APPENDIX C WILDERNESS

Introduction

The purpose of this appendix is to review the current situation of designated wilderness on the Green Mountain National Forest (GMNF) and the need for additional wilderness on the Forest, to summarize the process used to develop recommendations for additional wilderness on the Forest, and to provide site-specific evaluations of each roadless area that support the development and evaluation of alternatives in the Forest Plan.

Current Situation

Legislation affecting Wilderness in Vermont

In 1964, Congress passed the Wilderness Act, which established the National Wilderness Preservation System, and enabled congressional delegations to propose wilderness areas in their states. Although the 1964 legislation did not establish any wilderness areas in Vermont, it did define wilderness and establish the standards and expectations that would carry over to subsequent legislation that did establish wilderness areas in Vermont. The purpose of the National Wilderness Preservation System, according to the Wilderness Act, is:

> "In order to assure than an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness." (Wilderness Act 1964)

As defined in this legislation, a Wilderness Area must be "untrammeled," meaning the area is unhindered and free from modern human control or manipulation, "natural," meaning its ecological systems are substantially free from the effects of modern civilization, and must provide outstanding opportunities for solitude or a primitive and unconfined type of recreation.

In 1975, Congress passed an "Act," (so called the Eastern Wilderness Areas Act) which used the 1964 national standards and expectations to establish Wilderness Areas in Vermont. The Lye Brook (14,300 acres) and Bristol Cliffs (6,500 acres) Wilderness Areas were established at this time. The Act acknowledged that "in the more populous eastern half of the U.S. there is an urgent need to identify, study, designate, and preserve areas for addition to the National Wilderness Preservation System." A year later, in 1976, Congress passed the Bristol Cliffs Bill, which adjusted boundaries to eliminate

significant areas of private land in the Bristol Cliffs Wilderness. This adjustment reduced the size of the Bristol Cliffs Wilderness to 3,738 acres.

In 1984, Congress passed the Vermont Wilderness Act. The Vermont Wilderness Act approved more lands for Wilderness designation, establishing the Breadloaf Wilderness (21,480 acres), Big Branch Wilderness (6,720 acres), Peru Peaks Wilderness (6,920 acres), and George D. Aiken Wilderness (5,060 acres). This Act also added 1,080 acres to the Lye Brook Wilderness.

In 2004, the Green Mountain National Forest completed a Roadless Area Inventory. A Roadless Area Inventory is a requirement of the Forest Plan Revision process, whereby the Forest Service identifies roadless areas, which are then evaluated as potential wilderness areas. This inventory identified 36 roadless areas covering a total of 117,591 acres. The GMNF is now completing its Evaluations of Roadless Areas. The results will be used to develop and evaluate alternatives for the Draft Environmental Impact Statement for the revised Forest Plan.

Summary of Current Wilderness on the Green Mountain National Forest

Vermont currently has six Wilderness Areas, totaling 59,001 acres, all of which occur on the Green Mountain National Forest. These Wilderness Areas represent 15% of the GMNF, and provide a network of ecological reserves across the spine of the Green Mountains, as well as opportunities for solitude, primitive recreation, and other wilderness values. These areas are:

- Big Branch Wilderness, 6,505 acres, established in 1984. Features of this Wilderness Area include: Elbow Swamp, a large wetland on an eastern slope, Big Branch Brook, Baker Peak, and the Appalachian Trail/Long Trail (AT/LT) and side trails.
- Breadloaf Wilderness, currently the largest of Vermont's Wilderness Areas, 21,151 acres. Established in 1984, key features of this Wilderness Area include: Breadloaf Mountain, Vermont's Presidential Range (Mounts Wilson, Roosevelt, Cleveland, Grant), the headwaters of New Haven & White Rivers, and the Long Trail and side trails.
- Bristol Cliffs Wilderness, a smaller area, containing 3,712 acres, established in 1975 and modified in 1976. Features of this Wilderness Area include: the Bristol Cliffs/Vermont Escarpment, high ponds, and outstanding views of the Champlain Valley and Lake Champlain.
- George D. Aiken Wilderness, 4,772 acres, designated in 1984. Its features include wetlands, ponds, and meadows, as well as trout streams.
- Lye Brook Wilderness, 15,814 acres, designated in 1975. Its features include: Lye Brook, high peaks and plateaus, the Appalachian Trail/Long Trail, and headwaters and wetlands.
- Peru Peak Wilderness, 7,047 acres, designated in 1984. Features include Peru Peak, Pete Parent Peak, Styles Peak, and the Appalachian Trail/Long Trail.

Use of these existing wilderness areas has focused on recreation activities, which must be non-motorized in a wilderness, such as hiking, hunting, fishing, camping, and cross country skiing. Motorized and mechanized equipment and vehicles, and commercial enterprises except for outfitter guides under permit are prohibited in wilderness areas. Management activities have focused on boundary marking and maintenance, trail construction and maintenance that meet wilderness standards, interpretation and education, and law enforcement. Allowed management activities include search and rescue, research (with restrictions), fire control, and access to existing in-holdings and private rights. Timber harvest, creation or maintenance of wildlife and viewpoint openings by motorized methods, and maintenance with motorized equipment are examples of prohibited wilderness management activities. Specific wilderness legislation, however, has allowed for certain activities that are normally prohibited under national wilderness regulations. An example is the Vermont Wilderness Act permits shelters on the Appalachian Trail/Long Trail.

Issues currently facing the Vermont wilderness areas include the appropriate level of trail maintenance for brushing, blazing, and signage boundary marking, trespass, and illegal motorized use, the number and types of outfitter/guides and appropriate group size, the impacts of new technology such as cell phones, GPS, and geo-caching, and a lack of quality baseline data and methods to monitor and measure changes to wilderness character. Current challenges also include the management of the AT/LT in wilderness, particularly replacement of shelters and agreement on the appropriate balance of providing for recreation uses with protection/enhancement of wilderness character. In addition, limited funding for wilderness programs has affected stewardship effectiveness, including protection of wilderness character. Education and awareness of wilderness values is also a challenge, as is the increasing use of and impacts to portions of the wilderness that previously had low use.

These issues have had some negative effects on the quality and manageability of wilderness in Vermont. The impacts that are occurring, however, are primarily limited to certain sites and as yet have not cumulatively or irreversibly undermined the wilderness values these areas provide, although limited funding does continue to be a constraint to wilderness stewardship. An important issue is that designation of wilderness is only a first step in protection of wilderness values "as an enduring resource" (Wilderness Act 1964). The more long-term responsibility is to ensure that wilderness areas are managed on-the-ground to retain the values sought with designation. This continues to be a challenge to the Forest Service as well as other federal agencies managing wilderness areas.

Evaluation of New Wilderness Opportunities on the Green Mountain National Forest

The Forest Plan process includes a requirement to evaluate opportunities for additional wilderness on the Forest. This was accomplished through the aforementioned inventory and evaluation of roadless areas. The inventory and evaluation in the Forest Plan was used to develop and evaluate alternatives. The evaluation of alternatives shows the tradeoffs associated with potential designation of new wilderness areas. The revised Forest Plan includes recommendations to Congress for additional wilderness. Congress will then consider whether or not to introduce legislation proposing additional wilderness designation. (Such legislation is independent of the Plan Revision process, however, and could occur at any time.)

The GMNF Roadless Area Inventory, using national criteria, has determined that there are 37 roadless areas on the GMNF, totaling 124,321 acres. There are individual evaluation reports for each of these roadless areas and for an additional area that was evaluated at the Forest Supervisor's discretion. The criteria for defining an area as roadless include:

- 5,000 acres or more
- Less than 5,000 acres if manageable due to physical features or vegetation; or self-contained ecosystems such as an island; or contiguous to existing wilderness- regardless of size
- Land is regaining a natural appearance
- Existing improvements are affected by forces of nature, rather than humans, and are disappearing or muted
- Existing or attainable federal ownership, both surface and subsurface, and could ensure perpetuation of identified wilderness values
- Location is conducive to perpetuation of wilderness values. Consider relative to sources of: noise, air, water pollution; unsightly conditions; amount & pattern of federal ownership
- No more than ½ mile of improved road for each 1,000 acres, and these roads are under Forest Service jurisdiction
- No more than 15% of area is in non-native, planted vegetation
- 20 % or less of the area has been harvested within the past 10 years

- Area contains only a few dwellings on private land, and location of dwellings and their access needs insulate their effects on the natural conditions of federal lands

Once established as a Roadless Area, using the above criteria, the areas then were evaluated based on another set of national criteria and standards, in two main sections: Wilderness Capability and Wilderness Availability. The Wilderness Capability section assesses each area's unique attributes, such as features, uses, natural integrity and appearance, opportunities to experience wilderness values, and management implications. The Wilderness Availability section then assesses the tradeoffs associated with wilderness designation, in such categories as recreation use, wildlife resources, and management considerations. Each Roadless Area Evaluation also includes a site-specific summary of the potential for wilderness benefit and impact in that area. This includes a summary of factors associated with capability, availability, benefit and need for wilderness. Information in the Roadless Area evaluations was used to consider what the highest value and need is for individual roadless areas, based on their current and projected conditions, uses, and management considerations. The roadless evaluations were used to assess the quality of these areas as potential additions to the National Wilderness Preservation System.

An important factor in the current situation of the GMNF relevant to potential additional wilderness is that the Forest has acquired over 90,000 acres of land since the 1987 Forest Plan. These new lands have not been previously evaluated for potential wilderness attributes. They are now analyzed in the 2004 Roadless Inventory, and portions of these lands are now identified as roadless areas.

Assessment of Need for Additional Wilderness on the Green Mountain National Forest

Public Desire for Additional Wilderness

Wilderness designation, with its associated benefits and restrictions, engenders passionate debate in the American public. Attitudes toward wilderness range from valuing the simple existence of wilderness, regardless of use, to objections to wilderness based on economic or social considerations. Locally, the question of whether there is a need for additional wilderness on the Green Mountain National Forest has been a major issue in the revision of the Forest Plan, reflecting the contentious nature of this topic on the national scale. The question of additional wilderness was included as an issue in the GMNF's Notice of Intent recorded in 2002, and remains a major issue addressed in detail in the Forest Plan revision.

Various advocacy groups, members of the public, and towns have developed positions on this issue. The Forest Service held an educational forum attended by over 250 people on the topic of federally designated Wilderness in November of 2001. It continues to be an important and controversial element in the planning dialogue as the draft Forest Plan is developed.

One element to consider in the assessment of desire for additional wilderness is the University of Vermont's (UVM) Center for Rural Studies' phone survey of public attitudes towards wilderness in Vermont, conducted in February 2002. The Wilderness Society, a non-profit advocacy group, funded this study, for the purpose of identifying residents' attitudes towards uses of public land, and, in particular, wilderness, in Vermont. The study included a statewide sample as well as a sample of residents who live in or near the Green Mountain National Forest. The results were statistically significant and the study participants, with the exception of age and educational level, approximated that of the general Vermont public. Among the results of this study were:

73% of respondents agreed, “more wilderness areas should be established on the Green Mountain National Forest.”

65 % of respondents agreed, “I would support the establishment of additional wilderness areas on the Green Mountain National Forest even if it required the removal or re-routing of snowmobile trails.”

In addition, a 1996 UVM School of Natural Resources study funded by the North Central Forest Experiment Station studied Vermont residents’ attitudes toward National Forest management and additional wilderness on the Green Mountain National Forest. In this statistically significant study conducted by mail-back survey, 58% of respondents agreed that “More wilderness areas should be established on the Green Mountain National Forest.” (Manning et. al. 1996)

Further insight into the desire for more wilderness in Vermont comes from the Vermont Wilderness Association (VWA). VWA, a non-profit advocacy group, has proposed the designation of approximately 79,000 additional acres of wilderness on the GMNF. VWA is a coalition of individuals and groups working for expanded wilderness in Vermont. This group presented their proposal to the Forest Service and public in the early stages of the Forest Plan Revision (2001). The roadless areas included in VWA’s proposal are 92003-92006, 92017, 92019, 92021-92026, and 92028-92037. Their proposal includes additions to the Breadloaf and Lye Brook Wilderness Areas, as well as new wilderness around Glastenbury Mountain, Romance Mountain, and Lamb Brook, and a National Conservation Area at Abbey Pond. This proposal has drawn strong support as well as opposition.

The public has also commented on the need for additional wilderness. The Forest Service has received a large number of comments from individuals and groups regarding additional wilderness, reflecting strong feelings on both sides of the issue.

A number of groups have made other formal proposals to the GMNF for activities in the Inventoried Roadless Areas, including: a local snowmobile club for a connecting snowmobile trail, the Vermont Mountain Biking Association for a trail system, and the Catamount Trail Association for trails to complete the Catamount Trail system. Many comments address additional wilderness in general, while others are focused on specific areas.

The Forest Service reviewed these comments closely and used them in developing alternatives and evaluating effects of alternatives. Several comments identify social/economic impacts associated with designation of wilderness (strongly positive as well as negative impacts were identified). These include the need for areas of solitude, renewal, and primitive recreation on one hand, and the loss of existing uses, jobs, revenue, and important cultural-heritage factors on the other. Many comments also highlighted or questioned the ecological and scientific benefits of additional wilderness.

Furthermore, as a major issue in the GMNF Plan Revision, wilderness and special area designation was the theme of local planning meetings held at five locations in Vermont in September 2003. These meetings included a Forest Service presentation on wilderness considerations, maps and information on existing wilderness areas, and discussion with the public about designation criteria and locations where additional wilderness might or might not be considered. The public suggested criteria that were considered, along with national criteria, in the evaluation of roadless areas and in the development of alternatives and analysis of effects for the Forest Plan revision. At these meetings the public also worked in groups at tables to mark locations on maps that should or should not be considered for additional wilderness. This resulted in an array of mapped locations with written comments about the most important areas to consider or not consider for additional wilderness.

In addition, the Vermont Congressional delegation has convened a collaborative process, referred to as the Blueberry Hill Group, focused on the GMNF's potential for additional wilderness, and ways to strengthen its timber program. This process involved monthly meetings with citizens and group leaders with diverse interests. During a year and a half of meetings, the group shared significant dialogue and developed good awareness of land management issues, including wilderness, but did not reach consensus or any agreements regarding additional wilderness on the GMNF.

Finally, the GMNF has received written formal statements from eight towns within the GMNF, one regional planning commission, and the governor of Vermont on the potential for additional wilderness. Six town governments (Chittenden, Hancock, Mount Tabor, Pittsfield, Sunderland, and Woodford) state they do not support additional wilderness in their town. The Bennington County Regional Commission, the Honorable Governor Douglas, two of the above towns (Hancock and Chittenden) and two others (Granville and Rochester) also requested that the congressional delegation wait until the Forest Plan Revision process has been completed before any legislation on Wilderness is introduced. To date, no towns have stated they support additional wilderness in their town. The Vermont House of Representatives passed a Joint Resolution in April 2004 opposing additional wilderness acreage on the Green Mountain National Forest. The Vermont Senate did not act on the Joint Resolution.

In summary, the extensive comments and information the Forest has received from individuals, groups, and various governmental bodies has revealed that there is extremely high interest and concern regarding additional wilderness in Vermont. Although a 2002 University of Vermont study found that most Vermonters support additional wilderness on the Green Mountain National Forest, an advocacy group's proposal for 79,000 additional acres of wilderness on the GMNF has drawn strong support as well as opposition. Numerous towns have stated opposition to additional wilderness in their towns, and others have asked the congressional delegation to allow the Plan revision process to be completed prior to new wilderness legislation. While there is a good understanding and appreciation of wilderness values and character among those participating in the Plan Revision process, there are also significant opposing views about the need for additional wilderness. These views concern the ecological, social/economic, scientific, and other benefits and tradeoffs that additional wilderness would bring.

Social Need for Additional Wilderness

Based on public comments and social assessments, it is clear that there is a strong, growing desire for opportunities on the Green Mountain National Forest for solitude, serenity, and challenging primitive recreation. In addition, many people value wilderness for and of itself, apart from any questions of use. To determine the social need for wilderness, however, it must be determined how well existing wilderness opportunities are meeting this desire. This question is also a regional one, and should consider how well Vermont's wilderness needs are being met by regional resources such as the 103,000 acres in New Hampshire, 19,000 acres in Maine, and by the 1 million acres of wilderness within the 6 million-acre Adirondack State Park in New York.

In the New England-New York Region, public land makes up only 17 percent of the land base. With over 70 million people currently living within a day's drive of the GMNF, public land is under increasing pressure to serve the people of this region. As coming decades are predicted to bring further urbanization, sprawl, and loss of open space, public land in the Northeast will be increasingly scarce and precious. Populations throughout New England are also increasing: within New England, population is projected to increase 30.3 percent between 1995 and 2025, and the New York state population is projected to increase 9.3 percent (U.S. Census Bureau, 2004). Visitation to wilderness areas can be expected to increase as well. The Green Mountain National Forest, along with the White Mountain National Forest in New Hampshire and the Moosehorn National Wildlife Refuge in Maine, is one of three locations in the Northeast with federally designated wilderness areas. There is also a

relatively limited amount of wilderness in the East in terms of acreage. Furthermore, of the northeastern wilderness areas, only four are larger than 20,000 acres, and only one is greater than 40,000 acres, indicating limited availability of large-scale wilderness areas.

According to a National Visitor Use Monitoring Study (NVUM), there were 49,848 visitors to wilderness areas on the Green Mountain National Forest in the year 2000. Observations from field staff are that use varies, with most use concentrated in specific areas such as along the Appalachian Trail/Long Trail and other popular attractions. With many people going to areas of concentrated use, it may be difficult for wilderness users to find solitude at peak use times. Visitor perceptions of crowding, however, are generally low on the GMNF (USDA 2001). On a scale of 1 to 10, with 1 being "hardly anyone there," wilderness visitors rated GMNF Wilderness Areas a 2.4. The visitor use information can be used to analyze demand for a recreational resource. The 49,848 visits is equivalent to 57,083 Recreation Visitor Days (RVDs). RVDs are also used in recreation visitor capacity analysis. Based on the present wilderness acreage of 59,001, the Green Mountain National Forest has a capacity of 614,655 RVDs in existing wilderness.

While Green Mountain National Forest wilderness is a relatively limited resource on a regional scale, and there are strong voices in support of additional wilderness, there is currently little indication of a social need for additional wilderness on the GMNF, as existing regional wilderness opportunities appear to be largely meeting current wilderness recreation demand. The extent of wilderness' social benefit in proportion to its social costs and tradeoffs has not yet been determined. This will be evaluated through development and evaluation of alternatives in the Environmental Impact Statement for the revised Forest Plan.

Ecological Need for Additional Wilderness

The majority of the roadless areas on the Forest are composed of ecological types quite common and widespread throughout the Green Mountains. The Vermont Biodiversity Project (Thompson 2002) identified few areas on the Forest outside of existing wilderness to consider for conservation of biodiversity in a statewide system. The exceptions to this are some areas on the Vermont Escarpment that have unique and diverse communities. The Vermont Biodiversity Project identified these areas being important areas to include in a reserve system that protects and maintains the unique natural communities and landscape diversity present there.

Although these areas are important in achieving conservation goals for diversity and rarity of ecological groups on the Forest, it is not clear that wilderness designation is necessary, or even beneficial, for their preservation. The natural communities that contribute to the Vermont Escarpment's importance require disturbance to persist on the landscape. Without disturbance there would be gradual encroachment of more common adjacent communities. Wilderness designation may inhibit disturbances, making it more difficult for some of the uncommon plants in these areas to have a continued presence. Wilderness designation that included allowances for the use of prescribed fire and other vegetation management tools to perpetuate these communities would alleviate the adverse impacts of such designation. Portions of some roadless areas contain important ecological sites containing rare or unique plant or bird species and their habitats. Some of the sensitive plants in these areas require disturbance and openings and wilderness designation may make it more difficult for some of these species to sustain.

Wilderness designation, however, helps preserve a fundamental principle of conservation biology, which is that representative examples of each type of ecological system should be conserved in a way that prevents extractive management. These representative examples will provide ecological reference or benchmark conditions for baseline monitoring and research, and provide some ecological conditions

or functions that are not otherwise available across the landscape. Areas where these representative examples are preserved can be described as ecological reference areas, and include wilderness areas, along with other administrative designations like ecological areas, natural areas, and special areas.

Wilderness designation would also benefit wildlife species relying on mature forest habitats (i.e. certain amphibians, birds, rodents and mammals) and those species seeking remote habitats (i.e. black bear, bobcat and northern goshawk). Wilderness designation would adversely affect those species relying on early successional habitats (i.e. certain amphibians, birds, rodents, and mammals such as deer). With designation, managers will lose options to manipulate habitats. There is no information that identifies a need for more or less mature or remote forested habitats on the Green Mountain National Forest. Providing for all habitat types provides for the greatest diversity of species and has been a goal of the Forest.

Many of the roadless areas are important headwaters for streams. Many contain trout and some are being restocked annually with Atlantic salmon. Wilderness designation would limit the ability to place large woody debris and to access streams for fish stocking and aquatic restoration and monitoring. With wilderness, natural processes would continue to move streams and riparian areas towards natural conditions, though this would be a long-term process taking several decades.

There is currently no documented ecological need for additional wilderness on the Green Mountain National Forest. From an ecological standpoint, there is little information to suggest wilderness designation would provide important additional ecological benefits above those that could be provided with other Forest Plan Management Area designations.

Needs Related to other Factors

Other factors contributing to a need for additional wilderness involves economic considerations. There is little information available, however, about the economic need for additional wilderness. Although experience with existing wilderness areas on this Forest and in other locations shows that outfitter-guide and other service opportunities may increase with increase in wilderness, it is difficult to project to what extent. Studies that do exist regarding the economic effects of wilderness are divided in their findings: some argue wilderness areas harm property values, while others argue proximity to wilderness areas has a beneficial effect on private property values as well as an indirect beneficial effect on regional economic development (see, for example, Goodson 2002, Phillips 2004).

There are no known specific additional opportunities for scientific evaluation or research on the Green Mountain National Forest. In general, however, wildernesses are some of the only lands unmodified by humans, which are or could be used as an ecological reference area for scientific evaluation. This is one of the original purposes of the National Wilderness Preservation System established by the Wilderness Act.

When evaluating potential for additional wilderness on eastern lands, it is important to consider the long-term development of wilderness character, and the potential for areas to reclaim wilderness characteristics over time. While heavy human imprint can be a significant barrier to re-development of wilderness character, if current human impact is low, an area could reclaim wilderness character quickly. Wilderness is a long-term commitment. Time and deliberate action or inaction can result in enhancement of wilderness character

Finally, a critical consideration in the evaluation of roadless areas is the extent these areas contribute to the quality of other Wilderness Areas on the Forest and in the National Wilderness Preservation System. Many of the roadless areas being evaluated are directly adjacent to existing wilderness

areas. It is important to consider with a long-term view whether the attributes, features, and uses of each area would contribute to or detract from the quality of the existing Wilderness Areas. Likewise, for roadless areas not adjacent to existing wilderness, the key question is how these areas will contribute to the quality of the network of Wilderness Areas on the Forest, in the region, and in the national system. A short summary at the end of each roadless evaluation provides insights of how the area would contribute to quality of wilderness. This is assessed further through evaluation of alternatives in the environmental impact statement for the revised Land and Resource Management Plan.

Process for Determining Wilderness Recommendations

Information from the roadless inventory and evaluations and from this Wilderness Need Assessment was used to develop and evaluate alternatives in the Final Environmental Impact Statement (FEIS).. The FEIS evaluated an array of alternatives that included varying amounts of potential wilderness areas (wilderness study areas). Public comments received on the Draft EIS were used to develop the FEIS and Record of Decision. The Record of Decision includes recommendations about which areas are appropriate for further consideration of wilderness designation.

Table C-1. Roadless Area Summary Information

Roadless Area Number	*Roadless Area Name*	*Acres*	*Hectares*	*County(s)*	*Ranger District*	*Town(s)*
92001	Dunville Hollow	1,261	510	Bennington	Manchester	Woodford
92002	Yaw Pond	1,324	504	Bennington		Woodford, Searsburg, Readsboro
92003	Glastenbury	43,645	17,204	Bennington, Windham		Bennington, Glastenbury, Shaftsbury, Somerset, Stratton, Sunderland, Woodford
92004	Lyman Brook	718	291	Bennington		Sunderland
92005	Stratton	9,222	3,732	Bennington, Windham		Stratton, Sunderland, Winhall
92006	Bourn	206	83	Bennington		Manchester
92007	Mad Tom	918	371	Bennington		Dorset, Peru
92008	Three Shanties	900	364	Rutland		Mount Tabor
92009	Old Job	1,094	443	Rutland		Mount Tabor
92010	Griffith Brook	1,532	620	Bennington, Rutland		Mount Tabor, Peru
92011	Mt Tabor Brook	464	188	Rutland		Mount Tabor
92012	Homer Stone	11,619	4,702	Rutland		Mount Tabor, Wallingford
92013	South End	839	340	Rutland		Mount Tabor
92014	County Line	42	17	Rutland		Mount Tabor
92015	Emerald	236	96	Bennington		Dorset

Table C-1. Roadless Area Summary Information

Roadless Area Number	*Roadless Area Name*	*Acres*	*Hectares*	*County(s)*	*Ranger District*	*Town(s)*
92016	Flood Brook	141	57	Bennington		Peru
92017	Mill Brook	106	43	Bennington		Sunderland
92018	Pittenden	16,089	6,538	Addison, Rutland, Windsor	Rochester	Chittenden, Goshen, Pittsfield, Rochester
92019	Worth Mtn	13,984	5,659	Addison, Windsor		Goshen, Hancock, Ripton, Rochester
92020	Hat Crown	177	71	Addison		Hancock
92021	Texas Gap	1,567	635	Addison		Granville, Hancock, Ripton
92022	Austin Brook	867	293	Addison, Washington		Granville, Warren
92023	Steam Mill	1,384	560	Addison		Ripton
92024	Turnpike	73	29	Addison		Ripton
92025	Blue Bank	246	100	Addison		Lincoln, Ripton
92026	Cooley Glen	473	191	Addison		Lincoln, Ripton
92027	Mount Abe	4,870	1,971	Addison, Washington		Lincoln, Warren
92028	Stetson Brook	2,037	824	Addison, Washington		Granville, Warren
92029	Rob Ford	2,541	1,028	Addison		Lincoln, Ripton
92030	South Link	51	21	Addison		Lincoln
92031	North Link	45	18	Addison		Lincoln
92032	West Slope A	145	59	Addison		Bristol
92033	West Slope B	11	5	Addison		Bristol
92034	West Slope C	13	5	Addison		Bristol
92035	West Slope D	13	5	Addison		Bristol
92036	West Slope E	16	7	Addison		Bristol
92037	Abbey Pond	5,453	2,206	Addison		Ripton, Middlebury, Bristol
Total		124,321	49,789			

2004 Evaluations of Roadless Areas and Lamb Brook

Roadless Area 92001 (Dunville Hollow)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,251 acres
Private: 10 acres
Total: 1,261 acres

b. Location, Vicinity, and Access: The Dunville Hollow Roadless Area (RA) is in the Town of Woodford, in Bennington County. This RA is bounded on the east by the George D. Aiken Wilderness, on the northeast by Woodford State Park, and on the south by a Town of Woodford Road, which also serves as a FS snowmobile trail #391. Forest Road 273 and FT392 make up the western boundary. This RA is accessed by approximately 5 miles of cross-country ski trails.

Dunville Hollow RA Roads & Trails		
Name	**Type**	**Mileage**
Trail	Cross Country Ski	5

c. Geography, d. Topography e. Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Dunville Hollow RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Elevations range from 2,650 feet along the southeastern edge of the area along the ridgeline, to 2,050 feet in wetlands in the southwestern corner of the area. A small ridge extends southwest along the center of this long narrow RA (which itself is oriented southwest), forming the western boundary of the large expanse of wetlands and gentle slopes that make up George Aiken Wilderness. Slopes are moderately steep along the western side of the ridge, and moderate to gentle on the east side. The southwest and northeast corners of this area are dominated by gentle slopes and wet flats, including about 82 acres of wetlands. National Wetlands Inventory mapping indicates these are a mix of open and forested wetlands dominated by conifers, predominantly spruce and fir. Small patches of scrub-shrub wetlands occur in the northeastern portion of the area. This RA also contains a small portion of the headwaters of the West Branch of the Deerfield River.

Dunville Hollow RA Land Type Associations (LTAs):	
Low mountains & hills & plateau	84%
Mountain slopes	15%
Valley bottom	1%

Dunville Hollow RA Vegetation:	
Northern hardwood	83%
Hardwood & red spruce	10%
Red spruce & balsam fir	3%
Open	4%

Dunville Hollow RA Site Indices:	
60+ (moderately high productivity)	29%

<60 (moderate to low productivity)	71%

The land types in the RA consist primarily of low mountains, hills, and plateau. The vegetation consists mainly of northern hardwood forests, but contains a small percentage of open areas. The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce, with about 300 acres potentially in wetlands.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	2.1A	2.1B	2.2A	2.2B	3.1	4.1	4.2	6.1	6.2A	6.2B	8.1	9.2
Roadless Acres	10									1,251			

Management Area 6.2A is managed primarily for Semi-Primitive Recreation values, and also allows for some timber harvesting.

Timber resource considerations:

- 1,212 acres (96%) are suitable for timber production (capable of growing commercial crops of timber).
- In the past ten years, no timber has been harvested.

Under Special Use Permit, the Prospect Mountain Cross Country Ski Area maintains a trail network for winter use totaling 11.5 miles of trails, of which almost 100 percent are on National Forest System (NFS) lands; approximately 4 miles of those are within this RA. The ski area is based on private land adjacent to the RA. These trails are groomed and hazards abated throughout the trail system to provide a safe experience for recreationists.

Recreation use of the area includes activities similar to activities occurring within other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest. Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low. In addition to use from the cross-country ski area, there is some recreation use generated from the adjacent private land. Woodford State Park also has cross-country ski trails that access this area. Estimation of snowmobile use on FS snowmobile trail #391, on the RA's southern border, is 50 to 100 snowmobiles a day on peak weekend days, based on field staff observations.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The Dunville Hollow RA is characterized by a mix of vegetation types and landforms. Adams Reservoir, in the adjoining Woodford State Park, continues onto USFS lands within this RA. Wetland exists within the Dunville Hollow RA in the vicinity of the reservoir, as well as on the western edge of the area. Trails within this RA offer views into the wetland complex.

This RA borders the Aiken Wilderness along its eastern boundary. Woodford State Park adjoins the area to the northeast, and Prospect Mountain Ski Area lies directly adjacent to the north and west of the RA. The state park contains a developed portion of Adams Reservoir, with camping and picnic facilities. The private land on which Prospect Mountain Cross Country Ski Area is based is developed with ski area facilities, including the towers that remain from the chairlift line when it functioned as an alpine ski area. A cell phone tower is also located within this adjacent ski area.

i. Key Attractions:

- Located adjacent to the George D. Aiken Wilderness.
- Located adjacent to Woodford State Park
- Prospect Mountain Cross Country Ski Area adjacent, with trails located in this RA.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: Although an extensive trail network dissects this RA, the variety of vegetation types and landforms in the area, including wetland scenery, makes the area appear natural.

Most of the stands in this area were regenerated from past harvest and other land uses, and now appear as young to middle-aged forests. There are 14 acres of forested land that are 15 years old or younger, and there are no areas of documented old growth conditions. There is an existing road along the southwestern boundary of the area, which can limit movement of small animals like salamanders and turtles into and out of the wetlands in that portion of the area. Surveys for NNIS (Non-Native Invasive Species) have not occurred, so the botanical integrity of the area cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: The area contains 1,261 acres, is relatively accessible with good road and trail access from the south and east, and is dissected by a number of trails. Due to this relative accessibility, the area is judged to have a varying potential for providing solitude or primitive recreation. The eastern portion, adjacent to the existing wilderness area, provides some potential for solitude, but this drops off to low near the southern and western edges, which are accessible by motor vehicles, and have been subject to more management activities. The snowmobile trail on the southern boundary has 50 to 100 snowmobiles a day during peak periods, based on field staff observations. The portion of the RA affected by Prospect Mountain Ski Area cross-country ski trails under Special Use Permit is designed to attract people for a relatively secluded recreation experience with developed facilities on adjoining private land. While challenges may exist on the site, operation of the ski area as a commercial business precludes solitude. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) (60 %), with some Semi-Primitive Motorized (2%) and some Semi-Primitive Non-Motorized (38%). Noise from motorized trails and the Prospect Mountain area could affect the Semi-Primitive Non-Motorized more than the inventory would suggest. The RA is adjacent to the Aiken Wilderness, and would provide some benefit to the solitude of the existing area, except for that portion closest to the cross-country ski area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Dunville Hollow RA.

Geological- There are no known areas of unique or rare rock formations in this RA.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Adams Reservoir has been noted by the State of Vermont (VNNHP) as a significant biological feature to the State, due to the presence of a species of viability concern, Hidden-fruited bladderwort (*Utricularia geminiscapa*). The southern end of this reservoir lies within the RA, while the remainder lies north and outside the area.

Rare and Endangered Plants- There is one known occurrence of a plant on the Regional Forester's Sensitive Species (RFSS) list in this RA– *Utricularia geminiscapa* (see above). There are no other occurrences of plants that are on the RFSS or Species of Viability Concern (SVC) lists, however, or plants that are tracked by the state.

Historical- Approximately two percent of the southwest portion of this area has been surveyed for Heritage Resources. There is one recorded historic site – a single historic grave in the southwest portion of area. No other known or potential historic sites are recorded. Potential for prehistoric archaeological sites is moderate to high along the tributary to Stamford Stream to the south, and along Red Mill Pond Brook to the north.

e. Size, Shape and Manageability: This 1,261 acre area lies entirely in the Township of Woodford and is contiguous to and northwesterly of the George D. Aiken Wilderness.

There is a small in-holding with an active camp along FR 273 and another along FT391. Adequate setbacks from these travel ways could exclude these two camp lots. There is also a ten-acre exception with a house in the midst of this area. This in-holding is located within U. S. Tract 149. See Non-Federal Land discussion, under Management Considerations, below.

Abutters to the existing property boundary lines include the State of Vermont (Woodford State Park) and Prospect Mountain Winter Sports Area.

f. **Boundary Conditions, Needs and Management Requirements**: Approximately one half of the property boundary mileage is not marked to current Forest Service standards and the line thru NF lands from property corner to property corner has no markings at all. Some adjustment to the existing George D. Aiken Wilderness boundary could make future boundary management more efficient.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: In the event of wilderness designation, grooming equipment on the cross-country ski trails would be curtailed.

The type of dispersed recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest.

Designation of this area as wilderness would provide opportunities for individuals desiring a remote recreation experience that isn't dependent on mechanized methods, or even on trails. On the other hand, there would be detrimental effect to cross-country skiers due to the termination or modification of the Special Use Permit (SUP) to Prospect Mountain Ski Area.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby

benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

City Stream in the Dunville Hollow RA provides aquatic habitat for brook trout and brown trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities that have occurred or will be implemented in the near future in this stream would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 1,212 acres (96 %) of the RA are classified as suitable for timber production. In the past ten years, no timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: On tract 417, which is located both inside and outside the roadless boundaries, there are several roads rights-of-ways (ROW) and a private water right. The water right is likely outside the roadless boundary. There is a question about the current validity of an outstanding road ROW. Research efforts by Forest Service personnel were unable to ascertain the ROW status. On Tract 149 there is a 10-acre private in-holding, and it has a 50-foot wide, 1,000-foot long road ROW to it. This private land is located in the center portion of the RA. Because the Forest Service is required to honor the easement and allow motorized access to the tract, this would make that portion of the RA unmanageable as a wilderness. This in-holding has a camp with a building and the ROW access is likely from the north of the inholding. There is also a power line ROW for Twin State Gas and Electric across tract 149; its approximate location can be seen by referencing the folder for Tract 390 II folder, Lot 18 Range 2. The power line easement runs through the center of the roadless area in a northwest to southeast direction, just south of the ten-acre exception. The ROW for the power line and roads make this area problematic for management as a wilderness, due to these outstanding rights.

If the RA were designated wilderness, the current Special Use Permit to Prospect Mountain Cross Country Ski Area would be modified or terminated, as mechanical grooming and clearing of trail corridors are not compatible with wilderness.

g. Management Considerations: Fire- Wildfire occurrence is rare for this area and restrictions on fire control techniques would be minimal. There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants/Unique Ecosystems-** The Adams Reservoir, at the northern end of the RA, is considered biologically significant by the State of Vermont. This reservoir provides habitat for a plant uncommon in Vermont and of viability concern to the Forest; protection through wilderness designation would not lead to reductions in habitat quality. Habitat quality for this species could improve or remain the same regardless of wilderness designation. The Forest Service only owns land around the southern third of the reservoir, so private land management around the rest of the reservoir may limit protection values from a wilderness designation. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There is a ten-acre inholding of private land with a 50 foot wide, 1,000 foot long road right-of-way accessing it. This private land is located in the center portion of the RA. Because the Forest Service would need to continue to honor the easement and allow motorized access to the tract, this would make that portion of the roadless area unmanageable as a wilderness.

4. Summary of Wilderness Evaluation: Benefit & Impact

The Dunville Hollow RA has limited potential to provide the attributes and values appropriate for wilderness designation. Although designation could benefit the adjacent Aiken Wilderness by providing increased solitude and primitive experience opportunities, the significant motorized use on the west and south boundaries, outstanding rights for private land use, road construction activity, and power line construction in this RA greatly lower the RA's potential for providing for long term wilderness values. Noise and visual disturbances near the Town Road, Forest Road 273, and near the central private property would adversely affect wilderness character and experience within the sight and sound distances of these edges. Furthermore, the impacts of designation could be significant, and would include changes made to the maintenance of the existing cross-country ski trail network, as well as the loss of active forest management for diverse habitats, forest products, and other benefits.

Roadless Area 92002 (Yaw Pond)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,245 acres
Private: 0 acres
Total: 1,245 acres

b. Location, Vicinity, and Access: The Yaw Pond Roadless Area (RA) is within the Towns of Woodford, Searsburg and Readsboro, in Bennington County. The area is adjacent to the eastern side of the George D. Aiken Wilderness. It is bordered on the south by FR73 (West Branch), on the east by the Corridor 9 snowmobile trail, and on the north by the FT390 snowmobile trail. There are no Forest Service trails or documented Classified roads, improved or unimproved, inside this roadless area. This RA contains only 0.01 mile of a National Forest non-system unclassified road, which is considered unimproved.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Yaw Pond RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. With the Aiken Wilderness, this RA contains some of the headwaters of the West Branch of the Deerfield River. Elevations range from 2,550 feet at the northeastern corner near the top of the ridge, to 1,850 feet at the southern tip of the area in wetlands along the West Branch of the Deerfield River. On the western edge of the RA, where it meets the George Aiken Wilderness, a small ridge extends southwest. The RA sits along the west-facing slopes of this ridge to the north, and then sits atop the ridge and extends along the west and east-facing slopes at the southern half of the area. These slopes are gentle to benchy or flat to the north, and gentle to moderately steep for short distances to the south. The western boundary follows Yaw Pond Brook south to where it joins the West Branch of the Deerfield River, and then follows this stream southeast for a small distance.

Yaw Pond Land Type Associations (LTAs):	
Low mountains & hills	71%
Plateau	29%

Yaw Pond RA Vegetation:	
Northern hardwood	90%
Red spruce	1%
Red spruce & balsam fir	7%
Open	2%

Yaw Pond RA Site Indices:	
60+ (moderately high productivity)	2%
<60 (moderate to low productivity)	98%

The land types in the RA consist primarily of low mountains and hills. The vegetation consists mainly of northern hardwood forests, but also includes 52 acres of wetlands, which follow much of the length of Yaw Pond Brook and the West Branch of the Deerfield River. There are also small isolated scrub shrub/emergent and conifer-dominated wetlands occurring on benches and small flats along the west slope of the ridge to the north. The potential natural vegetation of the area is a mix of northern hardwoods on the southern and more moderate slopes, spruce-northern hardwoods along the gentle

slopes and benches, spruce-northern hardwoods with outcrops along the steeper slopes near the crest of the ridge, and complexes of wet spruce-northern hardwood swamps, lowland spruce-fir swamps, and wet forest with open wetlands. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of open and forested wetlands dominated by conifers, predominantly spruce and fir. Site indices for the area indicate primarily moderate to low productivity for tree growth in the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0					46				1,199			

Management Area 6.2A emphasizes semi-primitive recreation, while Area 3.1 emphasizes roaded conditions.

Timber resource considerations:

- 1,047 acres (84 %) are suitable for timber production (capable of growing commercial crops of timber).
- 83 acres of timber have been harvested in the last 10 years.

Recreation use of the area includes activities similar to those occurring within other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest. Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as high, particularly because of the effects of motorized trail use on the trails that bound the RA on all sides except the wilderness boundary. Estimation of snowmobile use on these trails on busy weekend days, based on forest staff observations, is 500 to 1,000 snowmobilers per day.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the Yaw Pond RA can be characterized as a mix of vegetative types and landforms, with young to mature stands of northern hardwoods dominating the forested landscape. In addition, a wetland complex surrounding Yaw Pond Brook lies on the western edge of the RA, bordering the Aiken Wilderness.

There is a complex of 200-foot high wind towers in the surrounding area, less than two miles east of the RA. It may be possible to view the towers from the RA, especially from the more open portions of the wetland areas.

i. Key Attractions:

- The Yaw Pond RA is located adjacent to the George D. Aiken Wilderness.
- Motorized trails bordering the area have a high use level.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The Yaw Pond RA appears natural, with vegetation types and landforms, including wetland scenery, similar to the adjacent Aiken Wilderness. Surveys for NNIS (Non-Native Invasive Species) have not occurred there, so the botanical integrity of the area cannot be estimated. The natural integrity of the Yaw Pond RA is potentially compromised by the possible limits to small animal migration posed by a road in the area (FR 73). Roads can limit the movement of small animals like salamanders and turtles into and out of riparian zones, especially if the roads are open to traffic during spring and early summer.

The stands in this area were regenerated from past harvest and other land uses, and now appear as young to middle age forests. There are 83 acres of forested land that are 15 years old or younger. There are no areas of documented old growth conditions here.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to the relative accessibility of the Yaw Pond RA (it is bordered by major snowmobile trails on 3 sides), the RA is judged to have a low potential for providing solitude or primitive recreation. Though the RA is adjacent to existing wilderness, it would provide only a limited benefit to the solitude of the existing area. While some of the western portion of the RA, adjacent to the George D. Aiken Wilderness, may provide a high potential for solitude, the solitude opportunities drop off to low near the motorized trails and borders, accessible by motor vehicles. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) (31 %) and Semi-Primitive Motorized (SPM) (65 %), and only a small amount (3 %) as Semi-Primitive Non-Motorized, and Rural (1 %). The classifications of RN and SPM, making up 96% of the RA, are on the more developed end of the ROS scale.

Large groups occasionally use Forest Road 73, but the section used is very close to the end of the road. While the remainder of the RA may see increased visitation during these large gatherings, the events are of short duration.

A complex of 200-foot high wind towers on private land less than two miles east of the Yaw Pond RA may affect opportunities for primitive experience and solitude there.

d. Special Features:

Scientific- Within the Yaw Pond roadless area, there are no designated Research Natural Areas, Experimental Forests or Special Areas. No unique scientific opportunities have been identified in this RA.

Geological- There are no known areas of unique or rare rock formations in this roadless area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- Within the Yaw Pond RA, there are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern.

Historical- The only known historical resource in the RA is the remains of one historic farmstead. Although no other known or potential historic period sites are recorded, the terrain and environment strongly suggest that there are more sites in the area. Potential for prehistoric archaeological sites is moderate-to-high, primarily along Yaw Pond Brook and tributaries. Approximately ten percent of the lower portion of the RA has been surveyed for Heritage Resources.

e. Size, Shape and Manageability: This 1,245 acre area is contiguous to and easterly of George D. Aiken Wilderness. Most of this area is RARE II inventoried land, previously inventoried as roadless, but not included as part of George D. Aiken Wilderness when it was designated in 1984.

f. Boundary Conditions, Needs and Management Requirements: Some adjustment to the existing George D. Aiken Wilderness boundary could improve future boundary management efficiency. According to staff observations, boundary trails, on 3 sides of the RA, have winter use levels of 500 to 1,000 snowmobilers per day on busy weekend days.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Non-motorized recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. The northern, southern, and eastern boundary trails would continue to have motorized use by snowmobiles.

Designation of the Yaw Pond RA as wilderness would provide some minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. Noise from the busy motorized trails on the boundaries, however, would impact the potential for solitude near the edges of the area.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Parcels currently maintained as early successional units would disappear with the passage of time.

Yaw Pond Brook provides aquatic habitat for brook trout and Creek chub. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: No change in water quality is anticipated if the roadless area were to be designated as Wilderness. The streams in this area are not part of a municipal watershed and there are no known water storage needs.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 1,047 acres of the RA (84 %) are classified as suitable for timber production (capable of growing commercial crops of timber). These 1,047 acres, however, represent less than 1 percent of all lands suitable for timber production on the Green Mountain National Forest. In the past 10 years, 83 acres of timber has been harvested. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on historic period Heritage Resources, but may inhibit otherwise mandated prehistoric site inventory work in this area because such work usually involves digging some test pits (approximately 18 inches by 18 inches) and the attendant clearing of vegetation.

f. Land Uses: In the event of wilderness designation and subsequent completion of a Wilderness Implementation Schedule, special use permit groups-size would likely be limited and large groups (which had used the area prior to Wilderness designation) would be prohibited from gathering.

There is a power line ROW for Twin State Gas and Electric across the area; its approximate location can be seen by referencing the folder for Tract 390 II. Boundary locations should avoid inclusion of this power line easement.

g. Management Considerations: Fire-Wildfire occurrence is rare for this area and restrictions on fire control techniques would be minimal. There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants/Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-federal lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT AND IMPACT

The Yaw Pond RA has limited potential to provide the attributes and values appropriate for wilderness designation. Although there is a band along the existing Aiken Wilderness that could provide solitude, primitive recreation, and other wilderness values, significant motorized use on the east and south boundaries, and outstanding rights for power line construction in this area greatly lower the potential for providing for long-term wilderness values. Use of boundary snowmobile trails is estimated at 500-1000 machines per day. Noise and visual disturbances near the adjacent Forest Road 73 and Corridor 9 would adversely affect wilderness character and experience within the sight and sound distances of these edges. In addition, most of this area could provide for active forest management for diverse habitats, forest products, and other benefits, which would not occur with wilderness designation.

Roadless Area 92003 (Glastenbury)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 43,624 acres
Private: 21 acres
Total: 43,645 acres

b. Location, Vicinity, and Access: The Glastenbury roadless area (RA) makes up a portion of the southern Green Mountain National Forest. The Glastenbury RA is spread over many Bennington County towns: Bennington, Glastenbury, Shaftsbury, Sunderland, and Woodford. Also included are the Towns of Somerset and Stratton in Windham County. Approximately 56 miles of trails, and approximately 28 miles of improved and unimproved roads provide access to this RA. 3.7 miles of these roads are improved. The area is bordered on the north by the Town of Sunderland road, Kelley Stand road, and by Forest Road 85, and on the east in part by Forest Road 71. Part of the southern border of Glastenbury follows Vermont State RT 9, and part follows the Powerline Trail 384, and Forest Trail 382, FT385 C-7. FT 381, Castlebrook Trail borders the rest of the area.

Glastenbury RA Roads						
	Name	**Mileage**	**Improved?**	**Gated?**	**Surface**	**Main. Lev.**
85	MacIntyre	1.3	Imp.& Unimp.	No	Gravel	2
260	Catamount Cobble	.14	Improved	Yes	Cr. Gravel	1
272	Pine Valley	.73	Improved	No	Soil	1
275	Little Pone	1.85	Imp. & Unimp.	No	Soil	1
278	Middle Ridge	2.37	Unimproved	No	Soil	1-2
288	Bolles Brook	1.92	Unimproved	Yes	Soil	1
289	E. Middle Ridge	1.26	Unimproved	No	Soil	1
307	Fayville	1.94	Unimproved	Yes	Soil	2
311, 307A	Fayville Spur	.29	Unimproved	No	Soil	1
313	Fayville South	.45	Unimproved	No	Soil	2
325	Castle Brook	1.15	Unimproved	No	Gravel	2
335, 336, 337	MacIntyre W., S. Alder	.39	Imp. & Unimp.	No	Soil	1
340	Sheep Meadow	.12	Unimproved	No	Soil	2
371, 372, 373, 373A, 375	Various	5.56	Unimproved	No	soil	2
Unclassified		10				

Glastenbury RA Trails	
Type	**Mileage**
Hiking	27.7
Snowmobile	27.6

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 99% of the Glastenbury roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire

Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province; one percent occurs within the Taconic Mountains Subsection. The center of this RA is dominated by Glastenbury Mountain and the main ridgeline of the southern Green Mountains, where mountain landscapes are found. As the land falls east from the ridgeline, the slopes become more moderate and break up into the hilly to flat terrain more typical of this subsection. Although slopes are steep along the ridgeline and west, the slopes are extremely steep along Roaring Branch Brook along the northwestern edge of the area, along the western escarpment south of Fayville and along Fayville Branch, and along Bolles Brook in the southern end of the area. Gentle slopes and flats are concentrated in the northeastern and north central portion of the area, on either side of the ridgeline, as well as occurring in smaller patches to the south. These flatter areas are where most of the 546 acres of wetlands are found. The headwaters of the Deerfield River and its upper tributaries, Roaring Branch and its upper tributaries, and Walloomsac Brook are found in this area. Elevations range from 3,700 feet on the top of Glastenbury Mountain in the center of the area, to 950 feet at the base of the western escarpment in the northwestern corner of the area.

Glastenbury RA Land Type Associations (LTAs):	
Upper mountain slopes & mountain tops	27%
Low mountains & hills	26%
Mountain slopes	21%
Escarpment	17%
Plateau	7%
Footslope	2%

Glastenbury RA Vegetation:	
Northern hardwood	85%
Hardwood & red spruce	7%
Red spruce & balsam fir	4%
Uncommon	2%
Open	1%
Paper birch	1%

Glastenbury RA Site Indices:	
60+ (moderately high productivity)	13%
<60 (moderate to low productivity)	87%

The potential natural vegetation of the area is a mix of northern hardwoods on the eastern edge of the area, red oak-northern hardwoods and hemlock along the western and southwestern edges of the area, spruce, northern hardwoods, and hemlock on cliffs, outcrops or ravines scattered to the east and west of the main slopes of the Green Mountains, complexes of wet spruce-northern hardwood swamps, lowland spruce-fir swamps, and wet forest with open wetlands, montane spruce-fir along steep upper slopes of the escarpment and Glastenbury Mountain, and spruce-northern hardwoods elsewhere. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of open wetlands and forested wetlands, including ponds, emergent marshes, deciduous and evergreen scrub-shrub swamps, and evergreen and deciduous forested. Small patches of scrub-shrub wetlands occur scattered among the headwaters of the Deerfield River, Hell Hollow Brook, Roaring Branch, South Fork, and South Alder Brook.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2B**	**3.1**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	21	2,120	247	2,695	2,580	4,567	10,402	2,211	2,148	16,654

Management Areas 2.1A, 2.1 B, 2.2B, and 3.1 are managed as roaded environments. Area 6.1 emphasizes Primitive conditions. Areas 6.2A and 6.2B are managed for Semi-Primitive values. Management Area 8.1 is managed as Special Areas, typically without harvest, and the management strategy for Area 9.2 is to protect all options until studies determine the desired condition.

Timber resource considerations:

- 28,782 acres (66%) are classified as suitable for timber production (capable of growing commercial timber crops).
- 3,502 acres (8%) of timber have been harvested in the past 10 years.

Dispersed recreation activities in the Glastenbury RA are similar to those in other general forest areas throughout the National Forest. This use may include significant trail use, hunting, fishing, berry picking, bird watching, and casual walks though the forest, (non-trail use). The overall recreation use of the Glastenbury RA tends to be variable, from the more remote interior sections to the more heavily used sections near the boundaries. The majority of use is considered to be trail related, with both motorized and non-motorized uses occurring in relatively significant amounts.

Snowmobile use in the Glastenbury RA includes several trails on the western side of Glastenbury Mountain, FT372 McIntyre and FT374 Fayville. These trails serve as primitive access trails for people traveling from the Shaftsbury area to the Corridor 7 trail. Estimated use on these trails is less than 100 people per day, based on staff observations. To the north of Glastenbury Mountain, the FT307 Top of the Mountain and FT383 South Mountain snowmobile trails offer a challenging primitive, ungroomed trail for people seeking solitude. Use on these trails is also less than 100 people per day based on staff observations. In addition, the FT379 Deerfield River and FT380 Sports Cabin snowmobile trails connect to Corridor 7 and offer riders a chance for relative solitude in comparison to the groomed corridor trail. Estimate use on these trails is 100 to 500 people on busy weekends and holidays, according to staff observations. In the southeastern corner of the Glastenbury RA, there is the FT386 Little Pond snowmobile trail. On busy weekends, use is approximately 100 to 500 people per day, based on staff observations. This is a groomed corridor trail that offers a vista of Little Pond.

On the eastern side of Glastenbury Mountain, snowmobile use centers on FT375 & 376, Glastenbury and Glastenbury crossover snowmobile trails, popularly known as the “up & down” trail. The “up & down trail” offers a unique experience to snowmobilers, as a primitive ungroomed trail. According to staff observations, high use on busy weekends is 100 to 500 snowmobilers per day. Secondary ungroomed snowmobile trails are generally cleared to about widths of 4 feet to 8 feet. Maintenance is necessary on a yearly basis in order to keep trails open and treads covered with natural, non-woody vegetation during the summer.

Hiking use of the Glastenbury RA focuses on the AT/LT corridor, which traverses from north to south for 17.15 miles. This corridor includes the Goddard, Caughnawaga, and Kid Gore shelters. The Glastenbury section of the AT/LT offers scenic views and a relatively large tract of backcountry forestland. Based on Green Mountain Club observation and shelter use data, use on busy weekends is normally in the range of 50 to 100 people per day.

There are also approximately 11 miles of popular hiking trails other than the AT/LT in this RA, including the FT418 Beebe Pond Canoe trail, FT434 Bear Wallow trail, FT434.01 Bear Wallow Spur, FT435 Bald

Mountain trail, and FT436 West Ridge trail. Estimates of use on these trails are approximately less than 50 people per day on busy weekends, based on staff observations.

The Glastenbury RA also contains a Special Use cabin with surrounding trails, located in the Town of Sunderland. The cabin is used for guided tours and recreation events, and the trails are also used for a variety of hiking and backpacking activities under outfitter/guide permits.

Two gravel pits are directly adjacent to the road that forms the eastern boundary. Castle Brook pit one is currently inactive, and further north, Castle Brook pit two is a potential gravel source.

A monitoring site is located on a ridge top in a forest opening within a half-mile of the north central boundary, and is accessed by an old trail. This site is part of the Environmental Protection Agency's (EPA) Clean Air Status and Trends Network (CASNET) that collects nationwide meteorological data on ozone and acid deposition. For monitoring purposes, approximately a 0.5 acre opening will require future brushing to allow it to remain open.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: Glastenbury is a large RA, characterized by a wide mix of vegetative types and landforms Glastenbury Mountain, in the center of the area, is visible as a prominent feature from the surrounding landscape. Views from the existing fire tower on Glastenbury Mountain are panoramic. Over ten scenic vistas are located along the Appalachian Trail/Long Trail (AT/LT), which traverses the center of the RA. In addition, Little Pond is a designated Special Area located just east of the AT/LT on the southeast portion of this RA, and is noted for natural appearing scenery surrounding the shoreline.

The Power Line trail (FT 384) borders the parcel to the south, providing opportunities to view scenery. The Vermont Escarpment landform maintains steep west facing slopes along the western edge of this RA, and is visible from Bennington, Vermont Route 7, and points west. There is a parcel of private land located on a ridge northwest of Glastenbury Mountain, that is directly adjacent to and visible from this parcel. Potential future uses of this visible ridge would be out of Forest Service control.

Key Attractions:

- The Appalachian Trail/Long Trail, crosses the area from north to south.
- The Glastenbury Fire Tower in the center of the RA, provides panoramic views.
- Views to and from Glastenbury Mountain and Little Pond are also spectacular.
- A popular Winter Sports Cabin is located in this RA.
- The RA is popular with hunters looking for a more remote hunting experience.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The scenic integrity of the Glastenbury RA is high in most sections, with a few exceptions. The RA contains approximately ten documented vistas, which are located along the AT/LT as it traverses along the ridge. The historic fire tower at Glastenbury Mountain also offers panoramic views of the surrounding landscape. Along the RA's southern edge, however, a power line forms the RA boundary, and views of the power line structure are dominant. Also, recent timber harvest is evident on the northwest portion of the RA in the vicinity of Kelley Stand Road (FH6), east of FR 85. The Glastenbury RA has no known Non-Native Invasive Species (NNIS), with the possible exception of a small patch of *Rosa multiflora* (multiflora rose), which was found and hand-pulled. This species is an exotic that is problematic in some places, but is not yet on the Vermont quarantine list (or Forest NNIS list). The roads in the Glastenbury RA do not compromise its natural integrity. Although several roads enter the roadless area from all sides, they do not extend far, and most don't divide one portion of the area from another. Where roads cross habitat such as wetlands,

however, they may limit the movement of small animals like salamanders and turtles into and out of their habitat.

Most of the stands in this area were regenerated from harvests and other former land uses. 159 acres of the Glastenbury RA (0.4 percent) are reorganizing after a regeneration harvest, thus appearing to be young forest. 1,735 acres (4 percent) of the Glastenbury RA are possibly transitioning towards old growth conditions.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, the Glastenbury RA is judged to have a varying potential for providing solitude or primitive recreation. The area's 43,645 acres have good road access from most directions, and are dissected by a variety of trails, both motorized and non-motorized. Interior portions, however, away from heavily used portions of the Appalachian/Long Trails and motorized trails, do have potential for providing solitude. This interpretation is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (25%), Semi-Primitive Motorized (50%) and Semi-Primitive Non-Motorized (25%), with only a small amount of Rural (< 1%). If motorized trail use in the area were eliminated, however, the primitive recreation opportunities would increase.

d. Special Features:

Scenic- Glastenbury Mountain offers panoramic views from the historic fire tower.

Scientific- There are no designated Research Natural Areas or Experimental Forests in the Glastenbury RA. The RA does include two Special Areas, however: Little Pond (one of the protected "High Elevation Ponds"), and a section of the AT/LT.

Geological- There are no known areas of unique or rare rock formations in this roadless area, although extensive acidic boreal outcrops at Bald Mountain are high quality, and are considered a significant biological feature by the State of Vermont (VNNHP 1997).

Ecological- The Vermont Biodiversity Project (Thompson 2002) identified most of this area as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that much of the escarpment in this area had relatively high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. Aside from the escarpment, however, the remainder of the Glastenbury RA had low irreplaceability values.

Special ecological features:

- Glastenbury Mountain – The State of Vermont considers the spruce-fir forest around the summit of this mountain to be important habitat for Bicknell's thrush, a rare bird in Vermont and New England; the summit is also a known location for the uncommon small-flowered rush (*Luzula parviflora*), a plant of concern to the State. This site is currently managed for backcountry recreation and for trail recreation on the Appalachian/Long Trail, which passes over the summit. Trail clearing and trampling are considered possible threats to this area.
- Little Pond – currently a Special Area on the Forest; known location for the rare plant Tuckerman's pondweed (*Potamogeton confervoides*). This is a small, 15-acre high elevation softwater pond, with continuously wooded shores and a small area of bog mat and marshy shore. It is surrounded

by a narrow ring of conifers set in deciduous woods, and is located in the southeastern end of the roadless area. There are currently no known threats to this pond due to its remoteness.

- Lost Pond Slope – this 130 acre site was identified by the State of Vermont as an area of biological significance. The site is a damp slope of mossy boulders dominated by yellow birch of many sizes, with several exceeding 35 inches in diameter and one aged to approximately 400 years old. There are occasional red spruce and sugar maple in the stand, and greater proportions of spruce and beech near the top of the slope. The State recommends no cutting at the site until its extent and quality can be evaluated further.

Rare and Endangered Plants- In the Glastenbury RA, there are three sites – two ponds and one mountain summit - with known occurrences of plants that are either on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or are tracked by the state of Vermont. At one pond, four plants on the RFSS list occur– *Carex atlantica* (eastern sedge), *Torreyochloa pallida* var. *fernaldii*, Fernald alkali grass), *Potamogeton confervoides* (Tuckerman's pondweed), and *Utricularia geminiscapa* (hidden-fruited bladderwort). At the second pond there is another occurrence of *Potamogeton confervoides* (Tuckerman's pondweed), and at the mountain summit, a state-tracked plant (not on the RFSS list), *Luzula parviflora* (small-flowered woodrush), occurs.

Rare and Endangered Animals- Bicknell's thrush, a Regional Forester's Sensitive Species and a Vermont Species of Special Concern, is known to nest in the Glastenbury RA. This species occupies the highest elevations of the roadless area; generally, those parcels over 3,000 foot elevation. Degradation of nesting habitat has been identified as one concern for this species. (see Rimmer, et al., Bicknell's Thrush (*Catharus bicknelli*) Conservation Assessment, 2001). Both environmental (e.g., acid precipitation, global warming) and human occupancy (e.g. recreation, telecommunication) factors have potential to degrade habitat. Wilderness designation would reduce human occupancy-related habitat degradation, in that ski areas, communication towers, wind generators and the like, could not be located in a wilderness. Effects of environment agents would change little with wilderness designation alone. Rectifying effects of environmental agents, that originate off-site and impact wide landscapes, will require broader-reaching efforts.

Historical- Bennington/Woodford Section: The SW section of this area, along the improved road, includes the archaeological remains of the historic period "Great Northern Cabin", an early 20th century hunting/fishing lodge. There are also prehistoric remains near Little Pond, and Little Pond Brook has moderate-to-high potential for additional sites. Along Forest Road 288 there is one historic site associated with the cluster of sites to the North (in Glastenbury). Along Bickford Hollow Brook there is at least one 19th century charcoal kiln, and just north of Rt. 9 at the southern most point of the section is the large, historic Waters Hill Cemetery, an interesting and evocative artifact of late 18th and early 19th settlement of this area, that includes the first white settler in Woodford. Finally, Bald Mountain has two known prehistoric sites that are highly sensitive, and has a Native American traditional use history related to medicinal plants and sources for stone to make tools; in fact, the whole of Bald Mountain is a mass of quartzite and could be considered in its entirety to be highly sensitive for prehistoric sites.

Glastenbury (& Shaftsbury), west of the summit: In the SW corner of this section are two (perhaps more) 19th century charcoal kilns, but very little other evidence for historic settlement. The west-facing slopes may offer potential for prehistoric sites associated with quartzite outcrops. Along the central/western edge of the section are potential (but not documented) historic archaeological (farm) sites, and in the northwestern corner a known kiln site. To the north, overlapping the Sunderland border, the remains for the 19th c. MacIntyre Job sawmill village/operation lies along the South Fork of the Roaring Branch. At the end of Forest Road 288 and along Bolles Brook there is a significant cluster of historic archaeological sites (kilns, blacksmith shop, hotel, railroad, and more) representing the

remains of a village, known as the “Glastenbury Railroad, Mining and Manufacturing Company District”. This abandoned village is popularly known and well visited, and provides tangible evidence of the intensive land-use and landscape change that occurred in the 1800s.

Glastenbury, summit and east: At the summit of Glastenbury Mt, and within the AT/LT corridor, are a cluster of three sites – the National Register-eligible Glastenbury Mountain Fire Lookout Tower, the remains of the associated caretaker’s cabin, and at least three stone cairns whose cultural origins are uncertain, but could well be prehistoric. The steel, open-frame tower was built in 1927, and received heavy maintenance (e.g., replacement of the wooden steps and landings) in the 1970s. It is visited/monitored by enthusiasts and historians from the Forest Fire Lookout Association. To the north of the Mountain along the AT/LT are the Caughnawauga and Kid Gore Shelters – the former is NR-eligible and warrants maintenance and preservation efforts. In the eastern part of this section are the remains of at least five as-yet-undocumented logging camps, and one documented charcoal kiln. Finally, the upper reaches of the Deerfield River hold high potential for prehistoric sites.

Sunderland & Stratton section: The Southwestern corner of this section has one recorded charcoal kiln site. The north-central section along the AT/LT has another Shelter (Story Spring, constructed in 1963, so approaching potential historic status). There is one reported logging camp on the eastern side. The headwaters of the Deerfield River have high potential for prehistoric sites.

e. Size, Shape and Manageability: The size and shape of the Glastenbury RA makes its preservation as potential wilderness practical, with the possible exception of the southernmost portion of the area bordering the heavily-traveled Route 9. The proximity of the Glastenbury RA to multi-use private lands may present management challenges near border areas.

f. Boundary Conditions, Needs and Management Requirements: Most of the property boundary lines that this area follows in Shaftsbury and Glastenbury have no earlier Forest Service survey on them and therefore the condition of the lines and the existence of trespasses or encroachments is unknown. The property lines in other towns are marked to current Forest Service standards,. There is a 10-acre in-holding with camp lying on an extension of FR288 – motorized access is used for this camp. Two gravel pits are directly adjacent to the road that forms the eastern boundary. Castle Brook pit one is currently inactive, and further north, Castle Brook pit two is a potential source. Both would be an important source if this road were ever built to a higher standard. A boundary in this area would likely buffer the road, and these pits may be avoided if a boundary were to consider their location. Additionally, the area inside the eastern boundary of the Glastenbury RA contains many dispersed non-wilderness camping areas; adjusting the boundary on this side may warrant consideration**.**

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn’t dependent on mechanized methods, or even on trails. Non-motorized activities would be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry, and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness.

A significant amount of the recreation use in the Glastenbury RA would be affected if the entire RA were designated wilderness. The most significant effect of wilderness designation would be the elimination of snowmobile use on secondary trails, such as the “up & down” trail. There are few places on the forest that offer snowmobilers as high a quality experience to use a variety of secondary trails away from heavy use corridor trails. The Glastenbury RA is thus a major source of “backcountry

motorized opportunities". As designation would divert current snowmobile use on these trails to other trails, it could also increase crowding of other trails on the forest. Mitigation of the effects on snowmobile use would be difficult, since these trails would need to be closed to motorized use if the area were designated wilderness.

In addition, roads that enter, or border the RA in various places currently provide motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to much of the use that is currently occurring. Since many of these dispersed camping areas are located near the eastern edge of the RA, boundary relocation may mitigate the majority of these effects. In addition, outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent. This RA does not currently allow special use outfitter guides to use its secondary snowmobile trails. There is also a potential loss of the ability to view distant scenery in locations where vistas can no longer be maintained.

The management of wilderness recreation, including possible non-conforming activities, may be relatively difficult in this RA, due to poor access and proximity to private lands. Furthermore, as is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). The Glastenbury RA is the largest area (43,645 acres) being evaluated at this time, and larger areas designated as wilderness tend to provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats, however (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units (nearly 600 acres in this RA) would disappear with the passage of time.

This RA contains 15 acres of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., Armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

There are nine streams and one pond in the Glastenbury RA that provide aquatic habitat for brook trout and other fish species. Wilderness designation may limit the ability to restore stream habitat and enhance recreational fishing opportunities over the next half century or so, by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however,

that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In addition, habitat and fish population monitoring, and trout stocking either have occurred or will be implemented in the near future in these streams. If designated as wilderness, these activities would be altered or eliminated.

c. Water Availability and Use: The North Bennington Water Department has 797 acres in Well Head Protection Area and 786 acres in Surface Water Source Protection Areas. The actual wellhead is not located on National Forest. The Bennington Water Department has 412 acres in Well Head Protection Area and 10,092 acres in Surface Water Source Protection Area. The actual wellhead is not located on National Forest. Wilderness designation would not change these protected areas. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 28,782 acres (66%) are classified as suitable for timber production (capable of growing commercial timber crops). 3,502 acres (8%) of timber have been harvested in the past 10 years. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation of the Glastenbury RA may have an adverse effect on Heritage Resources in some areas of this RA. Specifically, the Waters Hill cemetery is attractive to various sectors of the public, but warrants considerable maintenance attention, such as the removal of encroaching vegetation. These adverse effects could be avoided by moving the proposed unit boundary to the north of the cemetery. In addition, Bald Mountain is deserving of a major survey/research/evaluation project for prehistoric Native American sites. Such an effort might be inhibited by wilderness designation because it would include some ground-disturbing testing and excavation, and attendant removal of understory vegetation. The “Glastenbury Railroad, Mining and Manufacturing Company District” has research potential as well, and currently requires attention due to deferred maintenance, preservation and interpretive needs. Although such needs may be incompatible with wilderness designation, relocation of the RA boundary to the north could avoid this conflict. Finally, the NR-eligible Glastenbury Tower warrants special attention, in partnership with the Green Mountain Club, to preservation, use, and maintenance issues. Overdue maintenance needs of the Tower are scheduled to be undertaken jointly by the Forest and the Green Mountain Club in 2004-2005. Although the work is planned using some motorized equipment, it could be accomplished with hand tools and portable replacement materials that are compatible with designation. The presence of the Tower itself can also be considered consistent with a “wilderness character” of the area, as it is a critical component of the history of dramatic 19th & 20th c land-use practices and landscape changes in this area.

f. Land Uses: There is a right-of-way in the southwestern corner of the RA for the Eddy Cemetery. There is also a spring right with access rights in this area. The southeastern corner has easements with access rights (which we assume is using Little Pond Road #275) and the “use of the land” on the east side of Little Pond. This comes with “the private right to erect use and maintain an unobjectionable dwelling on the subject tract.” There currently is not a structure there and we are uncertain who owns the current rights. Somewhere in the southeastern corner, is a road right-of-way “common with others”. It is unclear if the ROW is in the RA or not. There is a cabin with access and a valid special use permit off Fayville Road #307. This land is not privately owned. There is a ten-acre inholding along the RA’s southern border, and a ROW in common with others is located in the southern part of the RA, southwest of Little Pond. When the Forest Service purchased land in the center of the RA from Trenor Scott, Mr. Scott reserved a road ROW across a tract to a remaining portion of his land. As that land was later sold to the Forest Service as well, it would take an Office of General Counsel (OGC) opinion to determine if this ROW is now “dissolved.” Agency records do show it as an encumbrance. The RA

also includes a portion of US Tract 130C, which is subject to road easements. Outstanding road rights-of-ways need to be researched and their current validity confirmed. If easements cannot be accommodated by boundary adjustment, the affected areas would not be able to be closed to motorized access, leading to an inability to manage the areas for true wilderness values.

Designation of this RA as wilderness may affect access to the permitted isolated cabin in Sunderland, and may affect use of equipment to mitigate hazards and perform maintenance at that site. Furthermore, maintenance of 0.5 acre opening for the air monitoring site CASTNET may be affected by wilderness designation.

There is one road in this RA that has annual maintenance costs for grading and mowing. There is also a road in this RA with a bridge on it. There is no annual maintenance for the remainder of the roads in the Glastenbury RA. If these roads were closed there would be no real loss of investment.

g. Management Considerations: Fire/Insects/Disease- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. There are trade-offs regarding the extent to which these escarpment communities will benefit from wilderness designation. Wilderness designation would permit continued natural fire and insect disturbances. Wilderness designation would prevent agency management of disturbance regimes, however, and thus may result in the loss of some species requiring introduced disturbances. Wilderness designation would also restrict routine control measures for potential disease outbreaks such as Forest Tent Caterpillar, Saddle Prominent, Bruce Spanworm, and Hemlock Wooly Adelgid (HWA). Wildfire occurrence in this roadless area is rare, and restrictions on fire control techniques would be minimal. **Rare Plants and Unique Ecosystems-** There are two ponds that are considered significant features in the roadless area due to their remoteness, their high quality as examples of high elevation softwater ponds, and as habitat for rare and uncommon plants. Habitat quality and integrity could improve or remain the same under wilderness designation. One possible disadvantage of wilderness designation would be the Forest's inability to remove beaver. If beaver were to become established and change the hydrology at this site, they would impact two rare plants there that require stable hydrology, *Carex atlantica* and *Torreyochloa pallida* var. *fernaldii*. *Potamogeton confervoides*, a species of softwater ponds, is also threatened by changes in water level, and so could be affected in the same way. *Utricularia geminiscapa* is a species of open water of various wet habitats; in contrast, it apparently needs changes in water level to flower, and thus could potentially benefit from occasional beaver activity.

Glastenbury Mountain is significant as habitat for a state-tracked plant, *Luzula parviflora* (small-flowered woodrush). This species does not generally require intervention to maintain its viability (e.g. habitat management through cutting vegetation or other disturbances); consequently, wilderness designation would not change habitat suitability. *Luzula parviflora* occurs in disturbed sites (e.g., roadsides, trail and edges, etc.) where microhabitat features (such as hydrology and openness) are the limiting factors. Designation as wilderness would not prevent the activities that keep these microsites open, and thus is likely to have a neutral effect on this species. Impacts from trail maintenance and trampling may continue to be of concern regardless of designation, as the Appalachian Trail/Long Trail passes through this habitat.

Lost Pond Slope is a significant feature for its value as a potentially high quality old example of red spruce-northern hardwood forest in the Southern Green Mountains. As its development relies on natural disturbance regimes that are still intact within the mountains here, it is unlikely that wilderness designation will reduce the integrity of this natural community. **Non-federal lands-** There is a ten-acre in-holding with camp lying on an extension of FR288 – motorized access is used for this camp. A total

of 21 acres of private inholdings are located in this roadless area. As with any inholding, “reasonable and necessary” access would need to be allowed if requested.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Glastenbury RA has high potential to provide the wilderness attributes and values appropriate for wilderness designation. At 43,645 acres, Glastenbury is the largest of the roadless areas currently being evaluated on the Green Mountain National Forest. The area’s size contributes to the potential for relatively high quality solitude, primitive recreation, and other wilderness character and values. Glastenbury Mountain (3700 feet), numerous ridgeline summits, and the historic Glastenbury fire tower provide panoramic views of an expansive forested landscape. In addition, the presence of significant areas of old trees enhances the quality of this area for potential wilderness. Forest roads and snowmobile trails border a high proportion of this roadless area. There are about 17.5 mile of the Appalachian Trail/Long Trail in this area, with an estimated 50 to 100 hikers on busy weekend days. For the AT/LT corridor, this periodic high use would sometimes challenge the solitude and serenity sought in wilderness.

There are about 28 miles of snowmobile trails in the area. Most of these are secondary trails that provide the relative solitude and challenge of ungroomed, primitive motorized trails. The highest snowmobile use is on the “Up and Down” Glastenbury trails with an estimated 100 to 500 snowmobilers per day on busy weekends. These trails are prized for the access they provide to a special place: Glastenbury Mountain. There are few places on the Forest that offer as high a quality snowmobile experience on secondary trails. Elimination of this unique snowmobile experience for a relatively high amount of users would be a consequence of wilderness designation. Other changes, such as eliminating 28 miles of roads within the area, eliminating motorized access to archeological sites, and forgoing timber management on 28,000 acres of suitable timber lands would represent substantial change in current use. The effects would include elimination of motorized access for recreation, and elimination of active forest management for diverse wildlife habitats, forest products, and other benefits.

Roadless Area 92004 (Lyman Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 718 acres
Private: 0 acres
Total: 718 acres

b. Location, Vicinity, and Access: The Lyman Brook Roadless Area (RA) is within the Town of Sunderland, in Bennington County. The area is bordered on the south by the Kelley Stand Road (FR 327), which is a Town of Sunderland Road. Part of the Kelley Stand Road is also known as FR 327, Lyman Brook Road. On the north, the area is adjacent to the Lye Brook Wilderness. The RA is accessed by Lyman Brook road briefly entering from the south, and by a snowmobile trail crossing through the center of it.

Lyman Brook RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
327	Lyman Brook (Kelley Stand)	Unimproved	.7	No	Soil	1

Lyman Brook RA Trails	
Type	**Mileage**
Snowmobile	1.5

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Lyman Brook RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA lies on a gentle south-facing slope at the southern edge of a Lye Brook Wilderness plateau. The slopes are very gentle to flat near the northern two thirds of the area, and become gentle to moderate moving south. Elevations in the RA range from 2,550 feet at the north end of the area near the top of the slope, to 2,100 feet along Roaring Branch at the south end.

Lyman Brook Land Type Associations (LTAs):	
Plateau	61%
Low mountains & hills	39%

Lyman Brook RA Vegetation:	
Northern hardwood	46%
Hardwood & red spruce	45%
Red spruce & balsam fir	6%
Open	3%

Lyman Brook RA Site Indices:	
60+ (moderately high productivity)	14%
<60 (moderate to low productivity)	86%

Typical vegetation in the RA is mixed hardwood-spruce stands at the higher elevations and along the streams and wetlands, northern hardwoods on the average slopes, and red maple-beech on the drier

gentle slopes near the northwest end of the area. Wet flats follow Lyman Brook as it flows south through the eastern side of the area; most of the RA's 15 acres of wetlands are found here. Narrow areas of wet flats are also found along the eastern and western boundaries of the area. The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce, with the remaining area in spruce swamps. National Wetlands Inventory mapping indicates that the wetlands are a mix of open and forested wetlands, with most being open water with stands of dead trees, as well as emergent marshes, deciduous forested and deciduous scrub-shrub wetlands.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0	113				2				603			

Management Areas 2.1A and 3.1 emphasize roaded conditions and recreation opportunities, while the 603 acres in Area 6.2A are managed for semi-primitive recreation.

Timber resource considerations:

- 694 acres (97%) are suitable for timber production (capable of growing commercial crops of timber).
- No timber has been harvested in the last 10 years.

Recreation use of the area includes activities similar to those occurring within other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though we have no detailed use inventory for this RA, forest staff familiar with the area characterize its overall recreation use as low, with higher observed use in dispersed camping areas along the Kelley Stand Road. Higher use may occur near the private land in the northwest corner during the fall hunting season. There are no known non-recreation Special Uses within this area.

Snowmobile use of the Lyman Brook RA occurs along the Bacon Hollow trail (FT371), which is an 8-foot wide ungroomed trail passing through the center of the RA. Estimated use on busy days is less than 50 people per day, based on field staff observation.

Established in the fall of 2002, a water-monitoring site is located on a small stream several hundred feet from the Kelley Stand Road. Part of an acid rain study gathering information for a Northeast Forest Research Station and University of Vermont study, this data collection site is intended to serve for another three years. Data ties into a network of research throughout New England, looking at nitrogen levels in water that helps assess nitrogen saturation in soils. This site consists of an automatic water sampler and data logger run by batteries. Researchers visit the area every ten days to change batteries and/or download data. No trails lead to the site.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the Lyman Brook RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

The Lyman Brook RA borders the Lye Brook Wilderness, Kelley Stand Road (also known as FH 6) and the Roaring Branch. A primitive snowmobile trail leads to a privately-owned in-holding that is used primarily as a hunting camp that borders this parcel on the northwest corner and the Lye Brook Wilderness.

i. Key Attractions:

- The Lyman Brook RA is adjacent to the Lye Brook Wilderness.
- The RA provides access for recreational activities on Kelley Stand Road.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The Lyman Brook RA appears natural. Vegetative patterns appear natural, with some small inclusions of wetland and associated openings along drainages. As surveys for Non-Native Invasive Species have not occurred there, the botanical integrity of the area cannot be estimated. The area is fairly small in size, such that a catastrophic disturbance, such as a wind or ice storm or downburst, could affect most of the area and leave little intact. When viewed as a component of the landscape, however, such a disturbance may not affect natural integrity.

All of the stands in this area were regenerated from past harvests and other land uses, and now appear as young to middle-aged forests. There are no stands that are younger than 16 years of age or any areas of documented old growth conditions here.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, the Lyman Brook RA is judged to have a highly varied potential for providing solitude or primitive recreation. The RA is adjacent to the Lye Brook Wilderness, and may provide some minor benefit to the solitude of this area. However, while the eastern portion, adjacent to this existing wilderness, may provide a small area of high solitude potential, the southern portion near private land and good road access provides low potential. This interpretation is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this RA as primarily Roaded Natural (99%), with a small amount of Semi-Primitive Non-Motorized (1%).

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Lyman Brook RA.

Geological- There are no known areas of unique or rare rock formations in this RA.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) identified all of this RA as part of a larger area (which includes the Glastenbury RA) as a representative landscape to consider for conservation of biodiversity in a state-wide system. However, an analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this RA had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- In the Lyman Brook RA, there are no known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state.

Rare and Endangered Animals- Bicknell's thrush, a Regional Forester's Sensitive Species and a Vermont Species of Special Concern and a species of viability concern on the Forest, is known to nest in this RA. This species occupies the highest elevations of the roadless area; generally, those parcels over 3,000 foot elevation. Degradation of nesting habitat has been identified as one concern for this species. (see Rimmer, et al., Bicknell's Thrush (Catharus bicknelli) Conservation Assessment, 2001).

Both environmental (e.g., acid precipitation, global warming) and human occupancy (e.g. recreation, telecommunication) factors have potential to degrade habitat. Wilderness designation would reduce human occupancy related habitat degradation, in that ski areas, communication towers, wind generators and the like, would not be located in a wilderness area(s). Effects of environment agents would change little with wilderness designation alone. Rectifying effects of environmental agents, that originate off-site and impact wide landscapes, will require broader reaching efforts.

Historical- No systematic Heritage Resources inventory survey has been conducted. Although one cemetery with (possibly) three graves has been reported, its actual location is uncertain. The landscape suggests the possibility of the presence of an historic farm, but no sites have been recorded.

e. Size, Shape and Manageability: This RA is situated southerly and westerly of Lye Brook Wilderness in the Town of Sunderland.

f. **Boundary Conditions, Needs and Management Requirements**: Where this area abuts existing property boundary lines those lines are marked to current Forest Service standards. Some adjustment to the existing Lye Brook Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The 1.5-mile FT371 Bacon Hollow snowmobile trail passes through this RA. This trail has use of less than 50 people per day, and is maintained as an ungroomed trail with average trail width of 8 feet. The infrastructure consists of one pressure treated deck, a three-stringer bridge that is four feet to six feet wide and there are no designated attractions. The primary purpose of the trail is to provide access for local snowmobile riders in the Sunderland area to the corridor trail on the Kelley Stand Road, on the RA's southern boundary. There are also several popular dispersed campsites on this road.

Non-motorized use that occurs within the area would be relatively unaffected by designation of this area as wilderness. The exception would be an effect on current hunting use by the elimination of mechanical deer carriers. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest.

Some of the recreation use that occurs within this RA would be affected by designation of the area as wilderness. If the wilderness boundary extended to the edge of the Kelley Stand Road current dispersed camping areas on the road would be impacted.

Designation of this area as wilderness would provide some minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There would be significant detrimental effect, however, on recreation that requires motorized access. Since areas requiring motorized access are primarily located near the eastern edge of the RA, boundary adjustment may mitigate some of the effects on non-wilderness recreation. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk).

Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Parcels currently maintained as early successional units would disappear with the passage of time.

In Lyman Brook RA, Branch Pond Brook and the Roaring Branch provide aquatic habitat for brook trout. Brown bullhead have also been observed in Branch Pond Brook in past surveys. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities that have occurred or will be implemented in the near future on these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. The water-monitoring site is located near the Kelley Stand road; potential future boundaries may avoid its inclusion. Designation as wilderness would lead to the need to re-evaluate the monitoring site and determine if it would be appropriate to remain. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 694 acres of the RA (97%) are classified as suitable for timber production (capable of growing commercial crops of timber). These 694 acres, however, represent less than 1% of all lands suitable for timber production on the Green Mountain National Forest. In the past ten years, no timber has been harvested in this RA. There are no outstanding mineral rights in this RA. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: There are no known non-recreation Special Uses in this area.
There are no known easements or other encumbrances to this area.

g. Management Considerations: Fire- Wildfire occurrence is rare for this area, and restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern in this RA, nor are there records of rare or exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species, and so is uncertain until species are found there. **Non-federal lands-** While there are no private lands in this RA, access to a camp on the boundary does go through this area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Lyman Brook RA has limited potential to provide the attributes and values appropriate for wilderness designation. Opportunities for solitude are low on the southern edge due to proximity to the Kelley Stand Road and private land. This motorized use along the boundary lowers the potential for providing for long-term wilderness values. Noise and visual disturbances near these areas would adversely affect wilderness character and experience within the sight and sound distance of these impacts. In addition, most of this area could provide for active forest management for diverse habitats, forest products, and other benefits, which would not occur with wilderness designation. Wilderness designation would also increase the expense and difficulty of conducting aquatic restoration work and accessing a water-monitoring site.

There is a small area adjacent to the Lye Brook Wilderness with good potential for solitude, however. Furthermore, Bicknell's Thrush, a Regional Forester's Sensitive Species and a species of viability concern on the Forest, is known to nest in the highest elevations of this area. Although as an RFSS it is already protected, this species may gain further habitat protection by designation.

Roadless Area 92005 (Stratton)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 9,193 acres
Private: 29 acres
Total: 9,222 acres

b. Location, Vicinity, and Access: The Stratton Roadless Area (RA) is in the Towns of Stratton, Winhall and Sunderland, in Bennington and Windham Counties. The entire western boundary of this RA is adjacent to the Lye Brook Wilderness. The eastern side of Stratton RA is bordered by the snowmobile trail FT385, Corridor Trail. The southern portion is bordered by FT373, Kelley Stand Road, which is a town road under the jurisdiction of Stratton and Sunderland. The southwestern corner of the RA is bordered by FT370 Branch snowmobile trail/FR70 to Branch Pond.

The Stratton RA is accessed by a road and snowmobile trail in the southwestern section of the RA, FT370/FR70 Branch Pond. 4.2 miles of the Appalachian Trail/Long Trail (AT/LT) also cross through the RA, as well as numerous other hiking and cross-country ski trails.

Stratton RA Roads						
	Name	Improved	Mileage	Gated?	Surface	Main. Lev.
FR70	Branch Pond	Improved	2.4		Gravel	2
FR346	Stratton Pond W.	Unimproved	.9		Soil	n/a
Various	Unclassified	Unimproved	.8		Soil	n/a

Stratton RA Trails	
Type	**Mileage**
Hiking	12.9
Snowmobile	2.4
Cross Country Ski	4.9

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
The Stratton RA forms the western portion of a large plateau of gentle slopes and wet flats, which it shares with Lye Brook Wilderness, and stretches east to the base of the slopes leading up to Stratton Mountain. There is a small mountain peak in the central portion of the area, and another in the southwestern corner. Here slopes are moderately steep. Very steep slopes are rare and are found primarily associated with a ravine along the Winhall River at the north end of the area. Elevations range from 3,050 feet in the southwestern corner of the RA, to 1,700 feet in the north end of the area.

Stratton RA Land Type Associations (LTAs):	
Low mountains, hills, plateau	81%
Upper mountain slopes, tops	14%
Mountain slopes	5%
Valley bottoms	<1%

Stratton RA Vegetation:	
Northern hardwood	88%
Hardwood & red spruce	2%
Red spruce & balsam fir	1%

Paper birch	2%
Open	7%

Stratton Pond RA Site Indices:	
60+ (moderately high productivity)	3%
<60 (moderate to low productivity)	97%

The Stratton RA contains the headwaters to the East Branch of the Deerfield River, the Winhall River, Lye Brook, Branch Pond Brook, North Alder Brook, and Black Brook. The Winhall River flows north from its headwaters and forms a large portion of the western boundary of this area until it turns east and cuts through a ravine at the north end as it leaves the area. Branch Pond and Stratton Pond also occur within this RA. The area contains 648 acres of wetlands concentrated along streams and in plateau landscapes, in particular in the southern half of the RA and near the boundary with Lye Brook Wilderness. The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce, with spruce-northern hardwoods with outcrops and talus along the steeper slopes of the Winhall River ravine, and complexes of wet spruce-northern hardwood swamps, lowland spruce-fir swamps, and wet forest with open wetlands. Based on National Wetland Inventory classifications, spruce-fir-tamarack swamps and alluvial shrub and alder swamps likely dominate the wetlands, with red maple swamps, emergent marshes, shrubby peatlands, and ponds and lakes making up the remainder of the wetland types.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	29					616				1,092	597	846	6,042

Management Area 3.1 is managed as a roaded, intensively managed environment. Management Areas 6.2A and 6.2B are managed primarily for Semi-Primitive recreation values. MA 8.1 is typically managed without harvest, and MA 9.2 protects options until studies can determine the area's desired future conditions.

Timber resource considerations:

- 8,004 acres (87%) are suitable for timber production (capable of growing commercial crops of timber).
- In the past 10 years, 15 acres of timber have been harvested.

FR 70 into Branch Pond penetrates the roadless area. This road, with a short trail section, FT 440 Branch Pond Access hiking trail, provides canoe access to Branch Pond. Based on manager's observations, the trail is used by less than 50 people per day on peak days. The trail was renovated by the Vermont Youth Conservation Corps in 2001. The primary attractions are canoeing, wildlife watching, and dispersed campsites along the water.

Current use of the Stratton Pond area of the RA includes shelter and tent camping areas on Stratton Pond, which are popular camping destinations for overnight hikers. There is a shelter overnight camping fee being charged by the Green Mountain Club, which also performs all maintenance. A popular hiking trail, FT409 North, encircles Stratton Pond. Use is heavy, for a hiking trail, and averages between 50 to 100 people in good weather on weekends, based on manager observations and discussions with the Green Mountain Club. FT441 Stratton Pond hiking trail is an alternate to the AT/LT route to Stratton Pond, from the Kelley Stand Road. This trail is the old AT/LT corridor before it

was rerouted to Stratton Mountain in 1987. This trail is still used because it provides easier access due to fewer changes in elevation and shorter distances to Stratton Pond. Based on staff observations, use is less than 50 people per day on a busy weekend.

This RA receives significant trail usage. From the west, FT431 Lye Brook hiking trail from Stratton Pond provides access to the Lye Brook Wilderness and Bourn Pond. This trail and the northern end of FT508 Winhall River was seriously damaged by a tornado in 2003 that has closed the trail to use for approximately one mile in length on the northern end. FT431 was damaged for about 100 yards in length where it crosses into Lye Brook Wilderness. FT508 Winhall River is a primitive snowmobile trail (currently posted closed to motorized use) as well as a section of the Catamount Trail. Options for repair of the damage are being evaluated. FT407 Branch Pond hiking trail provides access to the southern end of the Lye Brook Wilderness and Bourn Pond. Day hike access from the Stratton Mountain Winter Sports area to Stratton Pond is provided on FT 507 North Brookwood West. This trail also serves as a section of the cross-country skiing Catamount Trail.

Other dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is minimal detailed use inventory for the area, forest staff familiar with Stratton RA characterize its overall recreation use as relatively high, particularly at popular locations at Branch Pond, Stratton Pond, and dispersed camping areas along the Kelley Stand Road. Branch Pond provides popular water-based dispersed camping at the end of FR 70, approximately two miles inside the RA.

Large non-commercial groups occasionally use dispersed areas, old log landings, and meadows along FR 70 and its surrounding area for events. Three Special Use Permittees use the snowmobile trail network in or adjacent to this RA for guided tours. Other permittees use those snowmobile trails for recreation events. Various outfitter/guide permittees do a variety of hiking or backpacking activities on the trails of the area, with Branch Pond, Stratton Pond, and through traffic on the AT/LT being the main focal points of the use. A Special Use Permit has also been issued for the management of the AT/LT shelters at Stratton Pond. A food vendor is authorized annually by a Special Use Permit to operate during the winter at the AT/LT trailhead on the Kelley Stand Road located on the boundary. The vendor serves the snowmobiling public with food and provides Forest information.

There are a total of three research sites in this area. The first is located west of Branch Pond Road on a narrow 200-foot section of land between the existing Lye Brook wilderness boundary and the road. Established in 2001, this long-term project is a Soil Climate Analysis Network (SCAN) site, part of a global network. The purpose is to look at soil climate change in response to global weather changes and also for drought prediction. The area is accessed cross-country with no trails leading to it. The monitoring equipment consists of a 0.1-acre opening, two 15-20 foot metal towers (poles) with a solar panel and buried soil sensors that have wires running into the ground. There is also an 8-foot by 8-foot snow pillow that looks like a buried waterbed with the rubberized material at the surface. The second research site is a long-term amphibian-monitoring research area located within a $1/10^{th}$ mile of the east side of Branch Pond Road. The site is also approximately a half-mile north of the Kelley Stand Road. A third study location is ½ mile from the north end of Branch Pond Road, $2/10^{th}$ of a mile to the NW, on a small, unmarked trail. In place since 1995, these areas are being researched by Middlebury College, with plans to re-study the area every five to ten years. Two pipe monuments with labeled brass caps and tree blazes around the perimeter distinguish the monitoring sites. The amphibian study also ties in to an acid deposition study.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The area is located adjacent to the Lye Brook Wilderness and provides access for a variety of recreational

activities. There are a number of popular trails and key dispersed sites located along roads that enter, or border the area. The Appalachian Trail/Long Trail (AT/LT) traverses the area from north to south, and passes key trail shelter and camping sites at Stratton Pond. A series of scenic vistas surround the Stratton Pond area, including along the AT/LT. A bridge allows for views from a scenic wetland to Stratton Pond. Wetland scenery is plentiful in this parcel and is often associated with the many drainages and small ponds in the RA. A number of critical dispersed camping sites are also located in the RA. Most notable are popular dispersed camping areas at Branch Pond, and adjacent areas along the Kelley Stand road.

Branch Pond and its access road (FR 70), are located in the southwest region of the RA. Branch Pond is a natural appearing high elevation pond. The road access allows for carrying small boats down to the water's edge. The Branch Pond Trailhead also serves as a trailhead for another remote pond, Bourn Pond, which is located to the north in the adjacent Lye Brook Wilderness.

Based on local and GIS mapping of ecological types, as well as significant biological features inventories, there are several sites of biological significance in this RA, including Branch Pond, Stratton Meadow Bog, Lye Brook Headwaters, and Winhall River Headwaters. These features are discussed in more detail below. The Winhall River Headwaters site occurs in both this RA and in the adjacent Lye Brook Wilderness.

Notable in the surrounding contiguous area is FT385, Corridor Trail, which is one of the most heavily used sections on the Forest, with use figures based on information from the Vermont Association of Snow Travelers (VAST) and staff observations of 500 to 1,000 people per day on busy weekends and holidays.

i. Key Attractions:

- High elevation Ponds, Branch Pond and Stratton Pond
- Also featured are the Appalachian and Long Trails

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The high elevation ponds in this RA, Branch Pond and Stratton Pond, are natural appearing and have a high scenic integrity. In the southwest corner of the RA, however, the road (FR 70) corridor leading to Branch Pond is highly engineered and does not fit lightly on the land.

Surveys for NNIS (Non-Native Invasive Species) have occurred in some places. At two of the non-forested sites, surveys occurred and no NNIS were found. Some trails were also surveyed in the southwest corner of this area, and no NNIS were found. The relative lack of NNIS in disturbed sites within these areas suggests that the forest in at least these sections is also likely to be uninfested.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There is an area of newly acquired land in the southeastern corner of the RA that appears to have been harvested within the last 20 years, and inventoried stands in that area appear to be 15 years old or younger. Most of these stands were not clearcut, but have residual small pole and sawtimber-size trees within them. There are no areas of documented old growth conditions.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the east and south), the Stratton RA is judged to have highly variable potential for providing solitude or primitive recreation. Although portions adjacent to the existing wilderness area

that are removed from the heavier trail use provide a high potential for solitude, this drops off to low near the southern, eastern and northern edges that are accessible by motor vehicles and snowmobiles. In addition, Outfitter/Guide activity reduces the opportunity for solitude on the trails from FR 70 to Branch and Bourn Ponds, in the Stratton Pond area, and on the AT/LT. This interpretation is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (64%) and Semi-Primitive Non-Motorized (36%). The area is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area.

d. Special Features:

Scenic- Branch Pond is a high elevation pond that is currently designated in the GMNF Forest Plan as a Special Area for viewing scenery.

Scientific- There are no designated Research Natural Areas or Experimental Forests in the Stratton RA, although the area does include two Special Areas: Branch Pond (one of the protected "High Elevation Ponds"), and a section of the Appalachian/Long Trail that crosses the southeastern end of the area on its way to Stratton Mountain, and then back across the central portion of the area.

Geological- Very steep slopes with potential for outcrops are rare and are found primarily associated with a ravine along the Winhall River at the north end of the area. There are no known areas of unique or rare rock formations in this RA.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) identified the southwestern portion of this area as part of a larger representative landscape around Glastenbury Mountain to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

There are several ecological features noted from this roadless area:

- Branch Pond – currently a Special Area on the Forest; known location for four species of viability concern or of concern to the State of Vermont – long sedge (*Carex folliculata*), Fernald's alkali grass (*Torreyochloa pallida* var. *fernaldii*), hidden-fruited bladderwort (*Utricularia geminiscapa*), and Tuckerman's pondweed (*Potamogeton confervoides*). This is a moderate sized 34-acre high elevation softwater pond, divided into two marshy bays by a narrow peninsula, with mostly wooded shores. It is surrounded by a narrow ring of coniferous woods set in northern hardwoods, and is located in the southwestern corner of the roadless area. There are currently no known threats to this pond due to its remoteness, although the State recommends no logging within 300 feet of the pond.
- Lye Brook Headwaters – This site consists of a 50-acre rare dwarf shrub bog community considered to be exemplary and of very high quality by the State of Vermont. Several bog-related plants grow here, including the uncommon few-seeded sedge (*Carex oligosperma*). The site is considered to be of natural origin and there do not appear to be any threats to the bog. The entire headwaters basin that includes the bog is about 107 acres in size, and is located along the western side of the area.
- Winhall River Headwaters – This site is considered by the State of Vermont to be a very extensive and high quality example of a shallow emergent marsh system, a common natural community in the state. Embedded within the marsh system is a small poor fen peatland as well. It is a known

location for rusty blackbird (*Euphagus carolinus*) and long sedge (*Carex folliculata*), two species of concern to the State; it is also a known location for the rare plant fall dropseed muhly (*Muhlenbergia uniflora*), a plant of viability concern on the Forest. There are currently no threats to this site, although the State recommends no cutting within 300 feet of the system. The entire system is approximately 325 acres and is situated along the middle portion of the western boundary of the area.

- Stratton Meadow Bog – this site is currently tracked by the State of Vermont as an element of concern; the site is a small, degraded example of a dwarf shrub bog, a rare natural community in the State. Lincoln sparrows and Rusty blackbirds have been observed at this site and presumed to breed there. Although there are no immediate threats noted, there have been beaver at the site, and their return could float the bog or inundate it. This has likely happened in the past and is why the site is not ranked as high quality. The site is about five acres in size and is located northeast of Stratton Pond along a tributary to the Winhall River.

Rare and Endangered Plants- Within RA 92005, there are three sites – one pond, and two brook/river headwaters - with known occurrences of plants that are either on the Regional Forester Sensitive Species (RFSS) list or are tracked by the State of Vermont. At the pond, there are four plants on the RFSS list and three plants tracked by the state occur - *Potamogeton confervoides* (Tuckerman's pondweed), *Torreyochloa pallida* var. *fernaldii* (Fernald alkali grass), *Sparganium fluctuans* (water bur-reed), *Utricularia geminiscapa* (hidden-fruited bladderwort), and *Carex folliculata* (long sedge), *Carex limosa* (mud sedge), and *Carex oligosperma* (few-seeded sedge), respectively. At one of the headwaters, one plant on the RFSS list and one plant tracked by the State occur – *Muhlenbergia uniflora* (fall dropseed muhly) and *Carex folliculata* (long sedge), respectively. At the other headwater, one plant tracked by the State occurs – *Carex oligosperma* (few-seeded sedge).

Rare and Endangered Animals- This RA is one in which American (or pine) marten were released during the early 1990s. Marten are considered Endangered in Vermont. They have not been confirmed for several decades, and are presumed nonexistent in Vermont. The Green Mountain National Forest cooperated with Vermont's Department of Fish & Wildlife in a recovery effort for marten through the release of 115 martens between 1989 and 1991 on Forest lands in the Towns of Wallingford, Mount Tabor, Stratton and Sunderland. Factors limiting marten establishment in Vermont have not been identified; there is no indication that wilderness designation will influence area suitability for marten.

The rusty blackbird, a species of Special Concern in Vermont, has been observed using a beaver flowage along the Winhall River. This species occupies isolated wet coniferous and mixed forests; frequenting fens, alder-willow bogs, muskegs, beaver ponds and other openings in the forest such as swampy shores along lakes and streams. They nest in spruce and balsam fir, and forage in pastures and plowed fields during their migration. Beaver activity, the primary influence of rusty blackbird nesting habitat in the Stratton RA, is unlikely to be altered by wilderness designation.

Historical- Stratton section: In the southeastern corner of the area along Kelley Stand Road, there are 3 known and 3 potential historic period archaeological sites; most are former farmsteads and at least one is a mill, dating to the 19th century and quite possibly earlier. Proximity to the road requires active monitoring and management. Potential for prehistoric archaeological sites in association with the East Branch of the Deerfield is high based on its connection to the Mohawk Trail and known sites further downstream. To the north, near the Winhall border, there is one potential site (a former logging camp) and the remains of the old AT/LT shelters at Stratton Pond. Prehistoric potential is high in selected spots around the Pond, but generally low in the rest of this section.

Sunderland section: Approximately 20 percent of the area has been surveyed. No Heritage Resource sites have been recorded. There seems to be little potential for historic period sites, with the possible exception of directly next to the Kelley Stand Road. Prehistoric potential is generally low, with the exception of isolated dry spots near Branch Pond.

Winhall section: No systematic Heritage Resources inventory survey has been conducted. No known or potential historic period sites recorded. There is some potential for late historic period features associated with the Rootville logging village to the West, but no agricultural-related sites. Potential for prehistoric sites is moderate-to-high within the Winhall River corridor and its tributaries – one of a handful of significant headwaters associated with Stratton Mountain.

e. Size, Shape and Manageability: This area contains 9,222 acres in the Townships of Winhall, Stratton and Sunderland and is contiguous to and easterly of Lye Brook Wilderness. The area is bounded as follows: Northerly by Forest Trail (FT) 365; Easterly by FR 341(a portion also being FT 385); Southerly by the Kelley Stand Road; Westerly by Lye Brook Wilderness and FT 363.01. There is a private inholding on Stratton Pond.

f. Boundary Conditions, Needs and Management Requirements: There is a section of boundary between FT 365 and FR 341 at the northeast corner of this area that needs further definition. Some adjustment to the existing Lye Brook Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There would be significant detrimental effect, however, on recreation requiring motorized access. Since these areas are primarily located near the edges of or in isolated portions of the RA, boundary relocation may mitigate the majority of these effects. In addition in the event of wilderness designation, the current level of recreation and tourism that is based on outfitter/guide activity may be reduced.

Wilderness designation could impact a significant amount of the recreation use in the southwest region of the RA, near FR70 and Branch Pond. If designation included FR70, the road would need to be eliminated, in order to restore the area's natural integrity. Since canoe access to Branch Pond is provide via this road followed by a short trail section, FT440 Branch Pond Access hiking trail, closing the road would cause a longer portage for canoes and kayaks.

Key dispersed camping areas on the Kelley Stand Road would also effectively be closed by designation, if the RA's southern boundaries were not changed. Furthermore, recreation activities around Stratton Pond may be impacted by designation, as the current management of shelter sites there is relatively intensive, and may be inconsistent with wilderness intent. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

Designation would allow non-motorized activities to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry, and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of much of this wilderness recreation, including possible non-conforming activities, would be relatively easy since forest staff already manages the Lye Brook Wilderness to the west, and there is little private land in the immediate area.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units (nearly 300 acres within this roadless area) would disappear with the passage of time.

Stratton and Branch Ponds, and Branch Pond, Lye, and Black Brooks, and the East Branch Deerfield River in the Stratton RA provide aquatic habitat for brook trout and brown bullhead. In addition, the Winhall River in this RA is one in which Atlantic salmon (ATS) have been released annually since the 1980s. The ATS is an indigenous species currently being restored to historic waters throughout the Connecticut River Basin. The Green Mountain National Forest cooperates with the Vermont Fish and Wildlife Department and U.S. Fish and Wildlife Service in this effort to restore salmon in the White and West River watersheds.

Management goals for ATS, brook trout, and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit the ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. Designation as wilderness would lead to the need to re-evaluate the monitoring sites and determine if they should remain. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 8,004 acres (87%) are classified as suitable for timber production (capable of growing commercial crops of timber). In the past 10 years, 15 acres of timber have been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation may inhibit appropriate and mandated prehistoric site inventory work along the Deerfield River because such activity would include at least some ground-disturbing testing and excavation and attendant removal of understory vegetation at these locations. Otherwise, designation would have limited or no adverse effects on Heritage Resources.

f. Land Uses: Part of this RA contains property acquired for the Appalachian Trail. This property came with a “reverter clause”, which means that the parcel of land was reserved for AT trail purposes, and if not used for that trail purpose for five consecutive years, the land would revert back to International Paper Company. The area must not be developed for purposes that would prohibit trail

construction. There is also a 29-acre private inholding in this RA around Stratton Pond, which is currently unimproved timberland. The Forest Service must allow "reasonable and necessary" access to this inholding if requested. There is uncertainty about the jurisdiction of the access to this inholding, however, as there have been unverified claims that it is a town road. The uncertainty surrounding the ownership of this access may increase the management complexity of this area. Finally, outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- Wildfire occurrence is rare for this area and restrictions on fire control techniques would be minimal. There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants/Unique Ecosystems-** There are two wetlands and one pond that are considered significant features in the RA due to their remoteness, their high quality as examples of high elevation softwater ponds, dwarf shrub bogs, and shallow emergent marsh systems, and as habitat for rare and uncommon plants and animals. Designation as wilderness could remove perceived future threats from cutting, although this can also be achieved through designation in other protected management categories. Of the rare plants at this site*, Muhlenbergia uniflora*, *Torreyochloa pallida* var. *fernaldii*, and *Utricularia geminiscapa* are species of open wetland habitats. *Muhlenbergia* could potentially be threatened by succession to a less open habitat, *Torreyochloa pallida* var. *fernaldii* requires stable hydrology to limit tree growth (and is, therefore, also threatened by succession), and *Utricularia* apparently needs changes in water level in order to flower. Thus, the Forest's inability to undertake activities to maintain stable hydrology and openness in this site could be either advantageous or disadvantageous, depending on the species. *Potamogeton confervoides* and *Sparganium fluctuans* are species of ponds that are threatened by changes in water level, eutrophication and invasive exotics, and motorboats, respectively. While designation as wilderness might attract more people to this pond, and thus increase the potential for activities that cause eutrophication or invasion by problematic species, it would also prohibit the use of motorboats, and would not prevent the Forest from either closing an area or rerouting a trail to protect rare species. *Carex folliculata* occurs in a mix of wet habitats, often beaver-influenced; it can be destroyed by changes in water level or fires, but also can have its habitat maintained by them. It is uncertain what effect designation as wilderness would have *Carex limosa* and *Carex oligosperma*, but their apparent viability suggests that absence or presence of management practices is not likely to cause a major downward trend for either species. The processes that create and maintain these natural communities do not depend on wilderness designation, as they have been able to operate in and sustain high quality systems without such designation up to this point, and are expected to do so into the future. Habitat quality and integrity could change either positively or negatively, regardless of wilderness designation, due to environmental changes outside our control. If beaver become abundant enough to alter these areas, such changes have the potential to degrade the sites (as has happened in the past at Stratton Meadow Bog), and wilderness designation will limit the types of controls that can be used to protect these sites from beaver inundation. **Non-Federal Lands-** There are 29 acres of privately owned lands within the RA boundary. The private inholding on Stratton Pond will require "reasonable and necessary" access if the owners request it. The land is currently unimproved timberland.

4. Summary of Wilderness Evaluation: Benefit & Impact

The Stratton RA has low to moderate potential to provide the attributes and values appropriate for wilderness designation. This RA has high scenic integrity, with continuous forests and wetlands

dominating the views. The high elevation ponds (Branch Pond and Stratton Pond) are natural appearing. Opportunities for solitude are high adjacent to the Lye Brook Wilderness, on the RA's western edge. This is a large (9,193 acre) RA with a high intensity of current uses, including snowmobile trails, AT/LT with developments, private inholdings and future access questions, and need for access for aquatic restoration, archeological site maintenance, and research site access. With significant changes in uses, this area could contribute moderately to the Wilderness system. These changes in current use, however, would affect users by eliminating motorized access. Furthermore, potential use and access to a private inholding on Stratton Pond and an uncertainty the ownership of that access may detract from wilderness values and increase management complexity. Most of this area could provide for active forest management for diverse habitats, forest products, and other benefits, which would not occur with wilderness designation. Wilderness designation could also increase the expense and difficulty of releasing and monitoring Atlantic salmon and conducting aquatic restoration work.

This area is adjacent to the Kelley Stand Road. Noise and visual disturbances near this road would adversely affect wilderness character and experience within the sight and sound distances of the road. Roads within the RA include FR 70, which provides access for canoes and kayaks to Branch Pond. These roads and associated access would be removed with wilderness designation. This area also receives a high amount of trail use. Snowmobile use on major trails can be as high as 1,000 people per day on peak weekends. About 4.2 miles of the hiking trails are the Appalachian/Long Trail, which includes the large shelter at Stratton Pond. The intense use and management in the Stratton Pond area would significantly change with wilderness designation.

Roadless Area 92006 (Bourn)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 206 acres
Private: 0 acres
Total: 206 acres

b. Location, Vicinity, and Access: The Bourn Roadless Area (RA) is located adjacent to the northwestern portion of Lye Brook Wilderness, in the Town of Manchester in Bennington County. To the west of the RA is US Route 7, and to the south of the RA is the Lye Brook Wilderness. There are currently no documented Classified system roads in this RA. The RA contains 0.3 miles of the hiking trail FT431, Lye Brook Trail, on its western boundary.

Bourn RA Roads						
	Name	Improved	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
TH317ext.	Unclassified	Improved	.4		Soil	

Bourn RA Trails	
Type	**Mileage**
Hiking	.3

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 85 percent of the Bourn RA lies in the Taconic Mountains Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province; 15 percent occurs within the Southern Green Mountain Subsection. Straddling the division between these two ecological subsections, the Bourn RA contains escarpment in the southeast corner of the area, grading into foothills further north and west in the middle, and then down into a valley bottom at the northwestern corner. Slopes are moderately steep along the escarpment, becoming gentle along the footslopes, and flat in the valley bottom and in concave areas of the footslopes. Two wetlands totaling 3 acres fall within the footslope area. National Wetlands Inventory mapping indicates that the one of the wetlands is classified as a pond, while the other is classified as scrub-shrub with deciduous shrubs. Mapping of ecological land units (ELUs) based on existing geographic data suggest that there is also potential wetland habitat in wet flats that occupy concave areas in the footslopes that trend toward Bourn Brook. Although no streams or tributaries arise from or pass through this area, the footslopes form part of the Bourn Brook and Lye Brook drainage basins. Elevations range from 1,250 feet at the southeastern corner along the escarpment, to 800 feet in the Vermont Valley at the base of escarpment and foothills in the northwestern corner of the area.

Bourn RA Land Type Associations (LTAs):	
Escarpment	15%
Small hill, footslope	75%
Valley bottom	10%

Bourn RA Vegetation:	
Northern hardwood	60%
Hardwood & spruce, hemlock, pine	37%
Open	6%

Bourn RA Site Indices:	
60+ (moderately high productivity)	100%

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0									180			26

Management Area 6.2A emphasizes Semi-Primitive recreation. In Area 9.2, the management strategy is to protect all options until studies determine the desired condition.

Timber Resource Considerations:

- 180 acres (87%) are suitable for timber production (capable of growing commercial crops of timber); 26 acres are tentatively suitable.
- Four acres of timber were harvested in the last ten years.

The hiking trail that borders the RA on the west, FT431, Lye Brook, is very popular. Estimation of use on busy summer weekends is 50 to 100 people, based on field staff observations.

Recreation use of the area includes non-trail activities similar to activities occurring within other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest. Though there is no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the area to be high. The RA is close to development in Manchester, Vermont, and illegal ATV use from the Manchester area has been known to occur here.

There is a long-term amphibian-monitoring site located in the northwest quadrant of this RA. This area is being researched by Middlebury College, with plans to re-study the area every five to ten years. Baseline data was collected from 1995-2002. Two pipe monuments with labeled brass caps and tree blazes around the perimeter distinguish the monitoring sites. This amphibian research also ties in to an acid deposition study.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the Bourn Pond RA can be characterized by a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. Although there are no stands of trees that are less than ten years old, there is evidence of recent logging in the newly acquired parcel in the southeast corner of the area. Land use history is also apparent in this RA, including homestead ruins, stonewalls, old logging roads, apple orchards, and old open-grown trees.

The Lye Brook Wilderness dominates the area surrounding this RA. The trailhead into the wilderness and the popular and scenic Lye Brook Falls is located just outside of the parcel boundary. The falls is located inside of the adjacent wilderness.

i. Key Attractions:

- Located adjacent to the Lye Brook Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: Overall, the majority of this RA does not appear natural. A road traverses through the center of the area, and leads up to three structures and beyond to private property. However, thirty-two acres of the RA falls in the Vermont Escarpment. This section of the parcel does appear natural, and is contiguous to the escarpment on the adjacent lands of the Lye Brook Wilderness. Surveys for Non-Native Invasive Species (NNIS) have not occurred there, so the RA's botanical integrity cannot be estimated.

The stands in this area were regenerated from past harvest and other land uses, and now appear as young to middle-aged forests. There are no acres of forested land that are 15 years old or younger, nor are there areas of documented old growth conditions here.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to this RA's relative accessibility and its proximity to Manchester, the area is judged to have a low potential for providing solitude or primitive recreation. There is good road access from the east, and the area is dissected by the trail to Lye Brook Falls. Though the eastern portion, adjacent to the existing wilderness area, may provide potential for solitude, this drops off to low near the western edge near development and highway noise (US Route 7). This interpretation is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (98 percent of the area) and contains only a small amount of Semi-Primitive Non-Motorized (2 percent). In ROS, this classification of Roaded Natural is on the more developed end of the scale.

d. Special Features:

Scientific Within the Bourn RA, there are no designated Research Natural Areas, Experimental Forests, or other Special Areas.

Geological- There are no known areas of unique or rare rock formations in the Bourn Pond RA.

Ecological- Although the escarpment has not been inventoried for natural communities, silvicultural mapping indicates that the RA is dominated by what could be described as the "beech-red maple-hemlock northern hardwood forest" variant of the typical northern hardwood community. Of interest is the occurrence of a wetland/pond area in the northern part of the RA that includes a swamp composed of red maple and tamarack, among other species. This swamp is not recognized in the NWI maps, but was recognized by field surveyors doing silvicultural inventory. If this is further verified as a calcareous red maple-tamarack swamp, it would be an important area as this swamp type is rare in Vermont. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state in the Bourn Pond RA.

Historical- There is no evidence for historic sites on this RA, apart from a recorded site that has been dismantled. There is at least moderate potential for prehistoric sites, however, given its gentle slope and location between two streams.

e. Size, Shape and Manageability: This area lies at the northwest corner of Lye Brook Wilderness and easterly of U.S. Route 7 in the Town of Manchester.

f. Boundary Conditions, Needs and Management Requirements: There are homes on the adjacent private property and there have been some encroachment problems onto National Forest lands in this area in the past. Boundaries are marked to standards.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependant on mechanized methods, or even trails. On the other hand there could be detrimental effects to wilderness recreation by changing the boundary to a less manageable location.

The lands in the southeast portion of the parcel in the Vermont Escarpment most closely meet wilderness intent. However, this area experiences some illegal ATV activity from the Town of Manchester going onto the trail. Manchester District currently has a policy of not advertising the Lye Brook Falls trail in an effort to reduce impacts to the wilderness.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time. Designation as wilderness would also lead to the need to re-evaluate the existing amphibian-monitoring site and determine if it should remain.

This RA has no stream or riparian area with fisheries resources.

c. Water Availability and Use: The Town of Manchester Water Department has 95 acres in a Well Head Protection Area located in this RA. The actual wellhead is not located on National Forest. These areas protect wells used by the towns, as a public water supply source. It is important that activities within the protection areas do not discharge contaminants, which may threaten the groundwater used for human consumption. Protection is currently provided by following Forest Plan Standards and Guidelines, as well as State Acceptable Management Practices (AMPs). Wilderness designation would not change these protected areas. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would be precluded by wilderness designation. Currently, 206 acres (100%) of the RA are classified as suitable for timber production (capable of growing commercial crops of timber). These 206 acres, however, represent less than one percent of all lands suitable for timber production on the Green Mountain National Forest. In the past ten years, four acres of timber has been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: While the private land served by the road under Special Use Permit is not an inholding, it abuts National Forest and is south of Bourn Brook, with no other roads serving it. The legal requirement to provide access placed on the Secretary of Agriculture by the Alaska National Interest Land Conservation Act applies in this case. In the event of wilderness designation, the permit for the road would have to be terminated or allowed to expire on its terms on December 31, 2007. About every ten years, on the private land, the private road Special Use permit holder (Torrey) harvests timber and hauls it out this road.

There is a utility easement to NET&T running north and south in the southeast corner of this area; the exact location is not known without further research and an actual survey of the area.

g. Management Considerations: Fire/ Insects/Disease- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Wildfire occurrence is rare within the remainder of this RA, and restrictions on fire control techniques would be minimal. Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants/Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. The uncommon natural communities associated with the escarpment have not been comprehensively surveyed in the southern Green Mountains. In general, however, some escarpment natural communities depend upon disturbances. If left to develop naturally, the sites of these communities may shift to more common natural communities. Given the Forest's requirement to maintain viability of all native species on the Forest, wilderness designation of the escarpment area would limit the extent to which the Forest could maintain some of these natural communities using vegetation management or fire, and so some species and natural communities that only occur here on the Forest could be lost. **Non-Federal Lands-** There are no private lands within this roadless area

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Bourn RA has low potential to provide the attributes and values appropriate for wilderness designation. This small RA, adjacent to the Lye Brook Wilderness to the south, and private property along Route 7 to the west, would not be a potential quality addition to the Lye Brook Wilderness due to its proximity to private land and roads. Its closeness to Route 7 and Manchester would preclude the development of solitude and wilderness values over time. Noise and visual disturbance from adjacent areas would not improve over time with wilderness designation. In addition, most of this area could provide active forest management for diverse habitats, forest products, and other benefits, which would not occur with wilderness designation. Wilderness designation would also increase the expense and difficulty of amphibian monitoring and aquatic restoration work.

The 32 acres on the Vermont Escarpment in this RA is contiguous to the escarpment in the Lye Brook Wilderness, and has high scenic integrity. This small area of escarpment, however, a feature that would potentially contribute to wilderness character, would also be protected through Forest standard and guidelines and other management designations.

Roadless Area 92007 (Mad Tom)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 918 acres
Private: 0 acres
Total: 918 acres

b. Location, Vicinity, and Access: The Mad Tom Roadless Area (RA) is adjacent to both the Big Branch Wilderness and Peru Peak Wilderness Areas. It is located in the Towns of Dorset and Peru, in Bennington County. It is bordered by FT355 Mad Tom, which is a secondary feeder snowmobile trail, and FT385/FR58, the Corridor 7 snowmobile trail. It is bordered by the Peru Peak Wilderness to the east on the other side of FT385, and by the Big Branch Wilderness to the northwest. This RA has no trails or roads entering the area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Mad Tom RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA forms a south-facing basin on the south side of Mount Tom and on the edge of the escarpment. The landscapes progress from upper mountain slopes at the northern end of the RA near the top of Mt. Tom, downslope through a mountain slope landscape, to the southern end of the area, where slopes are gentler as they converge on Mount Tom Brook. From this point an extension of the RA travels northwest over the edge of the escarpment. Slopes are moderately steep along much of the mountain, and become gentler at the bottom near Mad Tom Brook, to flat in the riparian zones. Some gentle slopes and flats are also found at the northern edge of the area. The slopes become steep to extremely steep in the extension on the escarpment. The 23 acres of wetlands in the area are found in the wet flats associated with tributaries to Mad Tom Brook.

Mad Tom RA Land Type Associations (LTAs):	
Low mountains & hills	42%
Mountain slopes	31%
Upper mountain slopes & tops	19%
Escarpment	8%

Mad Tom RA Vegetation:	
Northern hardwood	95%
Hardwood & red spruce	2%
Red spruce & balsam fir	1%
Open	2%

Mad Tom RA Site Indices:	
60+ (moderately high productivity)	50%
<60 (moderate to low productivity)	50%

The potential natural vegetation of the area is a mix of northern hardwoods in the center of the area, northern hardwoods mixed with red spruce in the southeastern portion, northern hardwoods and spruce with outcrops on steep scoured slopes, red oak and northern hardwoods along the escarpment portion of the area, and complexes of wet spruce-northern hardwood swamps, lowland spruce-fir swamps, and wet forest with open wetlands. National Wetlands Inventory mapping indicates that the wetlands in this

RA are a mix of marshy ponds, scrub shrub/emergent wetlands, and forested wetlands dominated by spruce and some hardwoods. The RA also includes a portion of the headwaters to Mad Tom Brook. Elevations range from 2,900 feet at the northern edge of the area toward the top of Mt. Tom, to 1,700 feet in the western extension at a point along the escarpment.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0					708	210						

Management Area 3.1 is managed as a roaded, intensively managed environment. Management Area 4.1 emphasizes Deer Wintering Areas.

Timber resource considerations:

- 901 acres (9%) are suitable for timber production (capable of growing commercial crops of timber).
- In the past 10 years, 34 acres of timber have been harvested.

There are no known non-recreation Special Uses in this area. Trails adjacent to this RA are used by a variety of outfitter/guide Special Use permittees, including a snowmobile tour operator.

Recreation activities in this RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low, with higher use on border snowmobile trails in the winter.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The western arm of this parcel is located on a steep west facing slope called the Vermont Escarpment. This portion of the parcel is highly visible from State Route 7 that has a high visual sensitivity. The southeastern portion of the parcel has had recent timber harvest. This parcel lies sandwiched between Big Branch Wilderness and Peru Peak Wilderness. In addition, FR 58 traverses the eastern edge of the parcel and makes access available into the White Rocks NRA. A trailhead exists at the northern tip of the parcel providing access into a popular and scenic backcountry setting of Griffith Lake. The majority of the forest stands in this RA can be characterized as a mix of vegetative types and landforms. The escarpment landform in this RA appears to be associated with northern hardwood natural communities, rather than unusual types.

i. Key Attractions:

- Located adjacent to Big Branch Wilderness.
- Corridor 7 snowmobile trail is located on the eastern boundary.
- Mad Tom Road provides a key access point to Griffith Lake and the southern ends of Big Branch Wilderness and the Peru Peak Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: In general, this area has a high visual integrity. Exceptions to this include FR 58, which skirts the parcel to the east, and the recent timber harvest in the southeastern

portion of the parcel. Surveys for Non-Native Invasive Species have not occurred here, so the botanical integrity of the area cannot be estimated.

About 20 acres of this RA are transitioning into possible old growth characteristics. These acres occur in a long narrow strip at the crest of the escarpment, where logging would have been difficult. The remaining stands in this area were regenerated from past harvest and other land uses, and now look like young to middle-aged forests. There are 34 acres of forested land that are in the reorganization phase of development at 15 years old or younger.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to the relative accessibility of the Mad Tom RA, the area is judged to have a varying potential for providing solitude or primitive recreation. This RA would provide some benefit to the solitude of the existing adjacent wilderness areas. The Mad Tom RA has good road access from the east and is bordered by key trails; the eastern portion that is closer to an existing wilderness area, away from roads and trails, provides a higher potential for solitude; this drops off to low, however, in the western portion accessible by motor vehicles and snowmobiles. This is somewhat consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (63%), with the remainder in Semi-Primitive Motorized (37%). The proximity of motorized trails on the boundary limits the potential to provide true Semi-Primitive Non-Motorized. The proximity on the border of snowmobile trails and their use by a Special Use permittee reduces the opportunity for winter solitude.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Mad Tom RA.

Geological- There are no known areas of unique or rare rock formations in this RA. Outcrops are noted at the northern end of the RA on the steeper mountain slopes, and “fort-like rock formations” are noted along the crest of the escarpment both inside and south of the area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a state-wide system, although an area was identified just to the west of this RA. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern in this RA, nor records of rare, unique or outstanding natural communities.

Historical- This RA contains a recorded site, a cluster of charcoal kilns. The presence of residential or agricultural historic or prehistoric sites appears unlikely, although some features associated with 19th century logging operations may be present – for example, a log flume/channel was constructed to transport logs from the mountain downslope to the mill in East Dorset.

e. Size, Shape and Manageability: This area contains 918 acres in the Towns of Dorset and Peru and is contiguous to and southerly of Big Branch Wilderness and White Rocks National Recreation Area and westerly of Peru Peak Wilderness.

f. Boundary Conditions, Needs and Management Requirements: The existing property boundary is not marked to current Forest Service standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even trails. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry, and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, given the existing management of the adjacent Big Branch Wilderness.

In addition, as the highly used snowmobile trails are located on the eastern boundary of the area, there may be the ability to relocate the boundary to mitigate the majority of the effects on non-wilderness recreation.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire,etc.). Areas currently maintained as early successional units would disappear with the passage of time.

This RA is adjacent to a recognized deer wintering area (DWA). Management goals for lands directly adjacent to DWAs focus on food requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these areas adjacent to DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management.

Mad Tom Brook in this RA provides aquatic habitat for brook and brown trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication).

Furthermore, the stream habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this RA are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 901 acres (98%) are classified as suitable for timber production (capable of growing commercial crops of timber). These 901 acres, however, represent less than 1% of all lands suitable for timber production on the Green Mountain National Forest. In the past 10 years, 34 acres of timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- Restrictions on fire control techniques would be minimal. There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems and apparently on this part of the escarpment. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants/Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Mad Tom Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation, due to its proximity to private land and roads. The western portion of this 918-acre area is highly visible from Route 7, and it is bounded by the Corridor 7 snowmobile trail to the east, and a secondary snowmobile trail (Mad Tom) to the south. The noise and sights on adjacent roads and lands would preclude the development of solitude and other wilderness character and values.

Much of this area does have high scenic integrity. There is a relatively small area adjacent to the Big Branch and Peru Peak Wilderness areas with opportunities for solitude. Furthermore, about 20 acres of trees with old growth characteristics in this RA would contribute to wilderness values. A trailhead at the northern tip provides popular hiking access to Griffith Lake and the Big Branch and Peru Peaks Wilderness areas.

Most of this area could provide for active forest management for diverse habitats, forest products, and other benefits, which would not occur with wilderness designation. Wilderness designation would also increase the expense and difficulty of conducting aquatic restoration work.

Wilderness Area 92008 (Three Shanties)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 900 acres
Private: 0 acres
Total: 900 acres

b. Location, Vicinity, and Access: The Three Shanties Roadless Area (RA) is in the Town of Mt. Tabor, in Rutland County. Entirely located within the White Rocks National Recreation Area (NRA), and directly adjacent on the south to Peru Peak Wilderness, there are no trails accessing this RA. The north boundary of the roadless area is FR30, which is also part of the Corridor 7 snowmobile trail.

Three Shanties RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
301	Pete Parent Peak	Improved	1.0	Yes	Bank-run Gravel	2
	Unclassified	Unimproved	.45			

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Three Shanties RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This area is situated along the north-facing slope of Pete Parent Peak, and serves as a drainage basin for a small, unnamed stream that feeds Big Branch Brook. The drainage basin lies more or less in the center of the area. The mountain slopes and tops are at the southern end of this area nearer the summit of the peak, with the gentler slopes progressing further north toward Big Branch. A small extension of the area to the northwest curves around a ridge and heads back south, capturing some of the west-facing ravine slope of Lake Brook. Peru Peak Wilderness borders the area to the south. Slopes are steep at the south end of the area as it approaches the peak, and at the point where the extension curves around the ridge along the Lake Brook ravine. Otherwise, slopes are moderately steep except along the flats associated with the stream, and at ridge tops and benches along the slope. There are enriched cove landforms that occur at the southern end of the tip of the extension in a ravine, and in the basin of the stream that lies within the area. This basin and stream riparian zone is where the four acres of wetlands are concentrated. Elevations range from 2,700 feet at the south end of the area near the ridgeline for Pete Parent Peak, to 1,900 feet along Lake Brook and at the north end of the area along the tributary to Big Branch Brook.

Three Shanties RA Land Type Associations (LTAs):	
Low mountains & hills	77%
Mountain slopes	22%
Upper mountain slopes	1%

Three Shanties RA Vegetation:	
Northern hardwood	81%
Red spruce & balsam fir	8%
Open	7%
Paper birch	4%

Three Shanties RA Site Indices:	
60+ (moderately high productivity)	66%
<60 (moderate to low productivity)	33%

The potential natural vegetation of the area is northern hardwoods along the midslopes, northern hardwoods mixed with red spruce along the extension to the west and along the east-facing slopes of the tributary basin, and lowland and montane spruce-fir along the eastern side associated with several streams and then moving south upslope along the ridgeline. Small areas at the crest of ridges and peaks have the potential for steep slopes with hardwoods mixed with spruce and abundant outcrops. National Wetlands Inventory mapping indicates that the two wetlands associated with this area are a mixture of scrub-shrub and emergent types.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0											900	

Management Area 8.1 is managed as Special Areas, typically without harvest. None of the area is classified for suitable timber production (capable of growing industrial crops of timber). This area is now classified unsuitable due to its inclusion in the White Rocks National Recreation Area (NRA). In the past 10 years, no timber has been harvested.

There are no known current non-recreation Special Uses in this area. Several recreation events use the snowmobile trail along FR 30 that separates the Three Shanties RA and the Old Job RA. Outfitter/Guides under Special Use Permit, including one snowmobile tour operator, also use the boundary road/trail.

Recreation activities in this RA are similar to those that occur in other general forest areas throughout the National Forest. This use may include hunting, berry picking, dispersed camping, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA lies to the north of Peru Peak Wilderness and within the White Rocks National Recreation Area. Fifty-eight acres of maintained (burned) openings exist throughout this RA, off of FR 30 and FR 301. Dispersed camping is also evident along the travel corridors. In addition, several forested stands have been cut in the last 40 years. Some cutting was done in two stands in 1965, and four additional stands were harvested in the mid-1980's, two with regeneration cuts and two converted to permanent openings that were last burned in 1995. These four stands are located at the south end of the roadless area.

i. Key Attractions:

- Located within the White Rocks NRA
- Located adjacent to the Peru Peak Wilderness

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA does not have outstanding scenery. The road providing access through the RA breaks up the area's natural integrity. Maintained openings along FR 301 and FR 30 add visual variety to the landscape. Surveys for NNIS (Non-Native Invasive Species) have not occurred there, so the botanical integrity of the area cannot be estimated.

The stands in this area were regenerated from harvests and other land uses, and now look like young to middle-aged forests. There are no areas of forested land that are 15 years old or younger, and there are no areas of documented old growth conditions.

Forest Road 30 forms the northern boundary of the area, and FR 301 enters the area along the tributary to Big Branch Brook. FR 30 may present a barrier to the movement of small animals like salamanders and turtles from the tributary to wetlands and riparian habitat downstream towards Big Branch Brook. However, there are additional wetlands and riparian habitat northwest of the areas that are not blocked by a road.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, the Three Shanties RA is judged to have a low potential for providing solitude or primitive recreation. With good road access on the north, much of the northern and western edges are accessible by motor vehicles and have been subject to more management activities. This is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (100 %). The area is adjacent to the wilderness area, however, and would provide some benefit to the solitude of the existing area.

Outfitter/guide activity reduces the opportunity for solitude adjacent to the FR 30 road/snowmobile trail corridor. Large non-commercial group events are infrequent and usually brief in duration.

d. Special Features:

Scientific- Although there are no designated Research Natural Areas or Experimental Forests in this RA, the area does lie entirely within the White Rocks National Recreation Area.

Geological- There are no mapped areas of cliffs, talus, or outcrops, and no known areas of unique or rare rock formation in this roadless area.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this RA or portions of this RA as a representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed plant species, Regional Forester Sensitive Species, or other species of viability concern in this RA.

Rare and Endangered Animals- The Three Shanties RA is one in which American (or pine) marten were released during the early 1990's. Marten are considered Endangered in Vermont. They have not been confirmed for several decades, and are presumed nonexistent in Vermont. The Green Mountain National Forest cooperated with Vermont's Department of Fish & Wildlife in a recovery effort for marten through the release of 115 martens between 1989 and 1991 on Forest lands in the Towns of Wallingford, Mount Tabor, Stratton and Sunderland. Factors limiting marten establishment in Vermont have not been identified; there is no indication that wilderness designation will influence area suitability for marten.

Historical- Approximately 20 percent of area has been surveyed for Heritage Resources in the past. No historic sites are known or reported, and there is limited potential for prehistoric sites. There may be evidence of past structures or features associated with logging.

e. Size, Shape and Manageability: This area is in the Town of Mount Tabor and lies within the White Rocks National Recreation Area and is contiguous to and northerly of the Peru Peak Wilderness.

f. Boundary Conditions, Needs and Management Requirements: Some adjustment to the existing Peru Peak Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, as the GMNF now manages an adjacent area as wilderness.

Much of the non-motorized recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. The use of mechanical deer carriers would be prohibited if the area became wilderness.

Some of the recreation use that occurs in this RA would be affected by designation of the area as wilderness, particularly if the adjoining Old Job RA were also designated as wilderness, and FR 30 were closed. This would eliminate popular dispersed camping sites and key access to the northern ends of Big Branch and Peru Peak Wilderness Areas. The border road, if closed, would also affect the snowmobile trail system.

Wilderness designation on this parcel could reduce visual variety of the landscape. Currently maintained openings located along FR 301 and FR 30 would grow in over time if maintenance to keep them open could not occur.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

Big Branch and Lake Brook in this RA provides aquatic habitat for brook trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. This RA is currently included in the White Rocks National Recreation Area. Fisheries habitat management has been possible under this designation. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options.

The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication).

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: None of the RA is classified for suitable timber production (capable of growing commercial crops of timber). This area is now classified unsuitable due to its inclusion in the White Rocks NRA. In the past ten years, no timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this RA. There are no known easements or other encumbrances to the lands in this RA.

If Forest Road 30 on the boundary were closed, it may affect recreation event permits issued for specific events. Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Three Shanties Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation, due to the proximity to roads and snowmobile trails on its borders. As the RA is bounded by the Peru Peak Wilderness to the south, by Forest Road 30 (also Corridor 7 snowmobile trail) to the north, and by Forest Trail # 385 to the west, the noise and sights on these adjacent roads and motorized trails would preclude the development of solitude and wilderness values. Wilderness designation would also increase the expense and difficulty of conducting aquatic restoration work.

Much of this area has relatively high but not outstanding scenery, and there is a small area adjacent to the Peru Peak Wilderness with opportunities for solitude. Designation of this area as wilderness could also improve boundary management of the Peru Peak Wilderness.

Roadless Area 92009 (Old Job)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,094 acres
Private: 0 acres
Total: 1,094 acres

b. Location, Vicinity, and Access: The Old Job Roadless Area (RA) is adjacent to the northeast corner of the Big Branch Wilderness, and is located in the Town of Mt. Tabor, in Rutland County. Entirely located within the White Rocks National Recreation Area (NRA), as designated by Congress in 1984, this area is bordered by FR10, Corridor 7FI, and FR30/ Corridor 7 snowmobile trails to the north, east, and south. These border snowmobile trails are heavily used, with 500 to 1,000 people per day on busy weekends. The area is also accessed by the hiking trail FT412, Old Job Trail.

Old Job RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
322	North Old Job	Improved	.7	No	Soil	1

Old Job RA Trails	
Type	**Mileage**
Hiking	1.5

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Old Job RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA is at the base of mountain slopes heading south to Pete Parent Peak, north to Willard Mountain and smaller peaks, and southwest to Buckball Peak. Included within it are the confluences of Lake Brook from the south and Ten Kilns Brook from the north Big Branch Brook from the east. Slopes are moderately steep along the south side of the area south of Ten Kilns Brook, and part way up the north side of the brook. The northern end of the area becomes benchy and offers gentle to flat slopes, and there are wet flats along Ten Kilns Brook and Big Branch, although riparian area deepens along Big Branch toward the western half of the RA. Elevations range from 2,100 feet up the slope to the south, to 1,600 feet where Big Branch Brook leaves the area to the northwest.

Old Job RA Land Type Associations (LTAs):	
Low mountains & hills	69%
Plateau	31%

Old Job RA Vegetation:	
Northern hardwood	75%
Hardwood & red spruce	12%
Red spruce & balsam fir	4%
Open & plantation	9%

Old Job RA Site Indices:	
60+ (moderately high productivity)	66%
<60 (moderate to low productivity)	33%

The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce, with lowland spruce-fir to the east among the tributaries and wetlands on Ten Kilns Brook, and an area of riverine forest on alluvium along Big Branch Brook toward the west. The 13 acres of wetlands in the RA occur along the streams in six small patches. National Wetlands Inventory mapping indicates that the wetlands are primarily deciduous shrub and emergent wetlands, with a small patch of hardwood swamp and an area of open pond and dead trees. Tiny pockets of topographic enrichment occur in the area, scattered primarily in association with the wet flats. This RA includes much of the drainage basin for Ten Kilns Brook and the upper reaches of Big Branch Brook.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0											1,094	

Management Area 8.1 is managed as Special Areas, typically without harvest. None of the area is classified for suitable timber production (capable of growing industrial crops of timber). This area is now classified unsuitable due to its inclusion in the White Rocks National Recreation Area (NRA). In the past ten years, no timber has been harvested.

There are no known current non-recreation Special Uses in this area. Several recreation events use the snowmobile trail along FR 30 that separates the Old Job RA and the Three Shanties RA. Outfitter/guides under Special Use Permit, including one snowmobile tour operator, also use the boundary road/trail.

Recreation activities in this RA are similar to those that occur in other general forest areas throughout the National Forest. This use may include hunting, fishing, dispersed camping, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as moderate, with higher use occurring on busy weekends.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the Old Job RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. In addition, several stands were cut during the 1960s and 1970s. A series of permanent openings, including apple orchards, which serve as scenic vistas are located on the northern border of the RA, along FR 10. This RA also contains a picturesque river corridor, along the Big Branch River. Silas Griffith's "Old Job" mill village is also located in this RA.

i. Key Attractions:

- Located within the White Rocks NRA.
- Located adjacent to the Big Branch Wilderness.
- Dispersed camping areas located along FR 30 and along the Old Job Trail, including a suspension bridge and the Old Job Shelter that are popular with the public.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The Old Job RA appears moderately natural. The Old Job heritage site, suspension bridges, and maintained openings detract from the RA's natural appearance. The number and size of openings, as well as evidence of past harvests also diminish the RA's natural appearance. Surveys for Non-Native Invasive Species have not occurred there, so the botanical

integrity of the area cannot be estimated. This RA is surrounded on three sides by roads, including Forest Road 10 and FR 30. Due to the way the RA lies on the landscape, these roads serve as barriers to movement of small animals like salamanders and turtles from their riparian habitats to similar or upland habitats upstream of this area.

The stands in this area were regenerated from harvests and other land uses, and now look like young to middle-aged forests. There are no areas of forested land that are 15 years old or younger, and there are no areas of documented old growth conditions.

c. Opportunity for Solitude, Challenge and Primitive Recreation: The Old Job RA has good road access from the north and south, and includes 1.5 miles of trail. Due to this relative accessibility, the RA is judged to have a lower potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). The area is adjacent to the Big Branch Wilderness, however, and would provide some benefit to the solitude of the existing area.

Outfitter/guide activity reduces the opportunity for solitude adjacent to the FR 30 road/snowmobile trail corridor and on hiking trails in the area. Large non-commercial group events are infrequent and usually brief in duration.

d. Special Features:

Scenic- A series of permanent openings, including apple orchards, that serve as scenic vistas are located along FR 10. Big Branch is a picturesque river corridor.

Scientific- Although there are no designated Research Natural Areas or Experimental Forests in the Old Job RA, the RA is contained entirely within the existing designated White Rocks NRA.

Geological- There are no mapped areas of cliffs, talus, or outcrops, and no known areas of unique or rare rock formation in this roadless area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection.
The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed plant species, Regional Forester Sensitive Species, (RFSS) or other species of viability concern in this RA.

Historical- Although this RA has had limited systematic survey, there are a large number of significant historic archaeological sites associated with Silas Griffith's late 19th c. "Old Job" mill village, including mills, charcoal kilns (at Griffith and where Ten Kilns Brook crosses FR10), support buildings, residences, and a school. In addition, the openings and vegetative cover in the Old Job area along the stream are part of an historic landscape and character associated with old land-use patterns. The Old Job Trail shelter (along the former AT/LT route) was reportedly built by the CCC in the 1930s, and is eligible for the National Register. Finally, this is part of the route identified as the southern-most major

portage for Native Americans coming “up” the Otter Creek and crossing the West River/Connecticut drainage, and therefore has high potential for archaeological sites along the stream corridors.

e. Size, Shape and Manageability: This area is in the Town of Mount Tabor and lies within the White Rocks NRA and is contiguous to and easterly of Big Branch Wilderness.

f. **Boundary Conditions, Needs and Management Requirements**: Some adjustment to the existing Big Branch Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Non-motorized recreation in the Old Job RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry, and is provided in many places throughout the forest. The management of this recreation would be affected by decreased access for maintenance on the Old Job Shelter and the suspension bridge. Currently, FR 322 provides critical administrative access to these facilities that would be eliminated if the area were designated as wilderness. This would be closed under a designation of wilderness.

As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

Except for the loss of administrative access, the management of this wilderness would be relatively easy given the existing management of an adjacent wilderness.

Some of the recreation use that occurs within the area would be affected by designation of the entire area as wilderness. If the Old Job RA and the Three Shanties RA were both designated wilderness, FR 30 would be closed, causing detrimental effects to users of important dispersed recreational access. This closure would also impact the snowmobile trail system.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn’t dependent on mechanized access, or even on trails. There would be detrimental effect, however, on current recreation that requires motorized access and on administrative access for maintenance activities.

Wilderness designation on this parcel would cause a loss in visual variety of the landscape. Along FR 10, currently maintained openings that offer an opportunity to view out from the otherwise canopied corridor would grow in over time if maintenance to keep them open could not occur.

There is a popular dispersed campsite at the trailhead on FR30 on Lake Brook. At the convergence of Big Branch and Lake Brooks, there is the Old Job hiking shelter area. This area includes a table, latrine, and historic shelter. There is also a 67-foot suspension bridge at this location spanning Lake Brook. Use of this trail is estimated to be fewer than 50 people per day on peak days, based upon observations of local managers. This trail requires yearly maintenance with weed eaters and weed whips due to the nature of the local vegetation that includes lots of fast growing weeds and vines. A wilderness designation would make maintenance of bridge and trail more time consuming and expensive due to prohibitions on power equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness would provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

The Old Job RA encompasses an entire Deer Wintering Area (DWA), consisting of 49 acres. When an entire DWA is located within a roadless area, there is concern for long term DWA stability. Management goals for DWAs focus on two components, shelter and browse. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address habitat objectives in these DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management.

Big Branch, Ten Kiln, and Lake Brook in the Old Job RA provide aquatic habitat for brook trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. This RA is currently included in the White Rocks National Recreation Area. Fisheries habitat management has been possible under this designation. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit the ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: None of the area is classified for suitable timber production (capable of growing commercial crops of timber). This area is now classified unsuitable due to its inclusion in the White Rocks NRA. In the past ten years, no timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have an adverse effect on the management of heritage resources within the "Old Job" district by restricting management and evaluation of them (because these activities would require removal of vegetation and, in some cases, test excavations). It would also restrict management/maintenance of the openings which contribute to the historic landscape, and would inhibit appropriate and mandated prehistoric site inventory activities along the Big Branch and its tributaries If adjustments were made to the proposed boundary of the wilderness

area, this would eliminate the adverse effects on most of the historic period archaeological sites. Conducting prehistoric site inventory work along the Big Branch and its tributaries may still be inhibited.

f. Land Uses: No ongoing special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

Recreation event permits are issued as needed for specific events. Outfitter/guide use might be curtailed if the wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- There are no natural communities within this RA that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. The upland openings are maintained using prescribed burning; this would stop under wilderness designation. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this RA, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained within the RA.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Old Job Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation, due primarily to its proximity to roads and snowmobile trails on its borders. The noise and sights on adjacent roads and motorized trails, including Forest Road 30 (also Corridor 7 snowmobile trail) to the south, Forest Road 10 to the north, and Corridor 7 (snowmobile trail) to the east, would preclude development of solitude and wilderness values. These border trails are heavily-used snowmobile trails with 500 to 1000 people per day on busy weekends. A popular hiking trail in this RA joins the AT/LT, and includes a suspension bridge and shelter. Maintenance and replacement of these structures would be difficult, and may not be feasible if designated for wilderness. Wilderness designation would also increase the expense and difficulty of conducting aquatic restoration work and historic site evaluation.

This 1,094 acre area is within the White Rocks National Recreation Area. As the Big Branch Wilderness borders this area to the west, there is potential for some boundary management improvement with wilderness designation. Much of this area has moderate but not outstanding scenery.

Roadless Area 92010 (Griffith Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,532 acres
Private: 0 acres
Total: 1,532 acres

b. Location, Vicinity, and Access: The Griffith Brook Roadless Area (RA) is located to the east of the Peru Peak Wilderness. This RA is located in the Towns of Peru and Mt. Tabor, located in Bennington and Rutland counties. It is separated from an adjacent RA, Mt. Tabor Brook, by FR309 in the northeast.

Griffith Brook RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
FR12ext, FR310ext.	Unclassified	Unimproved	2.6		Soil	n/a

Griffith Brook RA Trails	
Type	**Mileage**
Cross Country Ski	1.9

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Griffith Brook RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA is comprised of the south-facing slope of Pete Parent Peak, and the east-facing slope of Peru Peak. These two slopes together form part of the drainage for Griffith Brook, which bisects the area. The mountain slope landscapes occur at the north end of the area near Pete Parent Peak, as well as along the main ridge to the west side of the area downslope from Peru Peak. The remainder of the area toward the southeast consists of the lower slopes of the main ridge, until in the southeastern corner the landscape flattens out into the plateau. Slopes can be quite steep along the northern edge of the area, but moderate through the rest of the area until they become gentle to flat in the southern third of the area. Elevations range from 2,600 feet up the slope to the north, to 1,650 feet to the east in the vicinity of Utley Brook.

Griffith Brook RA Land Type Associations (LTAs):	
Low mountains & hills	53%
Mountain slopes	38%
Plateau	9%

Griffith Brook RA Vegetation:	
Northern hardwood	85%
Hardwood & red spruce	15%

Griffith Brook RA Site Indices:	
60+ (moderately high productivity)	40%
<60 (moderate to low productivity)	60%

The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce in the low slopes and flats, northern hardwoods on the south-facing midslopes, and hardwoods with spruce on the steeper slopes and crests. A small area of potential lowland spruce-fir is noted in the northeastern edge along Utley Brook. Wet flats follow Griffith Brook through much of the area, although there are no wetlands documented along this stream. There is one five-acre wetland at the source of a small tributary to Griffith Brook. National Wetlands Inventory mapping indicates this is the only wetland in the area – a small open pond with dead trees. There is also a five-acre beaver pond with dead trees, and about three acres of brushy openings in two patches in the area. This RA also includes a portion of the headwaters for Griffith and Utley Brooks.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0		284			29	109			1,110			

Management Areas 2.1B and 3.1 emphasize a roaded environment, while Area 4.1 emphasizes Deer Wintering Areas. Management Area 6.2A emphasizes Semi-Primitive Recreation values.

Timber resource considerations:

- 1,521 acres (99%) are suitable for timber production (capable of growing commercial crops of timber).
- In the past 10 years, 77 acres of timber have been harvested.

Recreation activities in this RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). In addition, FT501 Little Michigan (1.02 miles) and FT502 Utley Brook (0.89 miles) are ski trails accessing the area from the southern and eastern borders. These trails are part of the Catamount ski trail system that goes the length of Vermont. Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation as low. There are no known Special Uses in this area.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. There are also about 94 acres of forested land that are 15 years old or younger. The northern portion of this RA has similar terrain of steep side slopes and is contiguous in elevation to the adjacent Peru Peak Wilderness.

i. Key Attractions:

- Located adjacent to the Peru Peak Wilderness
- Provides access to the Catamount Cross Country Ski Trail

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: Most of this RA appears natural, although a recent timber harvest has occurred in the northwest portion of the area, and cross-country ski trails appear on the southern and eastern borders. Surveys for Non-Native Invasive Species (NNIS) have occurred in one location in the RA, and none were found.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are about 94 acres of forested land that are 15 years old or

younger; these stands are going through the reorganization phase of development. There are no areas of documented old growth conditions. Forest Road 309 bounds the northeast edge of this area, but otherwise there are no significant roads that bound or enter the area that would serve as barriers to migration of small animals.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness area, provides potential for solitude, this drops off to low near the eastern edge which is accessible by motor vehicles and has been subject to more management activities. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) (47%), with some Semi-Primitive Motorized (SPM) (53%) and only a minor amount of Semi-Primitive Non-Motorized (1%). As the RA is adjacent to a wilderness area, it would provide some benefit to the solitude of the existing area.

FT501 Little Michigan (1.02 miles) and FT502 Utley Brook (0.89 miles) are ski trails in the area. These trails are part of the Catamount ski trail system that goes end-to-end through Vermont. Based on field staff observation, estimated use on these trails is less than 50 people per day on a busy weekend. Trails are ungroomed, with some difficult sections. These trails are maintained in agreement with the Mountain Valley Trail Association, a local ski club that does the maintenance work under a group volunteer agreement.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the RA.

Geological- There are no known areas of unique or rare rock formations in this roadless area.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed plant species, Regional Forester Sensitive Species, or other species of viability concern in this RA.

Historical- Two known historic archaeological sites are the substantial remains of farms located along a well-defined historic road (now used as a cross-country ski trail). Prehistoric potential in this area is low.

e. Size, Shape and Manageability: This area lies in the Towns of Mount Tabor and Peru and is contiguous to and southerly and easterly of Peru Peak Wilderness.

f. Boundary Conditions, Needs and Management Requirements: Some adjustment to the existing Peru Peak Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Much of the non-motorized recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. The use of mechanical deer carriers would be prohibited if the area were designated wilderness.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy considering the current management of the adjacent Peru Peak Wilderness. Illegal mountain bike and ATV use has occurred on FT 501, however. This would continue to cause managers problems if designated wilderness.

As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (47 acres) of a recognized deer wintering area (DWA). Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Management goals for DWAs focus on food and shelter requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management. Concern about the DWA's stability, and long term suitability, however, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

Griffith Brook in this RA is one in which Atlantic salmon (ATS) have been released annually since the 1980s. The ATS is an indigenous species currently being restored to historic waters throughout the Connecticut River Basin. The Green Mountain National Forest cooperates with the Vermont Fish and Wildlife Department and U.S. Fish and Wildlife Service in this effort to restore salmon in the White and West River watersheds.

Accessing historic habitat to restore juvenile salmon populations is critical to the cooperative restoration program. Management goals for ATS focus on restoration of spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options.

The Forest Plan directs that habitat be managed for 15 percent pool habitat and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 1,521 acres (99%) of the RA are classified as suitable for timber production (capable of producing commercial crops of timber). In the past 10 years, 77 acres of timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained in this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Griffith Brook Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. The western portion of this RA, adjacent to the Peru Peak Wilderness, would provide more opportunity for solitude, primitive recreation, and other wilderness values than the eastern and northern portions near existing roads. There is also potential for some boundary management improvement with wilderness designation.

Griffith Brook, in this RA, has had Atlantic Salmon released annually since the 1980's. Wilderness designation could increase the expense and difficulty of conducting aquatic restoration work and salmon stocking. There are also about 1.9 miles of the ungroomed Catamount cross country ski trail, with bridges, in this area. With wilderness designation, mechanized equipment would not be available

for trail and bridge maintenance. Noise and visual disturbance near the eastern and northeastern edges of the RA, which are close to roads and trails, would adversely affect wilderness character and experience within the sight and sound distances of these edges.

Roadless Area 92011 (Mt Tabor Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 464 acres
Private: 0 acres
Total: 464 acres

b. Location, Vicinity, and Access: The Mt Tabor Brook Roadless Area (RA) is in the Town of Mt. Tabor, in Rutland County. The area lies south of the White Rocks National Recreation Area (NRA). The Mt Tabor Brook RA is bordered by Forest Road 309 on the south, the Peru Peak Wilderness on the west, and FR10/Corridor 7 on the east. There are no roads or trails located in this area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Mt. Tabor Brook roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA consists of the bottom of the east-facing slope of Pete Parent Peak and the riparian zone and basin around the upper reaches of Mt. Tabor Brook. Mt. Tabor Brook flows south through the entire length of the RA. The northern tip of the area extends upstream as far as Devil's Den, but does not include it; this is where most of the mountain slope landscape is. The plateau landscape is in the southern portion of the area, along the flatter stretches of Mt. Tabor Brook, and continues south into low areas where Mt. Tabor Brook joins Utley Brook outside the RA. Slopes are moderately steep along the western edge where Pete Parent Peak starts to rise, and at the northern tip where slopes increase along Mt. Tabor Brook. Otherwise, the area is a mix of gentle slopes and flats, with wet flats being concentrated along Mt. Tabor Brook and its tributaries. Elevations range from 2,100 feet up the slope to the west, to 1,700 feet to the southeast along Mt. Tabor Brook.

Mt. Tabor Brook RA Land Type Associations (LTAs):	
Low mountains & hills	67%
Plateau	29%
Mountain slopes	4%

Mt. Tabor Brook RA Vegetation:	
Northern hardwood	91%
Hardwood & red spruce	5%
Open/ wetlands	4%

Mt. Tabor Brook RA Site Indices:	
60+ (moderately high productivity)	57%
<60 (moderate to low productivity)	53%

The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce along all the low slopes, and lowland spruce-fir along the wet flats in the center and eastern side of the area. There are 16 acres of wetlands concentrated in the center of the area. National Wetlands Inventory mapping indicates that most of these are stands of dead trees, with some deciduous scrub-shrub swamps and emergent wetlands, and one area of conifer-dominated swamp.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0	436					28						

Management Area 2.1A emphasizes roaded opportunities, while Area 4.1 emphasizes Deer Wintering Areas.

Timber resource considerations:

- 447 acres (96%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- In the past ten years no timber has been harvested.

There are no known non-recreation Special Uses in this RA.

Recreation use of the RA includes activities similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize its overall recreation use as low, except for higher use on Corridor 10 snowmobile trail (FR 10) which borders the area to the east.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the Mt. Tabor Brook RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. In addition, physical evidence of a farm, lodge, and mill remain in this area, as well as evidence of past harvests on its southern edge.

The eastern boundary of this parcel is FR 10. This road has a high visual sensitivity. Devils Den cave, a Special Geologic Area, lies just north of this parcel inside the White Rocks NRA. Mount Tabor Brook and associated wetlands traverse the length of the RA.

i. Key Attractions:

- Located adjacent to the Peru Peak Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA appears primarily natural, although the road on its eastern boundary has a high visual sensitivity. This road may also serve as a barrier to migration of small animals like salamanders and turtles to wetlands and riparian habitat to the east. The botanical integrity of the area cannot be estimated, as surveys for Non-Native Invasive Species have not occurred there.

All of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no areas of forested land that are 15 years old or younger, nor are there documented old growth conditions. There is evidence of a farm, lodge, and mill in this RA, as well as evidence of cutting from the 1990s along the southern edge.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, the Mt Tabor Brook RA is judged to have a low potential for providing solitude or primitive recreation. In addition, the RA's proximity to FR 10 and Corridor 10 gives it significant noise levels. This interpretation is consistent with information gained from a recent Inventory for the Recreation

Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). The RA is adjacent to an existing wilderness, however, and could provide some benefit to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Mt. Tabor Brook RA.

Geological- There are no mapped areas of outcrops or cliffs, areas of unique rock formations, or other areas identified by the State as significant geological resources in this RA. The Devils Den Cave Special Geologic Area lies just north of this RA. A small area in the northern tip along the western side of the RA is of Cavendish formation (acidic rocks of Cambrian origin, mainly quartz-muscovite schist), but consists of calcareous dolomite. This portion of the formation appears fairly uncommon, with only a little over 700 acres of it across Vermont.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state in this RA.

Historical- This area has moderate potential for prehistoric sites, given its proximity to the Devil's Den geologic area and the Indian portage between Otter Creek and the West River. There are two known historic archaeological sites in the RA: the "Britton Job" sawmill, and a farm. On the southern border of this area there are also the remains of the "Clark Lodge" – reputed to be the first recreational residence constructed on what are now Forest lands.

e. Size, Shape and Manageability: This area is located in the Town of Mount Tabor contiguous to and easterly of Peru Peak Wilderness.

f. Boundary Conditions, Needs and Management Requirements: Some adjustment to the existing Peru Peak Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The non-motorized recreation use that occurs within the RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. If the area were designated, mechanical deer carriers would be prohibited.

Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, given the existing management of the adjacent Peru Peak Wilderness.

Two short spur roads have been closed in the past due to soil and water concerns, to prevent motor vehicle access to Mt Tabor Brook, a popular camping site.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (for example wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (for example black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (for example leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.).

This RA is adjacent to a recognized deer wintering area (DWA). Management goals for lands directly adjacent to DWAs focus on food requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these areas adjacent to DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management.

Mount Tabor Brook in this RA is one in which Atlantic salmon (ATS) have been released annually since the 1980s. The ATS is an indigenous species currently being restored to historic waters throughout the Connecticut River Basin. The Green Mountain National Forest cooperates with the Vermont Fish and Wildlife Department and U.S. Fish and Wildlife Service in this effort to restore salmon in the White and West River watersheds.

Accessing historic habitat to restore juvenile salmon populations is critical to the cooperative restoration program. Management goals for ATS focus on restoration of spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 15 percent pool habitat and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 447 acres (96%) of the RA are classified as suitable for timber production (capable of producing commercial crops of timber). In the

past ten years, no timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: As archaeological research typically requires the removal of vegetation and, in some cases, test excavations, wilderness designation of this RA may inhibit the research and evaluation activities that may be of interest at the RA's Britton Job historic site. Reconsidering the proposed boundary so that it excludes the Britton Job and Clark Lodge sites would avoid the adverse effect on them.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Mt. Tabor Brook Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. Bounded by the Peru Peak Wilderness on the west, this 464-acre RA could enhance the quality of the adjacent wilderness. There is potential for some boundary management improvement with wilderness designation.

The RA's close proximity to bordering roads and snowmobile trails restricts opportunities for solitude and other wilderness character and values in this area. The noise and sights on adjacent roads and motorized trails to the west and east would preclude development of solitude and wilderness values over time. Mount Tabor Brook, flowing south through the entire RA, has had Atlantic Salmon released annually since the 1980's. Wilderness designation could increase the expense and difficulty of conducting salmon stocking work, as well as aquatic restoration work. Historic site evaluation could also be more difficult with designation, as access would be by foot or other primitive means, adding cost and difficulty to the monitoring. The 96% of the RA classified as suitable for timber harvest would not be available if the area was designated wilderness.

Roadless Area 92012 (Homer Stone)

1. OVERVIEW

a. Acres:

Forest Service: 11,489 acres
Private: 130 acres
Total: 11,619 acres

b. Location, Vicinity, and Access: The Homer Stone Roadless Area (RA) is located in the Towns of Mt. Tabor and Wallingford, in Rutland County. Over 90 percent of this roadless area is located within the White Rocks National Recreation area, designated by Congress in 1984. A small section of the RA's southern boundary is adjacent to the Big Branch Wilderness. The RA is also bordered by FR10 Corridor 7, FR31 Corridor 7, FT334, and FR20, Wallingford Pond. This area has numerous trails and roads within its boundaries. One of these roads, FR60, Black Branch, provides significant access to the RA's recreation lands, and has a higher than normal traffic volume.

The area is also accessed by multiple hiking trails and snowmobile trails. An important component of the hiking access is the eight miles of Appalachian Trail/Long Trail (AT/LT) corridor that cross the area. Additionally, the snowmobile trail system on the southeastern side of the RA is extensive. Multiple trails in the area receive moderate use, with traffic primarily focusing on access to Wallingford pond.

Homer Stone RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
60	Black Branch	Improved	1.3	No	Cr. gravel	2
247	Homer Stone Mtn.	Unimproved	.7	No	Soil	1
	Unclassified	Imp./Unimproved	.6			

Homer Stone RA Trails	
Type	**Mileage**
Hiking	14.4
Snowmobile	9.9

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Homer Stone roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Mountain slopes in this RA occur along the crest of the escarpment to the west, including along Green Mountain Ridge, White Rocks, and Homer Stone Mountain as well as in the southeastern portion, Wilder and Willard Mountain. Plateau landscapes are found around a series of wet flats along Big Black Branch Brook south of Wilder Mountain, and around wet flats at the headwaters of Feller Brook north and east of Wilder Mountain. Extremely steep slopes, cliffs and talus are associated with Green Mountain Ridge, White Rocks, and the Homer Stone ravine; steep slopes and thin soils with outcrops are generally found along the upper slopes of the other mountains. Gentle slopes are associated with the lower slopes of the mountains and ridges, and the flats are concentrated along the stream corridors as well as on benchy slopes. The headwaters of Big and Little Black Branch, Homer Stone Brook, Bully Brook, and Feller Brook are found in this area. Elevations range from 2,750 at the top of Wilder and Willard Mountains, to 1,000 feet near the base of the escarpment toward the north.

Homer Stone RA Land Type Associations (LTAs):

Low mountains & hills	48%
Escarpment	21%
Mountain slopes	16%
Plateau	12%
Upper mountain slopes/ mountain top	3%

Homer Stone RA Vegetation:	
Northern hardwood	70%
Hardwood & red spruce	16%
Red spruce & balsam fir	5%
Open	3%
Aspen/paper birch	3%
Uncommon (white pine, hemlock, red oak)	3%

Homer Stone RA Site Indices:	
60+ (moderately high productivity)	29%
<60 (moderate to low productivity)	71%

The potential natural vegetation of the area is a mix of northern hardwoods on the sideslopes of Willard and Wilder Mountains and along the east-facing slopes of Homer Stone Mountain and White Rocks, spruce-northern hardwoods with outcrops along the steep escarpment slopes and along the west-facing slopes of Homer Stone Mountain and other steep places, complexes of wet spruce-northern hardwood swamps, lowland spruce-fir swamps, and wet forest with open wetlands in association with the wet flats and wetlands, red oak-northern hardwoods and hemlock along the escarpment along the middle to low slopes, and spruce-northern hardwoods elsewhere. National Wetlands Inventory mapping indicates that the RA's 441 acres of wetlands are a mix of open and forested types, including ponds and lakes, emergent marshes, deciduous and evergreen scrub-shrub swamps, and evergreen and deciduous forested swamps. Most of the RA's wetlands are found in the plateau landscapes, with the remainder along other small streams. The majority the wetlands are deciduous shrub swamps and conifer swamps. Some areas of enrichment also occur in the area, either in association with cove slopes and wetlands along riparian zones, or along the escarpment from calcareous bedrock.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	130	28				135	246					10,761	319

Management Area 8.1 is managed as Special Areas, typically without timber harvest. Areas 2.1A and 3.1 emphasize roaded environments, while 4.1 emphasizes Deer Wintering Areas. In Area 9.2, the management strategy is to protect all options until studies determine the desired condition.

Timber resource considerations:

- 777 acres (6%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- 10,661 acres (92%) are classified as unsuitable, due to the RA's inclusion in the White Rocks National Recreation Area (NRA).
- 16 acres of timber have been harvested in the last 10 years.

This RA receives significant motorized and non-motorized trail use. Dispersed recreation activities in the RA are similar to those occurring in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with this RA characterize its overall recreation use as moderate to high, especially on busy weekends and near favored locations.

One high non-motorized use area is the hike into Little Rock Pond on the AT/LT and the FT416 Little Rock Pond Loop hiking trail. These trails receive over 100 visitors per day on busy weekends, based on trailhead observations. There is a large paved parking area and vault toilet at the trailhead, and a shelter located on the Pond that is maintained by the Green Mountain Club (GMC). The FT424 Green Mountain hiking trail provides an alternative return route back to the Little Rock trailhead.

To the north of Little Rock Pond, adjacent to the AT/LT, is the FT 411, 414, 414.01 White Rock hiking trails. As the vistas provided on the White Rocks are popular, use levels from the parking area indicate over 100 people per day on busy weekends. This trailhead also has a paved parking area and vault toilet.

On the north end of the RA, the FT433 Keewaydin hiking trail provides access from the White Rocks trailhead to the AT/LT. Use levels on this trail are more than 100 people per day on a busy weekend, based on parking lot observations.

The FT406 Homer Stone hiking trail, which begins in the Town of South Wallingford, also provides access into the Little Rock Pond area. The use on this trail is less than 100 people per day. There are no structures on this trail.

One Special Use Permittee uses the snowmobile trail network in or adjacent to this area for guided tours. Other permittees use those snowmobile trails for recreation events. Various outfitter/guide permittees do a variety of hiking or backpacking activities on the trails of the area. A Special Use Permit has also been issued to the Green Mountain Club for the management of the AT/LT shelters at Little Rock Pond.

The owner of the private land northwest of the Wallingford Pond Trailhead holds an easement for the road providing access to the parcel and a Special Use Permit for a water system for the property. The Wallingford Fire Department #1 has 1,085 acres of Surface Water Source Protection Area in this roadless area, as well as 43 acres in a Wellhead Protection Area.

There is also motorized use of this RA. FT320, the Wallingford Pond snowmobile trail, receives use of 100 to 500 people per day. This is a secondary groomed trail to Wallingford Pond, with no structures. There has also been some illegal use by ATVs, dirt bikes, and mountain bikes on this trail. FT320, 323, 324, 325, the Homer Stone snowmobile trails also receive use of 100 to 500 people per day. These are primitive ungroomed trails to Wallingford Pond with two bridges. There has also been some illegal use by ATVs, dirt bikes, and mountain bikes on trail 325. The FT330/ FR60 snowmobile trail, which serves as part of Corridor 7, receives use of 100 to 500 people per day. The attraction is access to the Wallingford area trails. FT331, the Willard Mountain snowmobile trail, is a primitive ungroomed trail with one bridge, and the destination attraction is also Wallingford Pond. FT332, the Fifield snowmobile trail to Fifield Pond, is a primitive ungroomed trail with no structures and low use of less than 100 people.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: In this RA, the White Rocks Cliffs are a featured landscape element, from the Vermont Escarpment LTA. Views to these cliffs can be seen from Vermont Route 7, as well as from the White Rocks Picnic Area and trails

leading from the picnic area toward the Ice Beds Cave. In addition, there are two remote ponds in this RA, Little Rock Pond and Fifield Pond, which are managed to provide a natural appearing landscape. Tent platforms have been constructed along Little Rock Pond to minimize resource damage throughout the pond shoreline. Views to the pond can be seen from the tent platform area, as well as locations along the pond edge. In addition, Wallingford Pond is located in the National Recreation Area (NRA) outside of this parcel to the east. A small trailhead parking area and four-wheel drive road is located on the eastern boundary of this RA, associated with Wallingford Pond. FT424 (Green Mountain Trail) also traverses the Vermont Escarpment and offers views toward the west. The escarpment has a high proportion of ecological types that are limited to this landscape on the Forest.

i. Key Attractions:

- The White Rocks Cliffs are steep facing slopes of exposed quartzite rock.
- Boulder caves at the bottom of the cliffs hold the previous winter's ice for most of the summer and create a very cool micro-climate.
- Little Rock Pond and Fifield Pond offer a natural appearing landscape in a remote setting.
- This RA is the core of the White Rocks National Recreation Area, which was designated by Congress as part of the Vermont Wilderness Act of 1984.
- The Appalachian Trail traverses the length of the parcel. The AT/LT from FR 10 to Little Rock Pond is one of the heaviest used day-hike stretches on the Forest because it is short, easy, accessible, and terminates at a beautiful spring-fed mountain pond.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: In general the scenic integrity of the parcel is high. Developments such as White Rocks Picnic Area, Wallingford Pond and Little Rock Pond Trailheads are located on the edges of the parcel. Although trails do traverse through the area, most of them are primitive in design. A groomed snowmobile trail FT330 does travel through the area.

Surveys for NNIS (Non-Native Invasive Species) have occurred in a few locations. At the Big Branch Picnic Area, *Lythrum salicaria* (purple loosestrife) was found and pulled out, and at the Wallingford Pond Trailhead, no NNIS were found. Six of the sixty-two non-forested sites mentioned above have had surveys for NNIS, and none were found. The relative lack of NNIS in all of these disturbed sites suggests that the surrounding forest in at least these sections is also likely to be uninfested.

Most of the stands in this area were regenerated from harvests and other land uses, and now look like young to middle-aged forests. There are 16 acres of forested land in this RA that are 15 years old or younger, and so are reorganizing after a regeneration harvest. There are 68 acres in four stands that are transitioning toward old growth conditions. These stands are all along the southern end of the escarpment in this area, and are described as steep and rocky with hemlock, spruce and white pine, and may very well have old growth characteristics, although the largest sized stand is 32 acres and the smallest five. There has been cutting in the area over the last 40 years, primarily along the southern edge of the area in the mid-1980s and around Fifield Pond in the mid-1960s. These harvests included regeneration harvests of 18 stands or 471 acres (3 percent), half of which happened in the 1980s.

There are several roads and trails associated with this roadless area. Forest Road 10 forms the southern boundary; FR 31 follows a short stretch of the southeastern boundary; FR 20 follows a short stretch of the northeastern boundary, and FR 60 enters into the area from the south and ends between Willard and Wilder Mountains. FR 10 separates Ten Kilns Brook and associated wetlands from the confluence with Big Branch Brook, and so presents a barrier to movement of small animals like amphibians from downstream habitat. However, there is a great abundance of this habitat north of the road, and so this barrier may not prove of great consequence to biodiversity in the area. FR 31 and 20

likewise separate some riparian and wetland habitat from areas of similar habitat outside the roadless area, but only for short stretches, and not to the extent that access to suitable habitat is limited. FR 60 extends almost to the height of land between the two mountains, and cuts across Ten Kilns Brook dividing upstream wetland habitat from downstream habitat. Because of the length of that road segment to the height of land, this road may also serve as a barrier between upstream and downstream habitat for amphibians, with the bulk of the wetlands east and south of the road.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from almost all directions), this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the interior portions provide a high potential for solitude, this drops off to low near the edges, or near roads and trails. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (43%), with some Semi-Primitive Motorized (40%) and a small amount of Semi-Primitive Non-Motorized (17%).

Outfitter/guide activity reduces the opportunity for solitude along the AT/LT and its feeder trails. Outfitter/guide groups are limited in their use of Little Rock Pond due to its popularity.

d. Special Features:

Scenic- White Rocks Cliffs are steep facing slopes of exposed quartzite rock located within the Vermont Escarpment Land Type Association. Boulder caves at the bottom of the cliffs hold the previous winter's ice for most of the summer and create a very cool micro-climate. Fifield Pond and Little Rock Pond (along the AT/LT) have remote settings along the AT/LT. Views to the pond can be viewed from the tent platform area as well as locations along the pond edge.

Scientific- There are no designated Research Natural Areas or Experimental Forests, in the Homer Stone RA, but the majority of the area (90%) lies within the existing designated White Rocks National Recreation Area. The area also includes three Special Areas: Fifield Pond and Little Rock Pond (two of the protected "High Elevation Ponds"), and a section of the Appalachian/Long Trail that extends through the area for its entire length.

Geological- There is a small lens of Precambrian calcite and dolomite marbles along the southern edge of this RA. This rock type is fairly uncommon in the State, accounting for only 2,300 acres statewide in 11 patches. There are no known areas identified by the State as significant geological resources, aside from White Rocks.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection.
The Vermont Biodiversity Project (Thompson 2002) identified the western two-thirds of this area as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that most of this area, in spite of extensive areas of escarpment, had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. Part of the reason for the low values on the escarpment may be that there are better places within the Green Mountains to capture meaningful acreages of those uncommon ecological types than in this RA, where they are generally very few and in very small patches. Small portions of the area in the southwestern corner of the area had moderate irreplaceability values, due to the presence of less common ecological types.

There are several ecological features noted from this roadless area:

- Fifield Pond – currently a Special Area on the Forest; includes a very high quality example of a large (50 acres) poor fen (a slightly enriched open peatland), which is considered a rare natural community in Vermont. Is also a known location for four species of viability concern or of concern to the State of Vermont – Michaux sedge (*Carex michauxiana*), water sedge (*Carex aquatilis*), water bur-reed (*Sparganium fluctuans*) and matted spikerush (*Eleocharis intermedia*). This is a unique pond, having a poor fen with a central pond, with the pond two-thirds filled with floating mats of sedges and leatherleaf, with some spruce bog characteristics in the northwest corner. The area is surrounded by a narrow ring of conifers set in deciduous forest, and has been affected by beaver-influenced water level changes. There are currently no known threats to this pond due to its remoteness.
- Little Rock Pond – currently a Special Area on the Forest; known location for the rare plant low-water milfoil (*Myriophyllum humile*). This is a small, 15-acre high elevation softwater pond that is sparsely vegetated, and has not been evaluated as to its quality compared to the other inventoried high-elevation ponds. However, the State of Vermont considers the pond a significant biological feature as habitat for the rare plant, and they recommend keeping campsites well away from the pond edge.
- Green Mountain Ridge – The State of Vermont considers this area a significant biological feature for good quality examples of white pine-northern hardwood forest and hemlock forest. These two natural communities occur as separate patches along the escarpment ridgeline. The 19-acre white pine-northern hardwood community consists of a very steep, dry, rocky, west-facing slope with a moderately dense stand of tall, old white pines, hemlocks, and red spruces with scattered mature red pine. The surrounding forest is a mixture of younger hardwoods and softwoods. The 17-acre hemlock forest sits on a rocky knoll that drops off steeply to all sides, with mostly hemlock in the overstory and virtually no understory or ground vegetation. In addition, a small grove of very large sugar maple trees occurs further north along the escarpment ridge – these trees were aged up to 170 years and were as large as 27” in diameter. There do not appear to be any known threats at this site, although the State recommends no harvesting here.
- White Rocks – This site is tracked by the State of Vermont as a high quality significant biological feature for the natural communities of open talus, montane spruce-fir, and boreal acidic cliff, as well a habitat for peregrine falcon, and the uncommon plant spikemoss (*Selaginella rupestris*) which is of viability concern to the Forest. This site includes large open talus in three patches, with the spikemoss occurring in cracks; a large cliff of circumneutral Cheshire quartzite with scattered spruce and heath, where peregrine falcons have nested historically; and a mature spruce forest of about 270 acres, found above the cliff and along steep slopes adjacent to the cliff and talus, and including white pine and hemlock. The surrounding forest is a northern hardwoods. There are no known threats to the site, although the state recommends no harvesting of the spruce-fir forest.

Rare and Endangered Plants- There are two ponds and one open talus community in this RA with known occurrences of plants that are either on the Regional Forester Sensitive Species (RFSS) list or are tracked by the State of Vermont. At the first pond, there are four plants on the RFSS list – *Carex aquatilis* (water sedge), *Carex michauxiana* (Michaux sedge), *Sparganium fluctuans* (water bur-reed) and *Eleocharis intermedia* (matted spikerush). In the open talus community, there is one plant on the RFSS list, and one that is state-tracked – *Selaginella rupestris* (rock spikemoss), and *Milium effusum* (tall millet-grass), respectively. At the second pond, there is one plant on the RFSS list – *Myriophyllum humile* (low water-milfoil). According to FS files, the vicinity of a picnic area is a site with a moderate possibility for *Juglans cinerea* (butternut – RFSS). Also, of the many non-forested sites (see below), six have had surveys for rare plants, and of these, one has an occurrence of *Geum laciniatum* (rough avens – RFSS).

Carex aquatilis, *Carex michauxiana*, *Eleocharis intermedia* are species of open wetlands that could potentially be threatened by changes in hydrology or succession. *Geum laciniatum* also occurs in moist to wet, partially open habitats, which are also susceptible to succession or changes in hydrology. *Sparganium fluctuans* and *Myriophyllum humile* are pond species that are susceptible to changes in water quality. *Selaginella rupestris* is a plant of talus woodlands, in full sun or partial shade.

Rare and Endangered Animals- This RA is one in which American (or pine) marten were released during the early 1990s. Marten are considered Endangered in Vermont. They have not been confirmed for several decades, and are presumed nonexistent in Vermont. The Green Mountain National Forest cooperated with Vermont's Department of Fish & Wildlife in a recovery effort for marten through the release of 115 martens between 1989 and 1991 on Forest lands in the Towns of Wallingford, Mount Tabor, Stratton and Sunderland. Factors limiting marten establishment in Vermont have not been identified; there is no indication that wilderness designation will influence area suitability for marten.

The cliffs of White Rocks, in this RA, are a historical nest site for the Vermont Endangered peregrine falcon. During the early to mid 1980s, this location served as a release site for falcon reintroduction in Vermont, and the northeast. To date, this site has not been used by free-living peregrine falcons for nesting purposes. It is not clear why peregrine falcons are not using White Rocks; there is no indication that wilderness designation will influence peregrine falcon use of this cliff.

Historical- Mt Tabor section: In the western portion, along the LT/AT, there is a cluster of well-preserved charcoal kiln remains immediately north of FR10. Further north is one of the most significant and largest prehistoric sites in Vermont. Research, preservation and stabilization activities on this National Register (NR)-eligible site are critically important. The southern third of Green Mountain also appears to have high potential for prehistoric sites given the exposure and availability of massive amounts of high quality quartzite bedrock (used by Native people to make stone tools). Also, the wetlands complex in the upper portions of the Big Black Branch has high potential in selected areas. Along the north side of FR10 are several historic sites, the remains of historic homes, farmsteads, and at least one mill. FR60 is essentially a re-built historic road, with the archaeological remains of numerous 19th century homes, farm and mill sites associated with its original route.

Wallingford section: In the western/central portion of this section, the AT/LT runs through the NR-nominated Aldrichville historic archaeological mill district, consisting of the remains of numerous turn-of-the-19th-century structures. These sites offer visible clues to the turn-of-the-20th-century village and, by extension, the intensive use of the landscape at this time. The archaeological District as a whole warrants maintenance, research and preservation attention in the future. There are also numerous historic sites along the old (more westerly) Wallingford Pond Road and its extension south into 92012. Further east there are additional historic farm sites that are part of a larger population of sites south and east of the RA that could make up another NR historic "district" of rural 19th century sites. Prehistoric potential appears to be low-to-moderate except in association with significant streams and ponds (e.g., Fifield Pond).

e. Size, Shape and Manageability: This RA lies in the Townships of Mount Tabor and Wallingford, and much of it falls within the White Rocks National Recreation Area. The area contains 11,619 acres, and includes a private inholding of about 120 acres westerly of FR 20. There is at least one camp on the property, and motorized access is used.

f. **Boundary Conditions, Needs and Management Requirements**: Where the White Rocks NRA boundary is coincident with property boundary lines for the most part the property boundary lines are

not marked to current Forest Service standards, as well as some of the private boundaries, as outlined above.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Non-motorized recreation use in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is not dependent on remote backcountry and is provided in many places throughout the forest. Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent. Mechanical deer carriers would be prohibited if the area were designated as wilderness.

As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

Some of the recreation use that occurs in this RA may be affected by designation of the entire area as wilderness. There is at least one low standard road that enters the area, and currently provides motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to much of the use that is currently occurring. Designation would also eliminate the operation of the snowmobile tour guide. The snowmobile-based recreation events would be diverted to other trails or eliminated.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There would be significant detrimental effect, however, on current recreation that requires motorized access. Since these areas are scattered through much of the RA, it boundary relocation may not be able to mitigate these conflicts without affecting the integrity of the roadless area.

Minimal clearing has taken place along the trail from White Rocks Picnic Area to the ice beds to view the white rocks, as well as in portions of the area surrounding Little Rock Pond. Although wilderness designation may lessen the opportunity to view scenery, the effect would be minimal.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as Wilderness will provide greater benefit for reclusive species relying on mature forest conditions. This RA is one of the larger areas (over 10,000 acres) being evaluated at this time. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire etc.). Areas currently maintained as early successional units (nearly 400 acres in this RA) would disappear with the passage of time.

This RA contains an entire Deer Wintering Area (DWA), and more than 50% of a second DWA, totaling 1,169 acres. With wilderness designation, some vegetative management options would not be

available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern for long term, DWA stability is greatest in this situation, where an entire DWA, and a significant portion of a second, is located in an RA.

Homer Stone, Big Black and Bully Brooks provide aquatic habitat for brook trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. This RA is currently included in the White Rocks National Recreation Area. Fisheries habitat management has been possible under this designation. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit the ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The Wallingford Fire Department #1 has 1,085 acres in a Surface Water Source Protection Area in this RA. They also have 43 acres of Wellhead Protection Area in the RA. Their wellhead is located at the White Rocks Picnic Ground, outside of the RA. These are areas of land that directly contribute to the public water supply source. It is important that activities within the protection areas do not discharge contaminants, which may threaten the groundwater used for human consumption. As a reservation of the original sale to the US, the Town of South Wallingford has the right to take water from springs on Tract 34, which is 2,832 acres totally contained in this RA. Protection is currently provided by following Forest Plan Standards and Guidelines, as well as State Acceptable Management Practices (AMPs). Wilderness designation would not change these protected areas. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 777 acres (6%) are classified as suitable for timber production (capable of producing commercial crops of timber). In the past 10 years, 16 acres of timber have been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have an adverse effect on:

- The known National Register (NR)-eligible prehistoric site, by inhibiting research and site preservation efforts that may require some soil-disturbing test pit excavation and attendant removal of vegetation at these locations;
- The NR-eligible Aldrichville District, by inhibiting the ability to conduct maintenance, stabilization and research activities requiring some soil-disturbing test pit excavation and attendant removal of vegetation at these locations; and
- The numerous other historic and prehistoric archaeological sites in this section, by inhibiting Forest Service evaluation of them in the field.

f. Land Uses: The owner of the private land northwest of the Wallingford Pond Trailhead holds an easement for the road providing access to the parcel, and a Special Use Permit for a water system for the property. The private land served by the road under Special Use Permit is an inholding. The legal requirement to provide access placed on the Secretary of Agriculture by the Alaska National Interest Land Conservation Act does apply in this case. Adjusting the boundary to exclude the road and the water system and the area east of them to the Forest boundary would remove a negligible amount from this roadless area.

There is a public road right-of-way "east of Fifield Pond" in this RA. It is believed that this is an existing town road on the eastern boundary of the RA, and research of Forest records could not confirm without a survey. In addition, Forest Road 60, Black Branch, provides significant access to recreation lands and has a higher than normal traffic volume.

Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire/Insects/Disease- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, in which this RA is included. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. In the remainder of the area, wildfire occurrence is rare and restrictions on fire control techniques would be minimal. Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are two ponds that are considered significant features in the RA due to their remoteness, their high quality as examples of high elevation softwater ponds, and as habitat for rare and uncommon plants. Habitat quality and integrity could improve or remain the same regardless of wilderness designation, as these areas are currently remote. Protection through wilderness designation would not generally lead to reductions in habitat quality. Of the species associated with the ponds, *Carex aquatilis*, *Carex michauxiana*, *Eleocharis intermedia* are species of open wetlands that could potentially be threatened by changes in hydrology or succession. The latter occurs so slowly that it is not a major concern. The Forest's inability to manage beaver activity could potentially be a detriment if this area were to be designated wilderness; however, beaver also help to maintain the openness of wet sites. *Geum laciniatum* also occurs in moist to wet, partially open habitats, which are also susceptible to succession or changes in hydrology. Given that this species is known mostly from sites that the Forest actively maintains as open, designation as wilderness, which would prevent these activities, would most likely result in the loss of this species from many sites. *Sparganium fluctuans* and *Myriophyllum humile* are pond species that are susceptible to changes in water quality. While designation as wilderness might attract more people to this pond, it would not limit the Forest's ability to close an area or reroute a trail to protect rare plants, if necessary.

White Rocks and Green Mountain Ridge are significant areas representing high quality examples of natural communities in the State, and habitat for two rare or uncommon species. For the most part,

these communities and species do not require intervention to maintain their viability (e.g. habitat management through cutting vegetation or other disturbances); consequently wilderness designation would not generally change habitat suitability. *Selaginella rupestris* is a plant of talus woodlands that grows in full sun or partial shade at White Rocks. Designation as wilderness would prohibit forest management activities that would keep succession from occurring at the site where this species occurs and could lead to loss of viability of at least the plant on the Forest; however, talus woodlands are, by nature, unstable habitats, and adequate openness may occur without intervention. This site is not currently actively maintained and there is currently no evidence that the open rocks are in danger of becoming shaded.

Non-Federal Lands- There are 130 acres of private lands in this RA. Easements exist for motorized use to allow access to some inholdings; these may be close to a boundary and could be excluded with boundary adjustments.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Homer Stone Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation. Although this RA contains some significant features, its extensive network of snowmobile trails, roads, private inholding, and high-use hiking trails restricts opportunities for solitude and other wilderness character and values. This is a popular four-season recreational use area. It contains about 2 miles of roads, 14 miles of hiking trails (including 8 miles of AT/LT), and 10 miles of snowmobile trails. The snowmobile trail system on the southeast side of the RA is extensive. Opportunities for solitude and primitive experience are low on the edges due to proximity to roads and snowmobile trails. Outfitter guide activity and high use on the AT/LT reduce the opportunity for solitude in this trail corridor during hiking season peak periods. Noise and visual disturbance on adjacent roads and trails would adversely affect wilderness character and experience within the sight and sound distances of these edges. Wilderness designation would also increase the expense and difficulty of conducting historic site evaluation.

The White Rock Cliffs, seen from Route 7 and several trails and viewpoints in the RA, appear quite natural. The RA also has unique ecological features in the escarpment and associated cliffs and talus. Little Rock Pond and Fifield Pond, which add to the natural appearance of the area, have known occurrences of plants that are on the Regional Forester's Sensitive Species List or tracked by the State of Vermont. Wilderness designation is projected to be neutral to somewhat beneficial for these areas. Opportunities for solitude and primitive experience are high in the interior of the RA. There are 68 acres along the southern end of the escarpment with trees older than 170 years that are developing old growth characteristics. These large trees would contribute to wilderness character of the area.

Roadless Area 92013 (South End)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 839 acres
Private: 0 acres
Total: 839 acres

b. Location, Vicinity, and Access: The South End Roadless Area (RA) is in the Town of Mt Tabor, in Rutland County. This RA is bordered on the east by the Big Branch Wilderness, and on the southwest by Forest Road 259, East Dorset. To the west of the RA is US Route 7, and on the north end is the Mt. Tabor Work Center. Less than half a mile of hiking trail crosses the southern end of the RA.

South End RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
48A	Danby Depot Spur	Unimproved	.3	No	Bank-run Gravel	1

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 85 percent of the South End roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province; 15 percent occurs within the Taconic Mountains Subsection. This RA lies essentially along the lower slopes and base of Baker Peak along the western escarpment, picking up some valley bottom along the western edge of the area. Slopes are excessively steep with cliffs on the eastern edge of the area along the transition from lower to middle slopes of the escarpment; from here to the west, slopes gradually lessen, until they become flat along the western edge of the roadless area. Elevations range from 1,250 feet along the escarpment at the southern end of the area, to 700 feet along the valley bottom. The northern half of the area has a bench along the lower escarpment slope that is also flat, before it slopes down to the valley bottom. Some of the 53 acres of wetlands occur here along this bench, as well as in the valley bottom along Otter Creek.

South End RA Land Type Associations (LTAs):	
Escarpment	85%
Valley bottom	15%

South End RA Vegetation:	
Northern hardwood	79%
Open & plantation	10%
Wetlands	6%
Hardwood, spruce, hemlock, w. pine	3%
Hemlock	2%

South End RA Site Indices:	
60+ (moderately high productivity)	99%
<60 (moderate to low productivity)	1%

The potential natural vegetation of the area is a mix of northern hardwoods along the lower slopes of the escarpment, red oak-northern hardwoods at the base of the escarpment on the gentle slopes but

above the valley, spruce-northern hardwoods along the steepest slopes of the escarpment in the area and within deep river valleys along Big Branch Brook along the northern border and McGinn Brook at the south end, and hemlock swamp in the wetlands. National Wetlands Inventory mapping indicates that the existing wetlands are all forested wetlands, with a combination of coniferous and deciduous wetlands. McGinn Brook passes through this area to the south, with its headwaters east in the adjacent Big Branch Wilderness, and Big Branch Brook forms a portion of the northern boundary.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						839						

Management Area 4.1 emphasizes Deer Wintering Areas.

Timber resource considerations:

- 714 acres (85%) are suitable for timber production (capable of growing commercial crops of timber).
- 400 acres of timber selection harvest has been harvested in the last ten years.

There is a Special Use Permit for maple sugar tapping in the north part of this RA, served by a road through the Mount Tabor Work Center.

Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. These uses may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the South End RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. In addition, this area includes portions of the western escarpment, a steep west-facing slope which has a high proportion of ecological types that are limited to this landform. Furthermore, although the South End RA is adjacent to the Big Branch Wilderness, it looks out toward US Route 7, which has a high visual sensitivity.

i. Key Attractions:

- McGinn Falls is a scenic cascade located toward the southern end of this RA along McGinn Brook, in a remote setting.
- Big Branch, a scenic brook with large in-stream boulders, is on the northern boundary of the RA.
- The area is adjacent to the Big Branch Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. There has been some cutting in five stands, particularly in the northern half of the area, in the 1990s and in 1970, and some planting of hemlock and red oak in the 1990s in five areas; however, no stands have regenerated since the 1930s, and so all are closed-canopy forested stands.

Surveys for Non-Native Invasive Species (NNIS) have occurred in a few locations in this RA, and a few were found. *Lonicera xylosteum* (European fly-honeysuckle) was found in one small patch in a disturbed site; this species is an exotic that is not yet part of the state quarantine list (or Forest NNIS list). In another disturbed site, tiny patches of *Lonicera morrowii* (Morrow honeysuckle) and *Alliaria petiolata* (garlic mustard) were found. Although some NNIS were found, the relative lack of NNIS in these disturbed sites suggests that the surrounding forest is also likely to be uninfested.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility and proximity to development, this RA is judged to have a low potential for providing solitude or primitive recreation. While the area near the wilderness area may provide relative solitude, the potential is low near the western edge that is accessible by motor vehicles and subject to noise from Route 7 and private land. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (89%), with some Rural (1%) and a small amount of Semi-Primitive Non-Motorized (11%). Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, and expanding the boundary may increase management problems due to non-conforming uses.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the South End RA.

Geological- There are no known areas of unique or rare rock formations in this RA.

Ecological- Most of the RA is composed of ecological types that are not all that common or widespread in the Southern Green Mountain Subsection, but that are more common in the Taconics Subsection. Less common natural communities that occur or are likely to occur in the area based on substrate and topography include rich northern hardwood forests (a large proportion), mesic maple-ash-hickory-oak forest, dry oak-hickory-hophornbeam forest, and white pine-red oak-black oak forest. The Vermont Biodiversity Project (Thompson 2002) identified this RA as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. However, an analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that most of this area had low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. The southern tip of the area is part of a larger area identified as having high irreplaceability values.

There is one ecological feature noted from this roadless area:

- Otter Creek Swamp – In 2002 during field surveys of hardwood swamps, the State of Vermont located an extensive calcareous red maple-tamarack swamp near the southern end of the roadless area. It is the eastern-most extension of the Otter Creek wetland complex that borders the roadless area, and this particular swamp is on National Forest land. This is considered by the State to be a high quality example, and is the only documented occurrence on the Forest. It is also habitat for roundleaf goldenrod (*Solidago patula*), a species new to the Forest and currently of viability concern. There are currently no known threats to the area, although it is accessible to logging.

Rare and Endangered Plants- This RA contains part of a large calcareous wetland in which one occurrence of a rare plant was recently found – *Solidago patula* (roundleaf goldenrod - SVC). No other plants on the RFSS list or plants tracked by the State are known from this RA.

Historical- This RA has been previously surveyed, and is described by the Forest archaeologist as being the Forest's most sensitive area for the presence of prehistoric sites. Two such sites have already been identified, one at either end of the area. In addition, there is a cluster of (at least) two farms and a small cemetery (Baker cemetery) in the central/western portion of the area. Finally, at the "South End" itself there are remains of residential and mill structures, as well as the footprint of a horse-drawn railroad. These historic sites are likely related to operations owned and overseen by Silas Griffith -- the Danby-born millionaire, Senator, land-baron, and philanthropist.

e. Size, Shape and Manageability: This area is located in Mount Tabor Township and is contiguous to and westerly of Big Branch Wilderness. The Mt. Tabor Work Center, located on the boundary, serves as a trailhead for Corridor 7F1, and parking capacity is often exceeded. According to field staff observations, over 500 people per day use the area on busy weekends. In addition, a new barrack for seasonal housing of Forest Service employees and Green Mountain Club caretakers/volunteers is scheduled for construction starting in 2004.

f. Boundary Conditions, Needs and Management Requirements: It should be noted that 90 percent of this RA is classified as a RAREII area, meaning it was available as a potential wilderness when the 1984 wilderness boundaries for Big Branch were drawn. At this time, there is no information available on why the choice was made to not designate these acres.

This RA contains a small cemetery in-holding near the west boundary. There have been encroachment problems near this area in the past. Minor adjustment to the existing Big Branch Wilderness boundary could improve future boundary management efficiency.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The non-motorized recreation use that occurs in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry, and is provided in many places throughout the forest. The use of mechanical deer carriers would be prohibited if the area were designated as wilderness.

Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively difficult due to poor access and proximity to private lands.

A replacement bridge (Silver Bridge) for vehicles and pedestrians with associated interpretation and parking is planned for construction in 2004 along the northwestern edge of the parcel along FR 10. A temporary bridge is planned to the east of the existing bridge. This construction should be accounted for in case designation is proposed directly adjacent to the bridge. There are illegal snowmobile trails, and ATV and mountain bike activity running north and south through the area on old roadbeds between South End and the Mt. Tabor Work Center. These illegal uses would continue to cause mangers problems if trying to manage the area as wilderness.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk).

Generally speaking, larger areas designated as wilderness would provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

The South End RA contains an entire Deer Wintering Area (DWA), totaling 186 acres. Management goals for DWAs focus on food and shelter requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management. When an entire DWA is located within a RA, concern for long term DWA stability is greatest.

McGinn and Big Branch Brooks in this RA provide aquatic habitat for brook trout, brown trout, rainbow trout, long-nose dace, and black-nose dace. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 714 acres of the area (85%) are classified as suitable for timber production (capable of growing commercial crops of timber). In the past ten years 400 acres of timber selection harvest has been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation of this area would inhibit research, inventory and evaluation activities for prehistoric sites because such activities would include at least some ground-disturbing testing and excavation (with hand tools) and attendant removal of understory vegetation at these locations. It would also restrict maintenance and evaluation of historic sites and the Baker Cemetery for similar reasons, including the removal of trees that threaten the stones in the cemetery.

f. Land Uses: There is a pole line easement located close to the edge of a town road in the western portion of the RA. In addition, spring rights may still exist for adjacent private land. Forest Service maps show a two-inch iron pipeline and a spring box through a portion of the RA. Assuming those rights are still in effect, maintenance of this line would need to continue if designation occurred. Also, a decision would be made if the non-motorized and non-mechanized gathering of maple sap were an

acceptable use. Special Use permits for activities not dependent on wilderness values are typically not issued within a wilderness.

g. Management Considerations: Fire/Insects/Disease- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. In the valley bottom and low slopes, wildfire occurrence is rare and restrictions on fire control techniques would be minimal. Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** The calcareous red maple-tamarack swamp is considered significant due to its size, high quality, and presence of rare and uncommon plants. These swamps do not require human intervention to persist, although tamarack is intolerant of shade and would need windthrow or other disturbance to perpetuate itself in the community. Habitat quality and integrity is likely to improve for this area with wilderness designation, as the quality and quantity of calcareous groundwater seepage needs to be protected in order to preserve the integrity of this natural community. *Solidago patula*, which grows at this site, is a plant of calcareous wooded wetlands. The one potential threat to this species would be destruction of the habitat by beaver. Designation as wilderness would prevent the Forest from managing beaver at this site, if they became established. The uncommon natural communities associated with the escarpment have not been comprehensively surveyed in the southern Green Mountains. Several of these communities depend upon disturbances to create or maintain open forest conditions with more light available to the ground. Consequently, some of these communities are on sites that, if left to develop naturally, may shift to more common natural communities. **Non-Federal Lands-** There are no private lands in this RA.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The South End Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation. Although it is adjacent to the Big Branch Wilderness, its proximity to roads (including Route 7), adjacent private property, and the Mount Tabor Work Center restricts opportunities for solitude and other wilderness character and values. The Mount Tabor Work Center is a busy parking and trailhead area, and is expected to become even more active when Forest Service crew quarters are constructed in the near future. The noise and sights on adjacent roads to the west and north would also preclude development of solitude and wilderness values over time. The area is also the Forest's most sensitive area for the presence of prehistoric sites. Two prehistoric sites and several historic sites have been identified. Wilderness designation would restrict motorized access and use of mechanical equipment for evaluation and management of these sites, increasing the difficulty and expense.

Roadless Area 92014 (County Line)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 42 acres
Private: 0 acres
Total: 42 acres

b. Location, Vicinity, and Access: The County Line Roadless Area (RA) is a very small RA located in the Town of Mt Tabor in Rutland County. The Big Branch Wilderness is adjacent on the east side and private property is to the west of this area. There are no roads or trails connected to this RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the County Line Roadless Area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), however, this small RA is situated along the western escarpment of the subsection, and does not represent any of the other landscapes in it. The RA lies along a small section of very steep west facing midslope on the escarpment, along the western slopes of Mt. Tabor. Elevations range from 1,950 feet along the upper limit of the slope at the northeast corner to 1,450 feet along the lowest portion of the slope at the southwest corner. The RA is described as having slopes over the entire area, with rock ledges and thin topsoil. The area may have undergone fire in the 1920s, as several other paper birch stands along the escarpment have resulted from historical fires. The site index for this RA is quite low, suggesting lower quality growing conditions.

County Line RA Vegetation:	
Paper birch	98%
Northern hardwood	2%

The potential natural vegetation of the area is mainly red oak-northern hardwoods, with an area of hemlock-spruce-pine-northern hardwoods to the south at the steepest part of the area. There are no wetlands or streams associated with the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0												42

This RA is a Recently Acquired Land (MA 9.2). The management strategy for these lands is to protect all options until studies determine its desired condition. None of this area is classified for suitable timber production (capable of producing commercial crops of timber). In the past ten years, no timber has been harvested.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low. There are no known Special Uses in this area.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The RA is located on a steep west-facing slope called the Vermont Escarpment. This parcel looks out toward State Route 7 that has a high visual sensitivity. This small and narrow parcel lies directly adjacent to the Big Branch Wilderness.

i. Key Attractions:

- Located adjacent to the Big Branch Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA appears natural. As surveys for NNIS (Non-Native Invasive Species) have not occurred there, the botanical integrity of the area cannot be estimated. The stand in this area was regenerated from a past harvest. This stand would appear to be a middle-aged forest, except that growing conditions appear to be extreme. Given its size, this area is not large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could destroy the entire area. As a part of the Big Branch Wilderness, to which is adjacent, it enlarges the representation of natural communities that are not common in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Although it is relatively inaccessible, due to its relative proximity to development, this RA is judged to have a low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the County Line RA.

Geological- There are no known areas of unique or rare rock formations in this roadless area.

Ecological- Most of the RA is composed of ecological types that, while common to the escarpment, are uncommon elsewhere on the Forest. The Vermont Biodiversity Project (Thompson 2002) identified all of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has high irreplaceability values, reflecting the importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. Given its size, the County Line RA itself is less important for these goals. As a part of the larger Big Branch Wilderness, however, it becomes significant.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There are no known or reported Heritage Resource sites in this RA.

e. Size, Shape and Manageability: This area is located in Dorset Township on the Dorset/Mount Tabor town line, and consists of 42 acres.

f. Boundary Conditions, Needs and Management Requirements: The lines that are adjacent to private property (west and part of south) have been marked to current Forest Service standards.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The non-motorized recreation use that occurs in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry, and is provided in many places throughout the forest. The use of mechanical deer carriers would be prohibited if the area were designated as wilderness.

Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively difficult, due to poor access and proximity to private lands.

b. Wildlife And Fish: This area does not contain any streams or riparian areas with fisheries resources.

Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness would provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

c. Water Availability and Use: If there are streams in this area, they are not part of a municipal watershed, and there are no known water storage needs. No change in water quality is anticipated if the RA were designated as wilderness.

d. Livestock, Timber, and Minerals: None of the area is classified for suitable timber production (capable of producing commercial crops of timber). In the past ten years, no timber has been harvested. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation,

these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Within this area, such limitations may lead to the loss of any red oak in the area. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. The uncommon natural communities associated with the escarpment have not been comprehensively surveyed in the southern Green Mountains. Several of these communities depend upon disturbances to create or maintain open forest conditions with more light available to the ground. Consequently, some of these communities are on sites that, if left to develop naturally, may shift to more common natural communities. **Non-Federal Lands-** There are no private lands in this RA.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The County Line Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. While designation of this RA could benefit the adjacent Big Branch Wilderness, this small RA's proximity to roads and private property restricts opportunities for solitude and other wilderness values. This area is on a steep, inaccessible west-facing slope and is part of the Vermont Escarpment. This is an ecologically unique area. The rare plant communities here are important ecologically, and would be beneficial additions to the Big Branch Wilderness.

The noise and sights on adjacent roads (including Route 7) to the west and north would preclude development of solitude and wilderness values, and would limit the quality of this area as wilderness into the future.

Roadless Area 92015 (Emerald)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 236 acres
Private: 0 acres
Total: 236 acres

b. Location, Vicinity, and Access: The Emerald Roadless Area (RA) is located in the Town of Dorset in Bennington County. This RA is adjacent to the Big Branch Wilderness in the east, and bounded by FR259, East Dorset, along the western side. There are no roads or trails entering the area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Emerald RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), however, this small RA is situated along the subsection's western escarpment, and does not represent any of the other landscapes within this subsection. The RA lies along a section of moderate to very steep west-facing midslopes on the escarpment, along the western slopes of Mt. Tabor. Elevations range from 2,100 feet along the upper limit of the slope to the east, to 1,150 feet along the lowest portion of the slope to the west. Although no site index data is available, the substrate of the area indicates that there are productive conditions along the lower slopes of the escarpment in the western half of the area.

Based on current land cover and vegetation relationships with substrate, elevation, and topography, vegetation is likely a mix of northern hardwoods and northern hardwoods mixed with spruce and hemlock near the upper slopes of the area, hemlock-northern hardwoods along the steeper slopes, red oak-northern hardwoods along the steeper slopes in the southern end of the area, and rich northern hardwoods along the lower slopes to the west. There may be small patches of mesic maple-ash-hickory-oak forest and dry oak-hickory-hophornbeam forest. If the area had been burned over in the early 1900s it may be mostly paper birch. The potential natural vegetation of the area is mainly red oak-northern hardwoods, with an area of hemlock-spruce-pine-northern hardwoods along the steeper parts of the area. There are no wetlands or streams associated with the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0												236

This RA is a Recently Acquired Land (MA 9.2). The management strategy for these lands is to protect all options until studies determine its desired condition.

None of the area is classified for suitable timber production, (capable of producing commercial crops of timber). No timber has been harvested in the past ten years.

Dispersed recreation activities in this are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low. There are no known Special Uses in this area. There are no roads or trails entering the area.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This small RA lies directly adjacent to the Big Branch Wilderness, on a steep west-facing slope called the Vermont Escarpment. This portion of the RA is highly visible from US Route 7, which has a high visual sensitivity. Emerald Lake and associated facilities are located within a mile west of the area and may be visible from locations on its upper elevations.

This RA is likely a mix of vegetative types, with young to mature stands dominating the forested landscape. There are no documented old growth stands associated with this area.

i. Key Attractions:

- Located adjacent to the Big Branch Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: There is no vegetative data on this parcel and the scenic integrity as it relates to vegetative treatments is not known. Trails skirt the edge of the parcel and enter the existing Big Branch Wilderness. Surveys for NNIS (Non-Native Invasive Species) have not occurred there, and so the botanical integrity of the area also cannot be estimated.

The stands in this RA are likely recovered from harvests and other land uses. There are no documented old growth stands associated with this area. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could destroy the entire area. As a physical continuation of Big Branch Wilderness, which is adjacent, it enlarges the representation of natural communities that are not common in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its accessibility and relative proximity to development, the area is judged to have a low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, and expanding the boundary may increase management problems due to adjacent non-conforming uses that would then directly bound a wilderness.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests, or Special Areas in this RA.

Geological- There are no known areas of unique or rare rock formations of state or local significance in this RA.

Ecological- Most of the RA is composed of some ecological types that, while common to the escarpment, are uncommon elsewhere on the Forest. The Vermont Biodiversity Project (Thompson 2002) identified most of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has high irreplaceability values, reflecting the importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Given its size, the Emerald RA itself is less important for these goals. As a part of the larger Big Branch Wilderness, however, it becomes significant.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There are no known Heritage Resource sites in this unit, but it has not been surveyed since its fairly recent acquisition. One reported "home/farmstead" site is reported, and industrial historian/archaeologist Vic Rolando has indicated that there may be remains related to industrial activity at and around Emerald Lake. The RA's location, abutting the headwaters of the Otter Creek (and, by definition, the "divide" between this drainage and the Batten kill), suggests prehistoric potential.

e. Size, Shape and Manageability: This area lies in the Township of Dorset contiguous to and westerly of Big Branch Wilderness.

f. Boundary Conditions, Needs and Management Requirements: This property was formerly a part of the Emerald Lake State Forest. None of the property boundary lines are marked to current Forest Service standards and therefore their condition or the potential for trespasses and encroachments is not known.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The non-motorized recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. The use of mechanical deer carriers would be prohibited if the area were designated as wilderness.

Designation of this area as wilderness would provide only minor benefit for recreation dependent on wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively difficult, due to poor access and proximity to private lands.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (103 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by

regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: If there are streams in this area, they are not part of a municipal watershed; there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: None of the area is classified for suitable timber production, (capable of producing commercial timber crops). In the past ten years no timber has been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation may have an adverse effect on Heritage Resources because it would inhibit inventory activities (e.g., digging test pits and removing attendant vegetation at these loci) related to this potentially significant area, with particular reference to discovering historic period sites around Emerald Lake, and Native American sites around the Otter Creek headwaters.

f. Land Uses: There is a license agreement with CVPS and NET&T for a power line. The location is unknown, but is likely along the existing road that forms the west boundary of the roadless area. This should be noted when specific boundary lines are being drawn.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Within this area, such limitations may lead to the loss of any red oak in the area. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area. The uncommon natural communities associated with the escarpment have not been comprehensively surveyed in the southern Green Mountains. Several of these communities depend upon disturbances to create or maintain open forest conditions with more light available to the ground. Consequently, some of these communities are on sites that, if left to develop naturally, may shift to more common natural communities. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Emerald Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. The proximity to roads and private property restricts opportunities for solitude and other wilderness values, and the noise and sights on adjacent roads, including Route 7, to the west and north would preclude the development of these values. The noise and sight disturbances would limit the quality of this area as wilderness into the future.

This area is on a steep, inaccessible west facing slope and is part of the Vermont Escarpment. This is an ecologically unique area, which would add to the ecological reserve goals of the adjacent Big Branch Wilderness.

Roadless Area 92016 (Flood Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 141 acres
Private: 0 acres
Total: 141 acres

b. Location, Vicinity, and Access: The Flood Brook Roadless Area (RA) is located in the Town of Peru, in Bennington County, and is adjacent to the Peru Peak Wilderness on the west. There is .9 mile of cross-country ski trail in the RA. There are no other roads or trails in the RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Flood Brook RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This area sits on the lower southeast-facing slopes of Styles Peak, between Styles Brook to the north and Flood Brook to the south. About two-thirds of the area to the east sits on deep sediments associated with glacial and probably alluvial deposition associated with these two streams. Slopes are moderately steep in the western half of the area as the slope climbs toward Styles Peak, becoming more gradual and gentle in the eastern half of the area as it approaches the confluence of Styles and Flood Brook. Elevations range from 2,100 feet up the slope to the northwest to 1,700 feet to the southeast in the vicinity of Styles Brook.

Flood Brook RA Vegetation:	
Northern hardwood	88%
White pine plantations	6%
Spruce/fir plantation	5%
Open	1%

Flood Brook RA Land Type Associations (LTAs):
Hill & low slope

Flood Brook RA Site Indices:	
60+ (moderately high productivity)	100%

The potential natural vegetation of the area is predominantly northern hardwoods mixed with red spruce, with a small area of northern hardwoods toward the west further upslope. Although the RA contains tiny patches of wet flat ground, no wetlands are recorded in the RA. A small, unnamed tributary of Styles Brook has its headwaters in the area, and the slopes of this area drain into both Styles and Flood Brooks.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0					141							

Management Area 3.1 is managed to emphasize a Mosaic of Vegetative Conditions in a roaded, intensively managed, but natural appearing environment.

Timber resource considerations:

- 132 acres (93%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- 43 acres of timber has been harvested in the past 10 years.

There is a Special Use Permit in this RA for a road on the south boundary. This is held by the owner of a year-round residence on private property southwest of the RA. The owner of private land immediately east of this area holds a Special Use Permit for a water system that serves the camp on the private land. The camp is located within 10 feet of the Forest and the private property line.

A gravel pit borders the RA on the southeast edge. There is a CCC era gravel pit that is still apparent, and the potential for a new pit in the same area.

Wild Wings Cross Country Ski Area is based on private land adjacent to the north side of this area. Less than a mile of the ski area's trails (winter use) are on National Forest lands in this RA. Trails are highly developed, groomed ski trails, and hazards are abated throughout the trail system to provide a safe experience for recreationists.

Dispersed recreation activities in this RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be high.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA lies on gentle east facing side slopes. There is evidence of recent timber harvest, and a gravel pit borders the area on its southeast edge. The appearance of the RA can be characterized as a mix of vegetative types and landforms. With the exception of the recently harvested stands, with young to mature stands dominate the forested landscape.

i. Key Attractions:

- Located adjacent to the Peru Peak Wilderness.
- Provides access for groomed cross-country skiing.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: Due to the recent timber harvest, new plantations, a special use permit cross-country ski network, and a gravel pit on the southeast edge, this RA appears less natural than most of the other RAs, and less natural than the adjacent wilderness. Surveys for Non-Native Invasive Species (NNIS) have in scattered, disturbed locations throughout this RA, and no NNIS were found. The lack of NNIS in these disturbed sites suggests that the surrounding forest is also likely to be uninfested.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. Approximately 15 acres (11%) are 15 years old or younger, having been harvested in the mid-1990s; these stands are going through the reorganization phase of development. The 1990s cuts involved all but one stand in this RA. Aside from the creation of the two white pine plantations and regeneration of the Norway spruce plantation, the stands were not regenerated and so will still look like middle-aged forest. However, there evidence of the cutting is obvious in the stands. Furthermore, white pine is not a species typically found in these ecological types or landscapes, and so these stands will be out of place until they are either cut and allowed to

regenerate naturally or are allowed to fall apart and regenerate later. Norway spruce is not native to the U.S. and would also be out of place in a wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility from adjacent cross country ski trails and eastern roads, the area is judged to have a low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (99%), and only a small amount of Semi-Primitive Non-Motorized (1%). The area is adjacent to an existing wilderness area and would provide little benefit to the solitude of the that area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- There are no known areas of unique or rare rock formations in this RA.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed plant species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- This RA has been surveyed, and no historic sites were confirmed, although two or three sites were reported in or nearby the eastern portion of the area.

e. Size, Shape and Manageability: This area lies in Peru Township contiguous to and easterly of Peru Peak Wilderness.

f. Boundary Conditions, Needs and Management Requirements: All private property lines are to current Forest Service standards. A closed (but still noticeable) CCC era gravel pit borders the parcel on the southeast edge.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The non-motorized dispersed recreation use that occurs in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Mechanical deer carriers would be prohibited if this area were designated as wilderness.

Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: If there are any streams in this area, they are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. Currently, 132 acres (93%) are classified as suitable for timber production (capable of producing commercial crops of timber). 43 acres of timber has been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: There is a Special Use Permit for a water system that serves the camp on the private land. The camp is located within 10 feet of the Forest and private property line. Water systems may occasionally require the use of equipment for maintenance or the replacement of pipe, etc. If the RA were designated wilderness, this use may be affected. The current Special Use Permit to Wild Wings Cross Country Ski Area that covers the trails in this RA may be terminated.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, other plant species of viability concern, or significant natural communities within this roadless area. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Flood Brook Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation. Opportunities for solitude and primitive experience in this area are low due to roads nearby to the east and special use-permitted cross-country ski activity in and adjacent to this

area. Furthermore, the noise from nearby roads would not improve over time. There are no unique ecological, scientific, or other features that would benefit from wilderness designation.

In addition, this area has moderate to high timber productivity. About 132 acres (93%) of this area is classified as suitable for timber harvest. These acres would not be available for timber harvest if the area were designated wilderness.

Roadless Area 92017 (Mill Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 106 acres
Private: 0 acres
Total: 106 acres

b. Location, Vicinity, and Access: The Mill Brook Roadless Area (RA) is in the Town of Sunderland, in Bennington County. This RA is bordered by Sunderland to the west, by Lye Brook Wilderness to the north, and by private land to the east. There are no Forest Service system roads or trails within this area. One low-use snowmobile trail borders the area to the south.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Mill Brook roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), however, this small RA is situated along the subsection's western escarpment, and does not represent any of the other landscapes within this subsection. The RA consists of a small section of steep to very steep northwest-facing slopes that lie along the Mill Brook ravine. Seventy-four percent of the RA is described as too steep and inoperable. Elevations range from 2,100 feet along the upper limit of the slope to the southeast to 1,250 feet near Mill Brook to the northwest.

Mill Brook RA Vegetation:	
Northern hardwood	92%
Hemlock	8%

Mill Brook RA Site Indices:	
60+ (moderately high productivity)	28%
<60 (moderate to low productivity)	72%

The potential natural vegetation of the area is mainly hemlock/red spruce-northern hardwoods in the steep ravine, with red spruce-northern hardwoods to the southeast near the crest of the ravine. Although the area does follow Mill Brook and the slopes drain into that stream, there are no wetlands or tributaries in this RA.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0							2		104			

Management Area 4.2 emphasizes Deer Wintering Areas, while Area 6.2A emphasizes Semi-Primitive recreation.

Timber resource considerations:

- 35 acres (33%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past 10 years.

There are no known Special Uses in this RA. On the southern boundary, however, is a road that is an access route to private land. In the winter this road is also used as a snowmobile trail that may be used from time to time by permittees under a recreation event permit for a fundraiser.

According to manager's observations, the 1.47-mile FT371 Bacon Hollow snowmobile trail on the south boundary has relatively low use (for the southern end of the Forest) of less than 100 people per day. The primary purpose of the trail is to provide access for local snowmobile riders in the Sunderland area to the corridor trail on the Kelley Stand road.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: Mill Brook is the northern border of this small parcel and separates the adjacent Lye Brook Wilderness. The land forms in the RA are characterized by the steep terrain of the Vermont escarpment. The adjacent lands to the north in the Lye Brook Wilderness as well as lands to the south are also part of the Vermont escarpment. The vegetation in the area is a mix of vegetative types, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Lye Brook Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. Two stands in the southeastern section of the RA were clearcut in the 1970s, accounting for 25 acres (24%); a third had strip clearcuts. While these cuts did impact the RA in terms of recovery and re-establishment of ecological processes, the majority of the area is fairly well developed. Given its size, however, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could destroy the entire area. As a part of the adjacent Lye Brook Wilderness, however, it enlarges the representation of natural communities that are not common in that Wilderness area. Surveys for Non-Native Invasive Species have not occurred there, and so the botanical integrity of the area also cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, primarily from the south, this RA is judged to have a low potential for providing solitude or primitive recreation. Highway noise from US Route 7 and noise from adjacent roads and trails have significant impact on the area. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). Though the RA is adjacent to a wilderness area, it would not by itself provide significant benefit to the solitude of the existing area.

d. Special Features:

Scenic- The scenery in this RA is characterized by the steep terrain of the Vermont escarpment.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- There are no known areas of unique or rare rock formations of state or local significance in this RA.

Ecological- The RA is composed of some ecological types that are common in this subsection, including northern hardwood forests and red spruce-northern hardwood forests. Also present is hemlock-northern hardwood forests, which are quite common along the escarpment landscape, although much less common elsewhere on the Forest. The Vermont Biodiversity Project (Thompson 2002) identified all of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There are no known or reported Heritage Resource sites in this RA, and potential for such sites based on the landscape appears to be low.

e. Size, Shape and Manageability: This area is located in Sunderland Township contiguous to and southerly of Lye Brook Wilderness.

f. Boundary Conditions, Needs and Management Requirements: Most property boundaries are to FS standard except for a small section noted above.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest.

Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness. The management of wilderness recreation on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as Wilderness provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (41 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

Mill Brook in this RA provides aquatic habitat for brook and brown trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, Wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 35 acres (33%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Although fire is part of the disturbance regime typical of the escarpment, it would have been uncommon in these ravine ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation

depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

This small RA has limited potential to provide the attributes and values appropriate for wilderness designation. Its proximity to roads and snowmobile trails, such as Vermont Route 7 and the Bacon Hollow snowmobile trail, restricts opportunities for solitude and other wilderness values, which would not improve over time. Although the Mill Brook RA is bordered by the Lye Brook Wilderness to the north, it has limited potential as addition to the Wilderness. There are no unique ecological, scientific, or other features that would benefit from wilderness designation. In addition, most of this area has low scenic integrity.

Roadless Area 92018 (Pittenden)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 16,155 acres
Private: 0 acres
Total: 16,155 acres

b. Location, Vicinity, and Access: The Pittenden Roadless Area (RA) is bounded on the north by Vermont Route 73, and on the south by Forest Trail 44. This RA is spread over four towns- Pittsfield and Chittenden in Rutland County, Goshen in Addison County, and Rochester in Windsor County. This is a "stand alone" roadless area, and is not adjacent to existing wildernesses. Most of the eastern, southern and western boundaries of the RA are bordered by major snowmobile corridor trails. An important component of the access to this RA is the Long Trail (LT). Other hiking, cross-country skiing, and snowmobile trails also access the Pittenden RA.

Several trails in the central part of the area are Town of Chittenden easement trails. These trails and the structures on them are considered Chittenden Town Trails as documented in the land title deed. These are: FT 820, a 2.35 mile snowmobile trail, and FT's 820, 821 and 822, all mountain bike trails, totaling 4.69 miles.

Pittenden RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
45	Chittenden Brook	Improved	.1	Yes	Gravel	3
216	Ash Hill	Unimproved	.4	No	Soil	1
222, 222A	Brandon Brook Spur	Improved	.3	No	Soil	1
35 & 226 ext.'s	Unclassified	Unimproved	2.3			

Pittenden RA Trails	
Type	**Mileage**
Hiking	8.1
Cross country ski	4.1
Snowmobile & mountain bike	7.8

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), this RA lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA encompasses a portion of the main ridge of the Green Mountains and includes Farr Peak and Goshen Mountain there, and then extends east along an east-west trending ridge off of the main ridgeline, including a series of mountains such as Corporation Mountain, Round Mountain, and along the eastern edge of the area Little Wilcox Peak and Wilcox Peak. The low slope landscapes are concentrated at the edges of the roadless area and are most often associated with streams and drainage basins that are too narrow to have mappable floodplains. Slopes are extremely steep along portions of the upper slopes of most of the mountains, and along some upper stream reaches. Most of the slopes, however, are moderately steep, and become gentle only in the low slope areas or on the mountain tops or ridgelines. A particularly concentrated area of very steep slopes with cliffs is along an unnamed tributary to the West Branch of the Tweed River in the southeastern corner of the area. Elevations range from 3,500 feet on the top of

Farr Peak in the southwestern corner of the area, to 950 feet along the northern border to the east in the vicinity of the West Branch of the White River.

Pittenden RA Land Type Associations (LTAs):	
Mountain slopes	47%
Upper mountain slopes & tops	37%
Small hills & footslopes	16%

Pittenden RA Vegetation:	
Northern hardwood	83%
Hardwood & red spruce	10%
Red spruce & balsam fir	3%
Paper birch	3%
Open	1%

Pittenden RA Site Indices:	
60+ (moderately high productivity)	38%
<60 (moderate to low productivity)	62%

The potential natural vegetation of the area is a mix of northern hardwoods mixed with spruce on the middle to upper slopes of large mountains and mountain tops of lower mountains, as well as colder lower slopes and on very steep scoured upper slopes; northern hardwoods along the middle to lower slopes; and montane spruce-fir at the highest elevations and summits of the mountains along the main ridges. Small patches of boreal outcrops occur in association with Goshen Mountain, and a small area of spruce-hardwood wetland is noted as potential for the headwaters of Puss N Kill Brook. The RA contains 12 acres of wetlands scattered in four patches throughout the area. Each appears to be riparian or serve as headwaters for a small stream. The headwaters of numerous streams are found in this area. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of two emergent wetlands, an open wetland with dead trees at the headwaters of Puss N Kill Brook, and a combined deciduous forest/scrub-shrub wetland along Chittenden Brook.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0	2,992	78			708	831			3,894	556	486	6,610

Management Areas 2.1A, 2.1 B, and 3.1 emphasize roaded recreation opportunities. Area 4.1 emphasizes Deer Wintering Areas. Areas 6.2A and 6.2B are managed primarily for semi-primitive recreation. Management Area 8.1 is managed as Special Areas, typically without harvest. The management strategy for Area 9.2, Recently Acquired Lands, is to protect all options until studies determine the desired condition.

Timber resource considerations:

- 11,524 acres (51%) are classified as suitable for timber production (capable of producing industrial crops of timber).
- 2,648 acres of timber (16% of the RA) have been harvested in the last 10 years.

A large 20-plus car parking lot is located on the north central boundary of the area to access the Long Trail from the north. The next primary Long Trail access is the US RT 4 trailhead, located 15.7 miles south of the RA boundary. Two summer parking lots along FR 45 provide access to FT704. Much of this trail is also a winter ski trail, with winter parking access located at the edge of the Area near Rte 73. Both the Long Trail and the Chittenden Brook Trail are a part of the Long Trail National Recreation Trail System. Various outfitter/guides use the trails in the area for a variety of hiking and backpacking activities under outfitter/guide Special Use Permits.

Brandon Brook Picnic Area (a Forest Service facility now decommissioned) has a well listed as protected by a state Public Drinking Water Source designation in this roadless area. Hawk Mtn #18 has 8 acres in a Wellhead Protection Area in this RA.

Dispersed recreation activities in this RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, dispersed camping, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize its overall recreation use to be moderate with some high use on busy weekends. This use is spotty, however, and is centered on significant attractions such as the Long Trail. Due to the size of the area, there are portions that receive very low use, especially in areas without significant trail density.

Visitor use numbers are estimates based on staff observations. The Long Trail in this RA may have as many as 50 hikers per day, but generally less than 20 per day. This is also a winter ski trail south of VT Rte 73, with average visitation of less than 20 on weekends. Chittenden Brook area trails, including the Campground Spur and Beaver Pond Trails, receive less than 20 visitors most days, mostly from nearby Chittenden Brook Campground. Visitor use on the Town of Chittenden Easement trails is currently low, less than 10 visitors per day. FT 820 is currently closed to snowmobiles, as there are two bridges out. The snowmobile trails, FT 242.01, 146 and 717 get use of less than 100 visitors per day, and are important corridor links to the trail system on the north half of the Forest. The mountain bike trails are being mowed regularly by motorized equipment.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This is a large RA that stretches over the spine of the Green Mountain Ridge. State Route 73 bounds the area to the north. This route has a high visual sensitivity, and offers the viewer many opportunities for access and views into this area. The Long Trail continues north of this parcel leading to viewing points at the Great Cliff and Mount Horrid that overlook back into this area. The Long Trail traverses on or near the ridgeline, offering some views along the way through natural openings in the canopy. Recent storm damage left broken trees throughout the area. A network of primitive cross-country ski trails and hiking trails lies on the northwestern edge of this parcel, with access through the adjacent Chittenden Brook Campground. The campground also provides access to the Long Trail through a connecting hiking trail. The eastern portion of the parcel is visible from the Braintree Mountain Range and State Route100, which also has a high visual sensitivity. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

Most of the eastern, southern and western boundaries of the area are bordered by major snowmobile corridor trails, including FT's 146, 146.01, 242, 44, 728, 723, 729, 716, and 717 totaling about 13 miles. FT 716 is also managed as a mountain bike trail. All of the remaining trails surrounding the area are managed as winter motorized trails, but do get occasional use in non-winter months by hikers and hunters.

i. Key Attractions:

- The Long Trail crosses through the RA.
- The Chittenden Brook Trail, adjacent to Chittenden Brook, is a Significant Stream, as identified in the current Forest Plan.
- The Beaver Pond Trail, terminating at a wetland area, is a popular attraction for day hikers.
- This RA contains four peaks that exceed 3,000 feet in elevation. This is an attraction to people attempting to hike all 3,000-foot peaks in Vermont.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA appears natural, with the exceptions of some recent harvest in the Chittenden Brook area, and recent storm damage. Surveys for Non-Native Invasive Species (NNIS) have occurred to the north and south of Chittenden Brook, and no NNIS were found. The Chittenden Brook Campground, Mt. Horrid Overlook, and the Long Trail Trailhead at Brandon Gap have also had surveys, and no NNIS were found. In addition, four of the non-forested sites mentioned above have had surveys, and no NNIS were found. The lack of NNIS in these disturbed sites suggests that the surrounding forest in at least these sections is also likely to be uninfested.

Most of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are 251 acres of forested land in this RA (2 percent) that are 15 years old or younger, and so are reorganizing after a regeneration harvest. There has been a fair amount of cutting in this roadless area over the last 40 years, with more than 1,800 acres (12 percent) of regeneration harvests over that time. While most of the cutting took place during the 1980s or earlier, there will still be evidence of this harvesting visible, primarily as stumps and slash piles of larger woody debris. A significant (greater than half) proportion of the area was moderately to highly damaged by the ice storm of 1998. Damage was concentrated on the mountaintops and upper slopes, as well as some middle slopes on the higher mountains. Every named mountain peak in the area was affected by this damage. Although such disturbance, while natural, can be catastrophic, in this case it may release the understory red spruce and speed up succession within these upper mountain slope stands, where red spruce is considered part of the potential natural vegetation. There are also substantial acreages (over 1,000) of paper birch stands in the area, an early successional species that will succeed to other forest types over time. Although there are a number of acres of recent harvest, they represent a small percentage of the total area, and it is likely that the area will recover well from these treatments. RT 73 follows the northern boundary of the roadless area, and can be a substantial barrier to small animal movement into and out of the roadless area to the habitat north of the highway.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road or highway access from almost every direction), this RA is judged to have variable potential for providing solitude or primitive recreation. In addition, much of the interior area is dissected by a number of trails. A small amount of illegal use by horse riders and mountain bikers occurs on FT 146 and FT 44. Although the interior portions, especially in areas away from trails, provide a high potential for solitude, this drops off to low near the edges, which are accessible by motor vehicles and have been subject to more management activities. According to staff observations, snowmobiles can be heard around 80% of the perimeter during the winter. This is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as consisting of Roaded Natural (34%), Semi-Primitive Motorized (27%), Semi-Primitive Non-Motorized (38%), and a small amount of Rural (1%). The highly variable nature of these rankings should probably be considered in more detail during the final evaluation and recommendation.

d. Special Features:

Scenic- This area contains several mountain peaks over 3,000 feet in elevation.

Scientific- There are no designated Research Natural Areas or Experimental Forests in this RA.

Geological- Along the eastern edge of the area, a very narrow band of carbonaceous phyllite and schist from the Pinney Hollow Formation underlies the edge of the mountains. To the east of that and on the very edge of the area, a narrow band of greenstone, a mafic rock, of the Pinney Hollow formation is found. These two formations are uncommon in the state, accounting for only about 1,700 acres and 4,800 acres respectively. Areas of rock outcrops are fairly widespread through the RA, with a small area of cliffs in the southeastern corner. Most of the areas with outcrops are associated with the steepest slopes of the mountains, and where streams have cut deeply into the mountains. Although there are two rock formations within this area that have small acreages in the state, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) identified a small part of the western edge of this area as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that portions of the eastern side of the area northwest of Wilcox Mountain had moderate irreplaceability values, reflecting the moderate importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. This may be a result of the potential for red oak-northern hardwood communities in that area. Otherwise, the remainder of this roadless area had quite low irreplaceability values.

There is one ecological feature of local significance to note in this area:

- Chittenden Brook Beaver Meadow – currently has no special designation on the Forest; known location for the olive-sided flycatcher, a species of management concern to the U.S. Fish and Wildlife Service. Otherwise, the wetland is a typical and unremarkable beaver complex with a dry beaver meadow, emergent marsh, and open ponds. No threats to this site are noted. The State of Vermont does not consider this area of statewide significance.

Rare and Endangered Plants- There are no known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state in this RA.

Historical- Goshen/Rochester section: Approximately 40 percent of this section has been surveyed for Heritage Resources; the only known sites are a Long Trail (LT) shelter, and a prehistoric site near Brandon Gap – one of the few logical places for prehistoric sites to occur in this section.

Chittenden section: There are remains of a small mill and farm in the western section; a small, possibly portable (and so relatively recent) sawmill & camp along the LT (mentioned in old LT guide); several historic features & sites along the western side of Chittenden Brook Campground Road – including logging camp(s), a farmstead with a small orchard, and an early-20th c. logging-related splash dam in-stream. At the upper end of Michigan Brook there is a cluster of 19th century mill-related sites – the mill itself, boarding house, support structures, and more. This area has been signed by the Pittsfield Historical Society and receives visitation on a regular basis by interested publics; additional clarification of the nature and location of sites here would be useful. Finally, there is a cluster of farmstead remains on Knight Hill.

Pittsfield section: To the north, along West Branch, is the old Rochester CCC camp; the Commandant's house is within this section. Several agricultural sites (farms and sugar houses) occur toward the eastern edge of this section.

e. Size, Shape and Manageability: This 16,182 acre area is located in the Towns of Pittsfield, Chittenden, Goshen, and Rochester, and is bounded on the north by Vermont Route 73, abutting several pieces of private land on this route. Forest Trail 44 borders the RA on the south. For the Forest Roads and trails used as boundaries for this area, an offset of 100 feet from the centerline would enhance wilderness characteristics and avoid inevitable impacts resulting from road or trail maintenance activities such as brushing, and culvert replacements.

f. Boundary Conditions, Needs and Management Requirements: Approximately 20% of the property boundaries with private land are not marked to FS standard. Some changes in the boundaries (particularly along the northeast and east side of the area) could eliminate irregular jogs diverting around private lands that result in small vestiges of GMNF land, which could be difficult to manage as wilderness.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: A large portion of the recreation use in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized and non-mechanized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Outfitter/ guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

Some motorized trail use and motorized recreation use that occurs in the RA near the edges may be affected by designation of the entire area as wilderness. Some low standard roads that enter, or border, the area in various places currently provide motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to much of the use that is currently occurring. Most notable are popular dispersed camping areas on Forest Road 35, Forest Road 216 and along RT 73.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There would be significant detrimental effect, however, on the current recreation requiring motorized access, although these areas are mostly located near the edges of the RA, and boundary relocation may mitigate the majority of these effects.

There is a major footbridge, and several minor footbridges located on the Chittenden Brook Trail. The major bridge has been evaluated by the Forest Engineer and will be in need of replacement in the next five years. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

Snowmobile trails in this RA include portions of FT 242.01 and 146, which are part of a major access trail from a parking lot on VT RT 73. In addition, FT 717 is part of the major north south corridor trail in the White River Valley area, and briefly crosses through this RA. These trails would be closed if wilderness designation occurred. A small amount of illegal use by horse riders and mountain bikers occurs on FT 146 and FT 44. FT 820, a 2.35 mile snowmobile trail, and FTs 820, 821 and 822, all mountain bike trails, are Town of Chittenden Easement trails in the central part of the area. These

trails, and the structures on them are considered Chittenden Town Trails, as documented in the land title deed. As Town trails, the Forest Service does not have authority to close them. Therefore, wilderness designation that includes these trail areas would have to allow motorized and mechanized use to continue, creating a wilderness management conflict.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. This RA is one of the larger areas (>10,000 acres) being evaluated at this time. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units (over 100 acres in this roadless area) would disappear with the passage of time.

This RA contains a small portion (184 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, designation would limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

Steam Mill, Puss and Kill, Kettle, Bee. Morrill, Slab, Hayes, Michigan, Corporation, Chittenden and Brandon Brooks in this RA are ones in which Atlantic salmon (ATS) have been released annually since the 1980s. The ATS is an indigenous species currently being restored to historic waters throughout the Connecticut River Basin. The Green Mountain National Forest cooperates with the Vermont Fish and Wildlife Department and U.S. Fish and Wildlife Service in this effort to restore salmon in the White and West River watersheds.

Accessing historic habitat to restore juvenile salmon populations is critical to the cooperative restoration program. Management goals for ATS focus on restoration of spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 15 percent pool habitat and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities, habitat restoration and maintenance activities, and ATS restoration activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The Hawk Mountain #1 has eight acres in Well Head Protection Area in this RA. The Safe Drinking Water Act defines a Wellhead Protection Area in part as "the surface and subsurface area surrounding a well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield." Their actual wellhead is not located on National Forest. It is important that activities within the protection areas do not discharge contaminants, which may threaten the groundwater used for human consumption. Protection is currently provided by following Forest Plan Standards and Guidelines, as well as State Acceptable Management Practices (AMPs). Wilderness designation would not change these protected areas. The Public Water Drinking Source designation is no longer needed for the now-defunct Brandon Brook Picnic Area. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 11,524 acres (51%) are classified as suitable for timber production (capable of producing commercial crops of timber). In the past 10 years, 2,648 acres of timber have been harvested. There are no livestock operations or potential for such operations.

3,470 acres of this RA have existing outstanding oil, gas and mineral rights. These are located in the northeast portion of the RA. An additional 959 acres has existing mineral rights outstanding in a third party. The National Forest would be required to allow reasonable and necessary access to the owners of these rights, if requested, to allow for the removal of minerals. This would impact the agency's ability to manage these areas for wilderness values.

e. Heritage Resources: Wilderness designation would have an adverse effect on three clusters of historic-period archaeological sites: those located along Chittenden Brook, along FR229, and at the end of Upper & Lower Michigan Brook Roads (FR 35, 391, 393). Designation would inhibit the Forest's ability to evaluate, preserve and interpret these sites. Sites in the Michigan Brook Road cluster are signed, and the area is a popular destination for hikers. Because all three of these sites occur in close proximity to the proposed unit boundaries, adjustment to exclude these site clusters would avoid this adverse effect. This area has also been signed by the Pittsfield Historical Society, and receives visitation on a regular basis by interested publics; additional clarification of the nature and location of sites here would be useful.

f. Land Uses: A 50 foot right-of-way (ROW) is granted to CVPS on the boundary of this RA. In addition, spring rights are granted to the family of an adjacent property, which is near a boundary. A power line ROW is also granted to Rochester Light and Power, in an unknown location; it is likely near the edge of a road, however. A private road ROW is inside the RA near the northwest edge. An additional stated ROW's location is unknown. There are also water rights granted to two springs that appear to be inside the RA.

Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would

die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Pittenden Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. At 16,155 acres, this is among the largest roadless areas being evaluated. The opportunities for solitude, primitive recreation, and other wilderness values are high in the western and central portions of the RA, near upper slopes. These are headwaters of significant tributaries of the White River. Much of this RA is considered to have high scenic integrity and good opportunities for solitude, particularly in these central and western portions. There are several peaks over 3,000 feet, and a significant ecological feature in this RA-- Chittenden Brook Beaver meadow, which is a known location for the olive-sided flycatcher, a species of concern for the U.S. Fish and Wildlife Service.

There is relatively high snowmobile and road use in this RA, however, and there has been considerable past investment in timber management and historical interpretation in portions of this area. In addition, 10 brooks in this RA are being stocked for Atlantic Salmon recovery. Atlantic Salmon is an indigenous species currently being restored to its historic waters. Much of this area (6,610 acres) was previously owned by the Lyme Timber Corporation and the Stanley Tool Company; there has been substantial investment in timber management in these lands over many decades, as well as a significant network of snowmobile trails established. Changes in these uses may impact users. Noise and visual disturbances near roads and snowmobile trails would adversely affect wilderness character and experience within the sight and sound distances of these edges. Although eliminating the snowmobile trails and roads within the interior of the area would lessen noise and visual disturbance, it would impact current users. A substantial portion of this area (11,524 acres) is classified as suitable for timber production. Forgoing timber management on these lands is a tradeoff consideration for potential wilderness designation.

Roadless Area 92019 (Worth Mountain)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 13,981 acres
Private: 3 acres
Total: 13,984 acres

b. Location, Vicinity, and Access: The Worth Mtn Roadless Area (RA) is spread over four towns- Goshen, Hancock, Ripton, and Rochester, and two counties, Addison and Windsor. This RA is a "stand alone" area, not adjacent to existing wildernesses. Vermont Route 125 borders the area to the north, and Vermont Route 73 borders it to the south. An important component of the access to this RA is the Long Trail (LT), which passes through the area for 7.4 miles. In addition, the main north south snowmobile corridor trail in the White River Valley area, FT 749 and FT 764, borders the area on the east and northeast boundaries for about four miles.

Worth Mountain RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
41	Rochester West Hill	Unimproved	.01	Yes	Crushed Gravel	2
42	Bingo	Improved	.14	No	Crushed Gravel	3
352	Hog Back	Unimproved	.63	Yes	Soil	1
67A	Goshen Brook Spur	Imp. To Unimp.	.88	Yes	Gravel	3 to 2
	Unclassified	Unimproved	1.25			

Worth Mountain RA Trails	
Type	**Mileage**
Hiking	8.5
Cross Country Ski	7.3
Motorized	3.5

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 83% of the Worth Mountain RA lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 17% occurs in the Southern Green Mountain Subsection. The area encompasses a portion of the main ridge of the Green Mountains, including Worth Mountain to the north, heading south to Gillespie Peak, Cape Lookoff Mountain, and Mount Horrid. From Worth Mountain, the area also extends east along an east-west trending ridge off of the main ridgeline, including a series of mountains from Monastery Mountain to Philadelphia Peak. Low slope and hilly landscapes are concentrated at the edges of the RA, and are most often associated with streams and drainage basins that are too narrow to have mappable floodplains (i.e. valley bottoms). Slopes are extremely steep along portions of the upper slopes of most of the mountains and along some upper stream reaches, and in some places become cliffs. Most of the slopes however, are moderately steep, and become gentle only in the low slope areas or on the mountaintops or ridgelines. Particularly concentrated areas of very steep slopes with cliffs occur at Mt. Horrid along RT. 73, and in association with Monastery Mountain and Robbins Branch. Elevations range from 3,400 feet on the top of Cape Lookoff Mountain toward the southern end of the area, to 1,250 feet along Robbins Branch to the north.

Worth Mountain Land Type Associations (LTAs):	
Upper mountain slopes & mountain tops	45%
Mountain slopes	37%
Small hills, low mountains, & footslopes	18%

Worth Mountain RA Vegetation:	
Northern hardwood	74%
Northern hardwood & spruce	11%
Paper birch	8%
Spruce & fir	6%
Plantation & open	1%

Worth Mountain RA Site Indices:	
60+ (moderately high productivity)	35%
<60 (moderate to low productivity)	65%

The potential natural vegetation of the area is a mix of northern hardwoods mixed with spruce primarily on the north and east facing middle to upper convex slopes of large mountains, as well as colder lower slopes with deep sediments, and on very steep scoured upper slopes; northern hardwoods along the middle to lower concave slopes, especially associated with streams; montane spruce-fir at the highest elevations, on summits of the mountains along the main ridges and on very thin soils with outcrops and cliffs. Small areas of spruce-hardwood wetland are noted along Goshen and Sucker Brooks among other riparian low slope areas. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of open ponds with dead trees and deciduous scrub-shrub, emergent, and deciduous and coniferous-forested wetlands. 56 acres of wetlands are found along the lower slope landscapes associated with riparian corridors, or headwaters of small streams. Several coniferous forested and scrub-shrub wetlands occur along Goshen Brook, while smaller shrub and emergent wetlands are associated with Sucker Brook. There is also a complex of open pond, scrub-shrub, emergent, and coniferous wetlands at the headwaters of Brandon Brook below Mount Horrid. The remaining wetlands are small and isolated. Headwaters of several streams are also found in this area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	3	205	43	458	1,434	1,008	632		3,638	4,105	625	974	859

Management Areas 2.1A, 2.1 B, 2.2B, and 3.1 emphasize roaded conditions. Management Area 4.1 emphasizes Deer Wintering Areas. Management Area 6.1 is managed to emphasize Primitive recreation opportunities and does not include timber harvest. Areas 6.2A and 6.2B emphasize Semi-Primitive opportunities. Area 8.1 is managed as Special Areas. The management strategy for Area 9.2 is to protect all options until studies determine its desired condition.

Timber resource considerations:

- 8,031 acres (58%) are classified as suitable for timber production.
- In the past 10 years, 466 acres of timber have been harvested.

Dispersed recreation activities in this RA are similar those in other general forest areas throughout the National Forest. This use may include hunting, fishing, dispersed camping, berry picking, bird

watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with RA characterize its overall recreation use as moderate, with some high use on busy weekends. Due to the size of the area, however, there are portions that receive very low use, especially in areas without significant trail density. Large trailhead parking lots are located outside the area boundaries both to the north on VT RT 125, and to the south on VT RT 73, which provide direct access to the Long Trail. In addition, the parking and trailhead access for Sucker Brook Trail, a side trail to the LT, is located in the RA on FR 67. Both these trails are part of the Long Trail National Recreation Trail System.

The Blueberry Hill Inn Ski Center is adjacent to the west side of this RA. They operate a total of 27 miles of cross-country ski trail on the National Forest, under Special Use Permit. Some of these trails are in this RA. The cross-country skiing Catamount Trail coincides with Blueberry Hill Inn trails in the western central part of the RA. Safe use of these trails for commercial purposes requires they be groomed and kept free of hazards.

Visitor use numbers are estimates based on staff observations. Visitor use on the Sucker Brook Trail is less than 10 hikers on most days, mostly in non-winter months. The Long Trail averages 10-20 people per day, and as many as 100 visitors per day, especially the day hike to Mt. Horrid Cliffs. An overnight facility, the Sucker Brook Shelter, is located near the intersection of the Long Trail and the Sucker Brook Trail, and can be occupied by up to eight people. Visitor use on the Blueberry Hill Inn trails in the winter months can be up to 100 visitors per day on busy days on some of the trails. Two of these trails (FT 143.06 and 143.03) are also designated as mountain bike trails, with visitor use estimated at less than ten per day.

Several outfitter/guide Special Use Permits are issued annually for use of the Long Trail and other trails in the area, for a variety of non-motorized purposes.

There are pole-mounted electric and telephone lines along Goshen Town Highway 5 near the Blueberry Management Area on the west side of this RA, and there may also be some along Vermont Route 125 near the Middlebury Snow Bowl on the north side of the area.

A key part of the Forest's radio repeater network is located on Philadelphia Peak. It provides coverage of the east side of the Green Mountains for the north half of the Forest. The facility consists of an antenna tied to a tree, four solar panels on an old building approximately three feet by three feet by five feet, and a new fiberglass building six feet by six feet by eight feet that houses the radio equipment and a battery back up power supply. Access is by ATV from the end of a spur road off the Bingo Road, FR 62, to the end of the ATV route. The final half-mile is on foot. The Philadelphia Peak ATV repeater trail is used administratively about three to five times a year.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This is a large RA that stretches over the spine of the Green Mountain Ridge. There are six mountain peaks over 3,000 feet in elevation in this area that are visible from many off site vantage points, including points west of Vermont Route 7 in the Champlain Valley. The Long Trail traverses on or near the ridgeline through the parcel, offering numerous views, through a combination of natural and man-made openings in the canopy. Recent storm damage left broken trees throughout the area and some additional opportunities to view scenery. In addition, the Mount Horrid Special Area with the Great Cliffs has a scenic rock face visible from the Mt Horrid Overlook on Vermont Route 73. There are also views from the Cliffs. Portions of the Blueberry Management Area are also located on the western edge of the parcel. This area is annually maintained through controlled burning and mowing. Views from portions of the Blueberry Management Area are panoramic and offer outstanding scenery

accessible to many people. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

Vermont Route 125, on the RA's northern border, offers the viewer many opportunities for access and views into this area. Route 125 is also a State designated Scenic Byway, also called the Robert Frost Memorial Highway. The Middlebury College Snow Bowl is also adjacent to this parcel to the north, along Route 125. It is an alpine ski area with views to the surrounding area visible from trails and chairlifts. An overhead utility line is the southern boundary of this area. A network of cross-country ski trails and hiking trails lie on the western edge of the RA, along FR 32, with access through a special use permit at the Blueberry Hill Inn Ski Center. An active gravel pit with proposed expansion is located outside the western border of the RA, near the Blueberry Management Area, with the pit visible from the Management Area. On the eastern edge of the RA, the radio repeater tower located near the summit of Philadelphia Peak is visible from the immediately surrounding location.

i. Key Attractions:

- The Long Trail travels over the higher elevations and numerous connecting trails.
- The Great Cliffs, located just below Mt. Horrid, is the highest visited trail site in the RA.
- The Blueberry Hill Inn Ski Center trails attract visitors to the area.
- The RA contains six high mountain peaks over 3,000 feet in elevation. This is an attraction to people attempting to hike all 3,000-foot peaks in Vermont.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA appears natural, with the exception of the Philadelphia Peak repeater site, the Blueberry Management Area, the Blueberry Hill Inn Ski Center trail network, and some recent harvesting. As surveys for Non-Native Invasive Species (NNIS) have not occurred in this RA, its botanical integrity cannot be estimated.

Most of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are 364 acres of forested land in this RA (2 percent) that are 15 years old or younger, and so are reorganizing after a regeneration harvest. These stands are around Goshen Brook and along the edges of the RA. There has been a fair amount of cutting in this RA over the last 40 years, with regeneration harvests over more than 1,800 acres in 104 stands (13%) over that time. While a few stands were regenerated in the 1960s, most were harvested over the 1970s, 1980s, and 1990s. There will still be evidence of this harvesting visible, primarily as stumps and slash piles of larger woody debris. In addition, a significant proportion of this RA was moderately to highly damaged by the ice storm of 1998. This damage was concentrated on the mountain tops and upper slopes, as well as some middle slopes on the higher mountains. Every named mountain peak in the area was affected by this damage. Such disturbance, while natural, can be catastrophic; in this case, however, it may release the understory red spruce and speed up succession within these upper mountain slope stands, where red spruce is considered part of the potential natural vegetation. There are also substantial acreages (>1,000) of paper birch stands in the area, an early successional species that will succeed to other forest types over time, as well as areas managed for blueberries. This area may have enough accumulated disturbance effects that it will take a while for ecological processes to adjust.

Vermont Route 73 follows the southernmost boundary of the roadless area, and can be a substantial barrier to small animal movement into and out of the RA to the habitat south of the highway. Route 125 forms part of the northern boundary, and can have a similar effect on small animal movement.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from both the east and west), this RA is judged to have varying potential for providing solitude or primitive recreation. Much of the interior area is dissected by a number of trails, with some fields of blueberries used seasonally. While the interior portions, especially in the Worth Mountain to Philadelphia Peak area, provide a high potential for solitude, this potential drops off to low near the western and eastern edges, which are accessible by motor vehicles and have been subject to more management activities. This is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (46%), with some Semi-Primitive Non-Motorized (41%), and a small amount of Semi-Primitive Motorized (13%).

d. Special Features:

Scenic- Mt Horrid is a designated Special Area for scenic attraction. In addition, six mountain peaks in the RA are over 3,000 feet in elevation, and are located along the Long Trail.

Scientific- There are no designated Research Natural Areas or Experimental Forests in the Worth Mountain RA. The RA does include two Special Areas: Mount Horrid, and a section of the Long Trail that extends through the area toward its western side.

Geological- A narrow band of acidic carbonaceous and non-carbonaceous schist from the Hazens Notch formation is found underlying the east slopes of Philadelphia Peak in this RA. Along the western edge of the RA in a small portion adjacent to Dutton Brook Swamp, the area is underlain by Forestdale marble and Moosalamoo phyllite; both calcareous in nature and associated with highly productive conditions in general. These two formations and the carbonaceous phyllite toward the east side are uncommon in the State, accounting for less than 5,000 acres in area for each formation in the State. Although these formations have small acreages, there are no known areas of unique or rare rock formations that have been identified as significant by the State.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) identified a very small part of the western edge of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that a small portion of the eastern side of the area northeast of Philadelphia Peak had a high irreplaceability value, which reflects the high importance of this portion of the RA in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. However, the basis for the program's selection was uncommon ecological groups found west of the roadless area that do not occur in the RA. The remainder of this roadless area had quite low irreplaceability values and so also did not add substantial value to meeting diversity goals.

There are three ecological features of biological significance to note in this area:

- Mount Horrid – currently designated a Special Area in the Forest Plan; known location for several plant species considered of viability concern to the State of Vermont or the Forest, three of which are listed as threatened or endangered by the State (described further below). The 119-acre site is also one of only four examples in Vermont of a boreal or high-elevation calcareous cliff, and is considered a high quality example. It is a site for peregrine falcon nesting and was one of the initial hacking sites for reintroduction of the species. There is a trail that leads to the top of the cliffs, which needs to be closed when peregrines are nesting. Otherwise, there do not appear to be any threats to this site.

- Monastery Mountain – located on the lower north slopes of Monastery Mountain along Rte 125, currently does not have a special designation on the Forest; this 220-acre site is considered a good example of well-developed northern hardwood forest with old growth characteristics. Trees are old and large, and on the steeper slopes red spruce and hemlock mix in. There is little evidence of human use or disturbance in the area. Trees were aged to generally between 160 and 190 years old, although the silvicultural data shows the oldest stand in the area to be 140 years old. Although harvesting could occur here, some of the land is inoperable or marginal; the State recommends making the area a Special Area and conducting research on disturbance history and stand dynamics.
- Middlebury Gap – currently does not have a special designation on the Forest; this 100-acre site is located west of the Monastery Mountain site along the same north-facing slopes. It is considered by the State to be a good quality example of montane yellow birch-red spruce forest, apparently little disturbed, although average age is about 100 years old. The State notes that the site needs further survey to determine land use history and delineate boundaries. The site is described as steep and rocky, and so may be inoperable, although only one stand in the general area was described as marginal. Under current Forest Plan land allocations, aside from the marginal stand, the area could be harvested and so this could be a threat to the integrity of this area as being close to transitioning into older growth characteristics.

Rare and Endangered Plants- There is one large cliff in this RA with known occurrences of plants that are either on the Regional Forester Sensitive Species (RFSS) list or are tracked by the State of Vermont. This site has ten plants on the RFSS list - *Cardamine parviflora* (small-flowered bitter-cress), *Carex scirpoidea* (Scirpus-like sedge), *Juncus trifidus* (highland rush), *Platanthera orbiculata* (lesser round-leaf orchis), *Saxifraga paniculata* (white mountain-saxifrage), *Sedum rosea* (roseroot), *Solidago squarrosa* (squarrose goldenrod), *Sorbus decora* (northern mountain-ash), *Galium kamtschaticum* (boreal bedstraw), and *Woodsia glabella* (smooth woodsia); of these, *Platanthera orbiculata* and *Galium kamtschaticum* are historical records, and the rest are extant. Another four plants tracked by the state are known from this site – *Dryopteris fragrans* (fragrant fern), *Luzula parviflora* (small-flowered rush), *Stellaria alsine* (trailing stitchwort), and *Woodsia alpina* (alpine woodsia), of which two are historical records, and the other two are extant.

Of the rare plants in this RA, *Cardamine parviflora*, *Carex scirpoidea*, *Juncus trifidus, Saxifraga paniculata*, *Sedum rosea*, *Solidago squarrosa*, *Dryopteris fragrans*, and *Woodsia alpine* are all species of cliffs or ledges, in early successional habitat that is undisturbed except for recreation. Two other rare plants within this area, *Luzula parviflora* and *Stellaria alsine*, although not identical in habitat, occur in disturbed sites (e.g., roadsides, trail and edges, etc.) where microhabitat features (such as hydrology and openness) are the limiting factors.

Rare and Endangered Animals- The cliffs of Mt. Horrid, located in this RA, currently provide nesting site for the Vermont Endangered peregrine falcon. During the early to mid 1980s, this location served as a release site for peregrine falcon reintroduction in Vermont. Free-living peregrine falcons have since used this nesting site each year since 1988. Due to its current State status, as well as Federal concern, peregrine nesting efforts throughout Vermont are protected, in effort to prevent human disturbance.

Historical- Southern section: A small percentage of the area has been surveyed for Heritage Resources, and very few sites are known or reported (including one Long Trail shelter and an "industrial" site). There is some potential for prehistoric sites on the western-downslope edge.

Northern section: There is a mill, a farm, and one charcoal kiln along the western edge of the RA, as well as moderate potential for prehistoric sites down slope.

e. Size, Shape and Manageability: This 13,981 acre areas lies within the Towns of Hancock, Rochester, Ripton, Goshen, and Leicester. An exception for a spring lies within the RA, to the east of the northern corner of the private lands.

f. Boundary Conditions, Needs and Management Requirements: Approximately 15 percent of the boundaries adjoining private lands are not marked to standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation activities in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Outfitter/ guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There would be significant detrimental effect, however, on current recreation that requires motorized access or the use of equipment for maintenance. Since these areas are primarily located near the edges of the RA, however, boundary relocation may mitigate the majority of the effects on non-wilderness recreation.

As Wilderness policy does not allow for permanent structures within wilderness, the Sucker Brook Shelter would be removed unless strict criteria were met to document the exceptional need for buildings inside a wilderness, or unless legislation were to consider their continued presence as an exception.

Some of the recreation use near the edges of the RA would also be affected by designation of the entire area as wilderness. There are some low standard roads that enter the area from various places. These roads currently provide motorized access for dispersed camping, berry picking, hunting and other activities. Designation may close these areas to much of the use that is currently occurring. Most notable is a popular dispersed camping area on Road 224 near the Blueberry Management area. Current management of areas near the western edge would be detrimentally affected, including portions of the Blueberry Management Area, which depend on management activities for the maintenance of the berry bushes. If openings were lost in this Blueberry Management Area, it would mean a loss of visual quality, due to the loss of the ability to maintain vistas. It would also mean the loss of some recreational opportunities offered by blueberry picking, as without continued management the berry fields would disappear. Furthermore, many of the vistas in this RA are located along rocky areas where vegetation is sparse and have required maintenance to enlarge the size of the natural vista for view enhancement.

The Blueberry Hill Inn trails may also be detrimentally affected by designation, as they depend on grooming of and the use of equipment to abate hazards to make them safe for commercial use. The trails under permit at the Nordic Center have been constructed with machinery, averaging ten feet wide. The permit holder maintains the ski trails year round with motorized equipment: all the trails are groomed during the winter, and all are monitored and maintained by ATV's, mowers, and chainsaws. This motorized use would be prohibited by wilderness policy. In addition, there are several trail bridges on these trails that need to be maintained or replaced within the next five years. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions, and this RA is one of the larger areas (over 10,000 acres) being evaluated at this time. Wilderness designation will adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units (over 150 acres in this roadless area) would disappear with the passage of time.

This RA contains an entire Deer Wintering Area (DWA), and more than 50% of a second DWA, totaling 657 acres. With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern for long term, DWA stability is greatest in this situation, where an entire DWA, and a significant portion of a second DWA, is located within a roadless area.

Sucker, Goshen, North Branch Neshobe, Smith, Falls, Bingo, Boyden, and Grindstone Brooks in this RA provide aquatic habitat for brook trout, brown trout, slimy sculpin, and black nosed dace. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities, as well as trout stocking, and Atlantic salmon restoration activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 8,031 acres (58%) are classified as suitable for timber production. In the past 10 years, 466 acres of timber has been harvested. There are no livestock operations or potential for such operations.

Oil, gas, or mineral rights are outstanding in third party in this RA. If requested, the National Forest would need to provide reasonable and necessary access to mineral development for the individuals who own those rights. Active mining, however, would not be compatible with wilderness uses.

e. Heritage Resources: Wilderness designation would appear to have no adverse effect on Heritage Resources.

f. Land Uses: This RA includes a pole line easement, which may or may not be in the RA, a right-of-way (ROW) granted to Central Vermont Public Service (CVPS) along the southern boundary, a spring right granted with access, and a second CVPS ROW. A 150-foot ROW in the west of this RA should be used as part of the western boundary. There is also a very small exception of 0.04 acres inside the RA.

In addition, a built power line ROW is on the western edge, which is probably used as the boundary line, and a road ROW, with retained rights for motorized and non–motorized use for an undefined width or location. It is uncertain if there is a building located there. Additional research and survey work would be needed to locate the road. There is also a private inholding with motorized access on the west side. Furthermore, a private road crosses the southern part of the tract, with ROW easements. Tract 725A has a pole line easement near the boundary, also agricultural easements and spring rights near the boundary. Agricultural rights need more research to determine if they are within the roadless area. Both 725 and 725A are located within and outside of the roadless area.

The radio repeater located on Philadelphia Peak provides radio coverage to a large part of the North Half of the GMNF that would otherwise be without radio contact. Radio coverage is considered a safety item for the field going staff, and routine maintenance and equipment replacement is necessary to keep the repeater operational. The appropriateness of a radio repeater in wilderness may be questioned. An ATV trail for required maintenance may not be allowed.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are two forested stands and a cliff that are considered significant features in the RA due to their remoteness, their high quality as examples of their associated natural communities, and as habitat for rare and uncommon plants and animals. Habitat quality and integrity could improve or remain the same regardless of wilderness designation, as these areas are currently remote. Protection through wilderness designation, however, would not generally lead to reductions in habitat quality. Because the Long Trail corridor follows the western edge of the Mount Horrid Special Area, and was moved further away from the cliffs due to hiker impacts to peregrine habitat, it will be important to continue to manage this trail corridor in a similar manner if the area were designated wilderness. Assuming that closure orders can still be issued in wilderness for protection of Sensitive species, wilderness designation should not prevent managers from protecting peregrine nesting sites or rare plants on the cliffs. There would likely be limits on any vegetation management that could be used to maintain habitat, but there is currently no evidence that the cliffs are becoming overgrown or otherwise less suitable for the rare species there.

Of the rare plants in this RA, *Cardamine parviflora*, *Carex scirpoidea*, *Juncus trifidus, Saxifraga paniculata*, *Sedum rosea*, *Solidago squarrosa*, *Dryopteris fragrans*, and *Woodsia alpine* are all species of cliffs or ledges, in early successional habitat that is undisturbed except for recreation. While there is

the possibility that designation as wilderness would attract more visitors, and therefore expose these plants to more potential damage, this designation would still allow us to close certain areas or reroute a trail to protect these rare plants. Thus, wilderness designation may have a neutral effect. Two other rare plants within this area, *Luzula parviflora* and *Stellaria alsine*, although not identical in habitat, occur in disturbed sites (e.g., roadsides, trail and edges, etc.) where microhabitat features (such as hydrology and openness) are the limiting factors. Designation as wilderness would not prevent use of trail or brook edges, and thus would not prevent disturbances that may aid this species; it would most likely have a neutral effect. Another two of the rare plants here, *Sorbus decora* and *Galium kamtschaticum*, do not occupy exactly the same microhabitat, but lack of habitat is a limiting factor for them, rather than any particular threat posed by either forest management or the lack of it; thus, designation as wilderness would most likely have a neutral effect. The one historical plant from this site, *Platanthera orbiculata*, is untracked by the State, and threats are unknown; thus, it is unknown whether designation as wilderness would have any effect. There is potentially suitable habitat for other rare plants in the roadless area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are three acres of private lands in this RA. As with any inholding, "reasonable and necessary" access would need to be allowed if requested.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Worth Mountain Roadless Area has high potential to provide the attributes and values appropriate for wilderness designation. At 13,984 acres, this is among the largest RA's being evaluated. Much of this RA is considered to have relatively high scenic integrity and good opportunities for solitude and primitive experience. Opportunities for solitude are particularly high in interior portions surrounding the higher ridges, peaks, and upper headwaters. With six mountain peaks over 3,000 feet, Romance Mountain, Worth Mountain, Gillespie Peak, Monastery Mountain, Mount Horrid, and Philadelphia Peak, this RA can be seen from many viewpoints to the east and west. There are also unique ecological features in the RA that attract many wildlife viewers, including the Mount Horrid Special Area and Great Cliffs. In addition, the north slope of Monastery Mountain contains a 220-acre area featuring well-developed northern hardwood forest with old growth characteristics. There is also a 100-acre site near Middlebury Gap considered to be a quality example of montane yellow birch-red spruce forest.

Wilderness designation of the Worth Mountain RA would result in forgoing potential active habitat and timber management on about 8,031 acres of suitable timberlands. Blueberry openings in the Blueberry Hill area would not be actively maintained if the RA were designated, and would gradually be lost to encroaching forest cover. Noise and visual disturbances near roads and snowmobile trails near the boundaries would adversely affect wilderness character and experience within the sight and sound distances of these edges. Although eliminating the snowmobile trails, roads, and groomed ski trails within the interior of the area would lessen noise and visual disturbance, it would impact permittees and current users. In addition, a critical administrative repeater site located near the summit of Philadelphia Peak would likely be lost, and stream and fish habitat restoration activities would cease.

Roadless Area 92020 (Hat Crown)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 177 acres
Private: 0 acres
Total: 177 acres

b. Location, Vicinity, and Access: The Hat Crown Roadless Area (RA) is in the Town of Hancock, in Addison County. This small RA is adjacent to the southeastern boundary of the Breadloaf Wilderness. There are no Forest System trails or roads located in the area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Hat Crown roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The Hat Crown RA encompasses a small knob at its center dominated by spruce-fir vegetation. To the west the knob flattens to a bench before it starts to rise steeply again outside the area. To the northeast the slopes become gentle footslopes as they move downhill toward the Hancock Branch valley. To the south the area slopes steeply south to the incised valley bottom along Robbins Branch. There is a small patch of very steep slope just below the crest of the knob to the south. Elevations range from 1,700 feet west of the knob along the western boundary, to 1,150 feet in the southeastern corner along Robbins Branch.

Hat Crown RA Land Type Associations (LTAs):	
Mountain slope	78%
Footslope	21%
Valley bottom	1%

Hat Crown RA Vegetation:	
Northern hardwood	94%
Hardwood & spruce	3%
Spruce & fir	3%

Hat Crown RA Site Indices:	
60+ (moderately high productivity)	82%
<60 (moderate to low productivity)	18%

The potential natural vegetation of the area is a predominantly northern hardwoods, except at the top of the knob where hardwoods mix with spruce on the steep scoured and exposed upper slopes. There is abundant spruce reproduction throughout the understory along the south slope, and so all of that area may eventually become a mixed stand. There are no wetlands in this area, although Robbins Branch valley forms the southern boundary and a tributary to Hancock Branch enters the RA from the northeast.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0		177										

Management Area 2.1B emphasizes roaded recreation opportunities.

Timber resource considerations:

- 165 acres (94%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past ten years.

There may be pole-mounted electric and telephone lines along Vermont Route 125 near the private land west of Texas Falls on the south and east sides of the area.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, dispersed camping, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the area to be low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. This is a small area located adjacent to the Breadloaf Wilderness. This RA is located adjacent to and visible from Vermont Route 125, which is also known as Robert Frost Memorial Highway and a State Scenic Byway. This parcel is also located in close proximity to the Texas Falls Recreation Area. These areas are highly visible.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA is natural appearing and has a high scenic integrity. As surveys for Non-Native Invasive Species have not occurred there, the botanical integrity of the area cannot be estimated.

All of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor any stands of documented old growth in the RA. Two stands in the RA were regenerated in the mid-1970s and account for 52 acres (29%). Consequently, evidence of this harvesting will be visible; primarily stumps and occasional piles of large woody debris. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect it; in other words, one good wind event could destroy the entire area. As a physical continuation of Breadloaf Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road and highway access from the east and south), this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness area, provides a moderate potential for solitude, this potential drops off to low near the edge which is accessible by motor vehicles and has been subject to more management activities. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (56%) and Rural (44%). Adjacent to the wilderness area, this RA would provide some benefit to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Hat Crown RA.

Geological- Along the northern edge of the RA, a small piece of acidic carbonaceous phyllite and schist from the Pinney Hollow Formation enters into the area. This formation is uncommon in the State, accounting for only about 1,700 acres. There are otherwise no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portions of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There are no known or reported Heritage Resource sites. There is moderate potential for prehistoric sites along the north side of Robbins Branch/Hancock Branch (southwestern edge of the area).

e. Size, Shape and Manageability: This 177 acre area is located in the Town of Hancock and abuts Breadloaf Wilderness (unmarked boundary) to the west; private property to the south (narrow band separating NF from VT RT 125) and east side (boundaries are not marked to FS standard.), to corner of FS/private property from which a straight line heading north west to intersect with the SE corner of another tract of private land (boundaries marked to standard); then following that boundary west to the boundary with Breadloaf Wilderness.

f. **Boundary Conditions, Needs and Management Requirements:** Approximately 75 percent of the boundary lines are not marked to FS standards. There may be pole-mounted electric and telephone lines along State Route 125 near the private land west of Texas Falls on the south and east boundaries of the area. These need to be accounted for (and excluded) in boundary descriptions.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

Recreation, Including Tourism: Some of the dispersed camping that occurs within the area would definitely be affected by designation of the entire area as wilderness. These areas are relatively close to the boundary, but designation would essentially close these areas to much of the current use.

Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy since forest staff already manage the Breadloaf Wilderness to the west.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. Although there may be some detrimental effect on the current dispersed camping that requires motorized access, these areas are primarily located near the eastern edge of the RA, and boundary relocation may mitigate the majority of the effects.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (21 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., Armillaria) or pests (e.g., Balsam Wooly Adelgid, Spruce Budworm, and the Hemlock Wooly Adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 165 acres (94%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this RA.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal.

Insects/Disease- Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands in this RA.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Hat Crown Roadless Area has limited potential to provide the attributes and values appropriate for wilderness designation. Although it is located adjacent to the Breadloaf Wilderness, the opportunities for solitude are modest, and there are few features in this area. Approximately 165 acres (94 %) of this RA is suitable for timber production; with wilderness designation, these acres would not be available for timber harvest. There is substantial travel on adjacent Route 125 and the area is seen by many motorists. Besides this, there are few attractions and relatively low use of this small area. Noise and visual disturbances near Road 125 would adversely affect wilderness character and experience within the sight and sound distances of these edges

Roadless Area 92021 (Texas Gap)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,569 acres
Private: 0 acres
Total: 1,569 acres

b. Location, Vicinity, and Access: The Texas Gap Roadless Area (RA) is in the Towns of Granville, Hancock, and Ripton, in Addison County. This RA is adjacent to the southeastern side of the Breadloaf Wilderness. Much of the area's eastern boundary is formed by the Texas Gap Trail (FR 39), a major snowmobile trail. The primary road access to this area is from Forest Road 39 and Forest Road 212, Hancock Branch.

Texas Gap RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
212	Hancock Branch	Improved	1.5	?	Cr. aggregate & Soil	3
101A	Gulf Brook Spur	Unimproved	.2	No	Soil	1

Texas Gap RA Trails

Type	**Mileage**
Cross Country ski	1.5

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Texas Gap RA lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA sits on the east-facing side and lower slopes of the main ridge of the Green Mountains. Two smaller ridges trend southeast into the area from Battell Mountain. Hancock Branch follows the southwestern boundary of the area as it flows from the southern most ridge; the White River forms the northern boundary as it flows from the northern ridge. Texas Brook forms the eastern boundary of the area and the lower slopes of the RA drain into this stream. Slopes are moderately steep along Hancock Branch and along the upper slopes, becoming gentler as they trend toward Texas Brook. Elevations range from 2,500 feet at the top of the northern ridge extending into the area to 1,400 feet in the southeastern corner at the confluence of Texas Brook and Hancock Branch.

Texas Gap RA Land Type Associations (LTAs):	
Mountain footslopes	57%
Mountain slopes	39%
Upper mountain slopes & tops	4%

Texas Gap RA Vegetation:	
Northern hardwood	87%
Hardwood & red spruce	7%
Red spruce & balsam fir	1%
Plantation	2%
Open & wetland	3%

Texas Gap RA Site Indices:	
60+ (moderately high productivity)	54%
<60 (moderate to low productivity)	46%

The potential natural vegetation of the area is predominantly northern hardwoods, mixed with red spruce at the ridgetops, along Hancock Branch in the southwest corner of the area, and toward the White River in the northeast corner. There are potential areas of spruce-hardwood swamps along Texas Brook. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of deciduous scrub-shrub, emergent, and coniferous forested wetlands, concentrated primarily along Texas Brook. The remainder of the brook is dominated by spruce/fir stands. Although Hancock Branch, Texas Brook, and the White River pass along or through the area, their headwaters lie outside the RA.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0					58	181	282		1,048			

Management Area 3.1 emphasizes a roaded environment. Areas 4.1 and 4.2 emphasize Deer Wintering Areas. Management Area 6.2A is managed for semi-primitive recreation.

Timber resource considerations:

- 1,410 acres (90%) are suitable for timber production (capable of growing commercial crops of timber).
- 223 acres of timber have been harvested in the last 10 years.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include trail use, hunting, berry picking, fishing, bird watching, other wildlife viewing, and casual walks though the forest (non-trail use). In particular, Hancock Branch attracts fishing activity, and the eastern edge of the RA attracts wildlife viewing and pleasure drive activity. In addition, hunting is heavy in this RA, and berry picking is popular, though declining in recent years. In past years this was also a popular Christmas tree and bough gathering area. Though there is no detailed use inventory for this RA, forest staff familiar with it characterize its recreation activity to be moderate, with relatively high use on busy weekends. There are no known Special Uses in this area.

The Hancock Branch Trailhead parking lot is located near the southern end of the area. It provides summer trail access, and is not maintained in winter. The entire 1.5-mile length of the Hancock Branch Trail lies in the area. This trail is a popular year round trail, maintained for hikers in non-snow months, and cross-country skiers in winter. Based on field staff observation, visitor use is less than 10 per day on average. The highest use on adjacent FT 739 snowmobile trail would be about 50 snowmobiles per day, on mid-winter weekends. In addition, off-trail hiking, snowshoeing and skiing occurs west of FT 739, into the Breadloaf Wilderness. There is also some occasional illegal mountain bike use on FT739.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA contains a combination of vegetative types and land forms that include small hills and foot slopes as well as some mountain slopes. It is visible from the Braintree Mountain Range east of State Route 100. It is located adjacent to the Breadloaf Wilderness, just north of the Texas Falls Recreation Area, and directly adjacent to the Texas Falls meadows. The meadows are an open field area used for drive-in primitive camping in a scenic setting. The Hancock Branch Trail, which lies entirely in this RA, is

located on an old road, which continues to be quite apparent, along with a few culverts, ditches, and other road features. Young to mature stands dominate the forested landscape.

i. Key Attractions:

- The Hancock Branch Trail is near the Hancock Branch of the White River.
- The nearby Texas Falls Recreation Area attracts high visitor use to the area during summer and fall months.
- Located adjacent to the Breadloaf Wilderness, providing access for a variety of recreational activities.
- RA is popular for a variety of dispersed recreation activities, particularly along the eastern boundary, which is accessible to motorized recreation.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: Due to relatively recent timber harvests, this RA appears somewhat less than natural. Surveys for Non-Native Invasive Species (NNIS) have occurred at the Hancock Trailhead, Texas Falls Parking Area and Picnic Area, and the Texas Falls Special Area, and no NNIS were found. The lack of NNIS in these disturbed sites suggests that the surrounding forest in at least these sections is also likely to be uninfested.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. 159 acres of the forested land in this RA are 15 years old or younger, and so are reorganizing after a regeneration harvest. There are no stands of documented old growth in the RA. There has been a fair amount of cutting in this roadless area over the last 40 years, with more than 334 acres of regeneration harvests in 24 stands (21 percent) over that time. Most of the cutting took place during the 1980s or 1990s, although there were seven stands regenerated in the 1970s as well. Consequently, there will still be evidence of this harvesting visible, primarily as stumps and occasional piles of large woody debris, with logging slash possible in stands with recent cutting. Forest Roads follow along the southern, eastern, and northern boundaries of the area for most of their length. Because these roads are in the riparian zones of the streams that also border the area, they can pose problems for movement of small animals from riparian habitat to other suitable habitat both within and outside the roadless area. In particular, FR 212 follows Hancock Branch so closely that it would be difficult to find riparian habitat there without the road in it. FR 39 and 39B basically separate the lower stretch of Texas Brook from the roadless area (the boundary is the road), and so restrict small animal movements from those riparian habitats into the roadless area. In addition, although FR 101 separates part of the White River from the RA, leading to similar problems, here the stream crosses to the inside of the road and so is within the RA for a portion of the northern boundary.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the east), this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness area provides a high potential for solitude, this potential drops off to low near the eastern edge, which is accessible by motor vehicles and has been subject to more management activities. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) (96%), and only a small amount of Semi-Primitive Non-Motorized (4%). The area is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- At the southeastern corner of the area a small piece of acidic carbonaceous phyllite and schist from the Pinney Hollow Formation enters into the area. This formation is uncommon in the State, accounting for only about 1,700 acres. Also along the southern edge, a small piece of the Battell member of the Underhill formation enters the area, which is generally carbonaceous schist and schistose quartzite with occasional limestone. This member is also uncommon in the State. Although these two rock formations have small acreages in the state, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portions of it as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- Approximately 50 percent of this area has been surveyed for Heritage Resources. The nine known sites are 19th century residences and farms, associated with the main travelways. The Texas Gap trail was the historic north/south route, probably pre-dating State RT 100 as the main connector in the area. Monitoring and management of these sites is important, given the high use of and easy access to the area. Prehistoric potential is moderate to high at, and just south of, Texas Gap.

e. Size, Shape and Manageability: This 1,569 acre area is located in the Towns of Hancock, Granville, and Ripton. It abuts Breadloaf Wilderness (unmarked interior boundary) along the southern and western boundaries, and abuts Hancock Branch (stream) private property boundary on the east side of the southern boundary (boundary marked to FS standard), connecting with FR 39 which becomes the east side boundary to its terminus) to the north.

f. **Boundary Conditions, Needs and Management Requirements**: The boundary between this RA and the Breadloaf Wilderness boundary is difficult to accurately locate (short of surveying), as it is long, convoluted, and not marked. As an addition to Breadloaf Wilderness, this area could provide a more consolidated and more readily locatable boundary.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Some of the recreation use in this RA would be affected by designation of the entire area as wilderness. There are a number of low standard roads that enter the area from various places. These roads currently provide the motorized access for dispersed camping, berry picking, hunting and other activities. These areas are relatively close to the eastern edge (within 0.5 mile of the eastern boundary), but designation would essentially close these areas to much of the use that is currently occurring.

Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and

though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy since the agency is already managing the Breadloaf Wilderness to the west.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. On the other hand, there would be significant detrimental effect on current recreation that requires motorized access. Since the areas are mostly located near the eastern edge of the RA, however, boundary relocation may mitigate the majority of the effects on non-wilderness recreation.

The Hancock Branch Trail is located on an old road, which continues to be quite apparent, along with a few culverts, ditches, and other road features. The close proximity to the stream has resulted in occasional washouts to the trail. There are seven foot bridges located on the trail, constructed with the assistance of machinery and mechanized equipment. There are 7 pedestrian bridges located on the trail, 3 of which are over 30 feet long. These bridges are constructed with treated lumber, and will need continuous maintenance, requiring the use of machinery. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units will disappear with the passage of time.

Texas Brook, Hancock Branch and headwaters of the White River in this RA provide aquatic habitat for brook trout, rainbow trout and slimy sculpin. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit the ability to restore stream habitat and enhance recreational fishing opportunities over the next half century or so. Furthermore, the habitat and fish population monitoring and trout stocking activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 1,410 acres (90%) are classified as suitable for timber production (capable of producing commercial crops of timber). 223 acres of timber have been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have an adverse effect on Heritage Resources located along the Texas Gap Road (FR 39 & FT 739) because it would restrict the agency's ability to evaluate and actively preserve and stabilize historic archaeological sites here, as well as inhibit the ability to conduct prehistoric site inventory activities (for example test pit excavation and attendant removal of vegetation at those loci) in the vicinity of the gap. This adverse effect could be avoided, however, if the proposed boundary of this RA were moved to the west to exclude these sites.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area. If Forest Road 212, Hancock Branch, were closed, a parking structure would be lost.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands in this RA.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Texas Gap Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. This 1,569-acre RA is adjacent to the Breadloaf Wilderness along the southern and western boundaries, and could improve wilderness boundary management.

Due to established dispersed recreation in and near this area, opportunities for solitude are mainly modest. The Texas Gap Trail is a major snowmobile trail located on Forest Road 39, which is much of the area's eastern boundary. The nearby Texas Falls Recreation Area attracts high visitor use during summer and fall months. This area includes parking for the Hancock Branch Trail and the Texas Gap Snowmobile Trail. Wilderness designation would also result in forgoing potential active habitat and timber management on 1,410 acres of suitable timberlands, and would increase the cost and difficulty of heritage exploration and stream improvement. Noise and visual disturbances near boundary roads and snowmobile trails would adversely affect wilderness character and experience within the sight and sound distances of these edges. Although the elimination of roads and motorized trails in the interior of the area could improve the opportunities for solitude and other wilderness values and experiences, this would result in hardship to current and potential users. There are nine known heritage sites including 19th century residences and farms associated with old travelways. Wilderness designation would make evaluation and management of these sites difficult and possibly unfeasible.

Roadless Area 92022 (Austin Brook)

1. OVERVIEW

a. Acres (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 814 acres
Private: 53 acres
Total: 867 acres

b. Location, Vicinity, and Access: The Austin Brook Roadless Area (RA) is in the Towns of Granville and Warren, in Addison and Washington Counties. This RA is adjacent to the northeastern portion of the Breadloaf Wilderness. It is bounded on the east by Vermont Route 100, on the south by Forest Road 25, Austin Brook Road, and on the north by Forest Road 43, Stetson Hollow. There are 2 miles of FR 25, which is an improved Forest Service system road, in this roadless area. FR 25 is a gravel-surface road without a gate. A Special Use permitted road branching off from serves an inholding in the RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Austin Brook roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA drapes over a northeast trending ridge that extends from Mt. Cleveland. Slopes fall north, east, and south off the ridgeline to the boundaries of the area, and are steep along the upper parts of the east and south faces. Slopes are moderately steep along the slopes and two streams, flattening along the ridgeline. Elevations range from 2,300 feet along the ridge at the western edge of the RA to 1,100 feet in the northeastern corner at the confluence of Stetson Brook and the Mad River. Austin Brook runs just inside the RA's southern boundary, Stetson Brook runs just outside the northern boundary, and the Mad River follows the eastern. There are three acres of wetlands in a small area along the Mad River.

Austin Brook RA Land Type Associations (LTAs):	
Mountain slopes	97%
Footslope	3%

Austin Brook RA Vegetation:	
Northern hardwood	76%
Hardwood & red spruce	19%
Plantations	2%
Open	1%
Paper birch	1%

Austin Brook RA Site Indices:	
60+ (moderately high productivity)	50%
<60 (moderate to low productivity)	50%

The potential natural vegetation of the area includes northern hardwoods mixed with red spruce at the ridgetops and northern hardwoods along the middle and lower slopes and along the streams. National Wetlands Inventory mapping indicates that the existing wetlands along the Mad River in the area are conifer-dominated forested swamps. There are no streams that have headwaters or pass through the area besides the three noted as forming or following the boundaries, although the slopes do drain to these three streams.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	53						147	22		645			

Management Areas 4.1 and 4.2 emphasize Deer Wintering Areas. Area 6.2A is managed for Semi-Primitive Recreation values.

Timber resource considerations:

- 591 acres (72%) are classified as suitable for timber production (capable of growing commercial crops of timber).
- 83 acres of timber have been harvested in the past 10 years.

Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the RA to be relatively low, with moderate use on busy weekends. We understand Austin Brook Road to have a history of low-level, dispersed recreation use, although evidence of such is not readily apparent. A road under Special Use Permit has served a small inholding in the RA.

A stream gauge is located near the northern boundary in the central part of the RA, 30 feet south of the road. The gauge consists of a four-inch diameter pipe partially buried in a brook, which measures high water and normal flow readings. This was installed in the spring of 2003 and is intended to be in place for a few years. This site is part of a research project with Norwich University and the Vermont Department of Environmental Conservation to quantify the sediment in this stream. This is then used as an indication of sediment movement in the Mad River Watershed. The site, in place for a few years, is monitored several times a month from spring to fall and future plans are for additional gauges in the same stream.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA is located on mountain slopes projected down slope from Mt Cleveland. Views to the area can be seen from Route 100 and points east in the Northfield Mountains. The small RA has frontage on State Route 100 (a State designated Scenic Byway) on its eastern edge. A State pull-off and picnic site is adjacent to the parcel on State Route 100. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.
- Deer hunters desiring a more secluded type of hunting favor remote portions of the RA.
- Fishing at Stetson Brook.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This small RA has frontage on State Route 100 (a State designated Scenic Byway) on the eastern edge of the area. A State pull-off and picnic site is adjacent to the parcel on State Route 100. The RA is located on mountain slopes projected down slope from Mt Cleveland. Views to the area can be seen from Route 100 and points east in the Northfield Mountains. Recent timber harvest has occurred. The RA's botanical integrity cannot be estimated, as Non-Native Invasive Species (NNIS) surveys have not occurred here.

Most of the stands in this area are between 16 and 170 years old. They were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are 49 acres (7%) of forested land in this RA that are 15 years old or younger, and so are reorganizing after a regeneration harvest. There are no stands of documented old growth in the RA. There has been some cutting in this roadless area over the last 40 years, with 87 acres in 6 stands of regeneration harvests (12 percent) over that time. Most of the cutting took place during the 1980s or 1990s. Consequently, there will still be evidence of harvesting visible, primarily as stumps and occasional piles of large woody debris, with logging slash possible in stands with recent cutting. A small area of severe ice damage from the 1998 ice storm enters into the roadless area along the ridgeline from Mt. Cleveland. The size of this area limits this area's natural integrity, as it is of a size vulnerable to complete or substantial loss through catastrophic wind damage or other natural disturbance. However, because it adjoins Breadloaf Wilderness, the two areas together combine to make a wilderness area resilient to natural disturbance. Forest Roads border or follow along the southern, eastern, and northern boundaries of the area for most of their length. Because these roads are in the riparian zones of the streams that also border the area, they can pose problems for movement of small animals from riparian habitat to other suitable habitat both within and outside the RA. In particular, FR 43 and RT 100 follow their adjacent streams so closely that it would be difficult to find riparian habitat there without the road in it. Both roads separate portions of the streams and riparian habitat from the roadless area, and so restrict small animal movements from those riparian habitats into the RA.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the east, north and south), this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness area, provides a high potential for solitude, this potential drops off to low near the eastern and southern edges, which is accessible by highways and other roads. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (93%), with some Rural (4%) and some Semi-Primitive Non-Motorized (3%).

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Austin Brook RA.

Geological- At the western corner of the RA a small piece of the acidic Mt. Abraham schist member of the Underhill formation enters the area from the north. This formation is somewhat uncommon in the state, accounting for about 6,400 acres statewide. Although this formation has small acreages in the state, there are no known areas of unique or rare rock formations here that have been identified as significant by the State. Areas of rock outcrops can be found along the upper parts of the east and south faces of the ridge, primarily on the Pinney Hollow formation.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portions of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Wildlife- There are no known records of state or federally listed species, Regional Forester Sensitive Species, or other species of viability concern within this roadless area.

Rare and Endangered Plants- There are no known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state in this RA.

Historical- Approximately 60 percent of this section has been surveyed for Heritage Resource sites. The five known sites are the remains of historic structures – farms and at least one mill along Stetson Brook on the north.

e. Size, Shape and Manageability: This 867-acre area is located in the Towns of Granville and Warren bounded on the west and south by Breadloaf Wilderness (unmarked interior boundary). The southern boundary abuts the Austin Brook Road, FR 25. A high clearance road (FR161) fords Austin Brook to access two private inholdings. One small inholding contains a substantial camp and road with traditional motor vehicle access, with a Special Use permit for the road. A boundary adjustment to eliminate these inholdings, without producing a narrow finger of wilderness would be desirable. The east side boundary is VT Route 100. An offset of 300 feet from the centerline of VT Route 100 would be consistent with existing road offsets for the adjoining Breadloaf Wilderness and would enhance wilderness characteristics and avoid impacts resulting from road maintenance activities – brushing, culvert replacements, etc. The northern boundary is defined by the Stetson Brook Road (FR 43), which is Warren Town Road 39. This road accesses private land in the northwest corner of the RA. If this RA and the adjoining Stetson RA were both made into wilderness, it would result in an undesirable "cherry stem" exclusion to accommodate the Stetson Brook Road. This road has significant erosion, however, which has raised questions about the potential of the town "downgrading" the road to a trail status.

f. **Boundary Conditions, Needs and Management Requirements:** Two of the roads surrounding this RA, FR43 and State Route 100, would not be closed with wilderness designation. If this RA and the northerly adjoining RA were both designated as wilderness, the town road between the two (FR43) would penetrate deep into the new wilderness lands. This would be an unacceptable condition, as the agency could not control or close that road. There are also 53 acres of a private inholding in the RA, near the southern boundary.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Little of the recreation use that occurs within the area would be affected by designation of the area as wilderness, as the interior of the RA is not currently accessible by motorized recreation. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy since the agency already manages the Breadloaf Wilderness to the west.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. There may be some detrimental effect, however, on current recreation that occurs near the private in-holdings. Since the areas are primarily located near the southern edge of the RA, boundary relocation may mitigate the majority of these effects on non-wilderness recreation.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

The Austin Brook RA contains an entire Deer Wintering Area (DWA), totaling 25 acres. Management goals for DWAs focus on food and shelter requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management. When an entire DWA is located within a RA, concern for long term DWA stability is greatest.

Austin Brook in this RA provides aquatic habitat for brook trout and rainbow trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: Designation as wilderness would lead to the need to re-evaluate the water monitoring site in this RA and determine if it should remain. The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 591 acres (72%) are classified as suitable for timber production (capable of growing commercial crops of timber). 83 acres of timber has been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: The private land served by the road under Special Use Permit is an inholding. The legal requirement to provide access placed on the Secretary of Agriculture by the Alaska National Interest Land Conservation Act applies in this case. The Forest Service must allow "reasonable and necessary"

access to this inholding if requested. As mentioned above, the existing (and future proposed) stream gauges would need to be re-evaluated to consider if it is an appropriate use in wilderness.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are 53 acres of private lands within this RA. This includes a special use permitted road that provides access, and which would be required to continue under wilderness designation. Motorized use to an inholding would make wilderness management problematic in that area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

This 724-acre Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. With no Forest roads or trails in the RA, and being adjacent to the Breadloaf Wilderness, the potential for solitude in the western portion of this RA is high. Deer hunters looking for secluded hunting also favor this area. This RA is seen from Mt. Cleveland, Route 100, and the Northfield Mountains, and provides dispersed recreation at low to moderate levels.

Opportunities for solitude, primitive recreation, and other wilderness experiences and values would be limited by noise and visual distractions within sight and sound distance of edge roads, such as Route 100 and Forest Road 25. Impacts of designation would include forgoing timber management on 476 acres of suitable timber lands (66% of the RA), as well as forgoing management of a deer wintering area which is located fully within the RA.

Roadless Area 92023 (Steam Mill)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 1,382 acres
Private: 2 acres
Total: 1,384 acres

b. Location, Vicinity, and Access: The Steam Mill Roadless Area (RA) is in the Town of Ripton, in Addison County. This RA is adjacent to the southwestern boundary of the Breadloaf Wilderness, and is bordered on the west by FR59 and FR54, and by FT259, the Turnpike snowmobile trail.

Steam Mill RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
131	Short Ridge	Unimproved	.1	No	Soil	1
Off FR59	Unclassified	Unimproved	.6			

Steam Mill RA Trails	
Type	**Mileage**
Hiking & Cross Country Skiing	3.2

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 94 percent of the Steam Mill roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 6 percent occurs in the Northern Green Mountain Subsection. This RA lies along the west-facing lower slopes of the main ridge of the Green Mountains from Breadloaf Mountain south to Burnt Hill. Mountain landscapes are found at the northern tip of the RA, and valley bottom landscapes follow the footslopes along the western border. Slopes are very steep only at the northern tip of the area where two ridges form a gap; otherwise slopes are moderately steep progressing to gentle as one proceeds west over the area. Elevations range from 2,500 feet in the northern tip of the area, to 1,750 feet on the western edge along South Branch and Sparks Brook. Although most of the stream headwaters are outside the RA, several streams and their tributaries cross through this area.

Steam Mill RA Land Type Associations (LTAs):	
Low mountains & hills	77%
Mountain slopes	5%
Upper mountain slopes & tops	1%
Valley bottoms	17%

Steam Mill RA Vegetation:	
Northern hardwood	91%
Hardwood & red spruce	6%
Red spruce & balsam fir	1%
Open & wetlands	2%

Steam Mill RA Site Indices:	
60+ (moderately high productivity)	38%
<60 (moderate to low productivity)	62%

The potential natural vegetation of the area is primarily northern hardwoods mixed with spruce along the lower slopes and flats, as well as on the steep convex slopes. Potential northern hardwood areas are restricted to the moderately steep slopes along the eastern edge of the area toward the south. Two wetlands accounting for 10 acres occur at the northern end of the area. National Wetlands Inventory mapping indicates that these are generally scrub shrub/emergent swamps, with some coniferous forested swamp mixed in one area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	2									1,382			

Management Area 6.2A is managed primarily for Semi-Primitive Recreation.

Timber resource considerations:

- 1,259 acres (91%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- 219 acres of timber has been harvested in the past 10 years.

Dispersed recreation use in the area is similar to those in other general forest areas throughout the National Forest. This use may include hiking, hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the RA to be low to moderate, with higher use occurring adjacent to the RA, on the Turnpike snowmobile trail that forms the western boundary. Hunting use is also judged to be relatively high. Various outfitter/guide permittees do a variety of hiking or backpacking activities on the RA's trails.

The Burnt Hill (FT 115) and Skylight Pond (FT 116) trails pass through this RA for 0.76 and 0.64 miles, respectively, then through Breadloaf Wilderness and connect with the Long Trail. Both are part of the Long Trail National Recreation Trail System. Burnt Hill Trailhead is located outside the area on private lands. Steam Mill Clearing is the trailhead for Skylight Pond Trail, and is also used as a primitive camping area. It is located on the area's western boundary. A short portion of the Norske Trail (FT 169) (cross country skiing) is also in this RA, connecting with the Burnt Hill Trail. The Catamount Trail (FT 275) cuts through this RA, connecting FR 59 and FR 54.

Visitor use numbers are estimates based on staff observations. Burnt Hill and Skylight Pond Trails are used for day hikes, with visitor use of less than ten per day. Both are also long distance hiking access points. Both trails terminate on the Long Trail in the vicinity of overnight shelters. Use on the Turnpike snowmobile trail (FT259) bordering the RA in the winter months is up to 100 visitors per day on the weekends. The Catamount Trail has fewer than 20 visitors per day.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This is a long narrow RA that follows FR 59 and FR 54 on its western edge. On the eastern edge is the Breadloaf Wilderness, with access to the wilderness and the Long Trail offered via side trails. Some people drive for pleasure along FR 54 and FR 59 viewing the foreground scenery. Steam Mill Clearing is maintained as a wildlife opening and also serves as a primitive camping area at the Skylight Pond Trail head on FR 59. Foreground views to this site offer visual variety from the otherwise forested road canopy in this area. Panoramic views from the Breadloaf Campus of Middlebury College located south of this RA, at the intersection of FR59 and State Route 125, look out toward lands in the southern portion of this area.

The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.
- Provides access for a variety of recreational activities, including popular trails, such as the Skylight Pond Trail.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: With the exception of the trail network and some evidence of timber harvest, this RA appears natural. Within the roadside corridor of FR 59, areas have been designated for firewood removal in an attempt to enhance aesthetics along the road corridor. Panoramic views into this RA as well as the Breadloaf Wilderness mountain peaks beyond can be seen from State Route 125.

Surveys for Non-Native Invasive Species (NNIS) have occurred around Skylight Pond, on the edge of this RA (but not within it), and no NNIS were found. The lack of NNIS at this disturbed site suggests that the surrounding forest in at least this section is also likely to be uninfested.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. 40 acres of forested land in this RA are 15 years old or younger, and so are reorganizing after a regeneration harvest. These stands are at the south end around South Branch. There are no stands of documented old growth in the RA. There has been some cutting in this roadless area over the last 40 years, with regeneration harvests in 13 stands on 330 acres over that time. There will still be evidence of this harvesting visible, primarily as stumps and slash piles of larger woody debris. Forest Roads 59 and 54, the western boundary of the RA, are likely to present a substantial barrier to small animal movement into and out of the area, as there is a substantial amount of lowland and wetland habitat west of these roads.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road and trail access from the west), this RA is judged to have a varying potential for providing solitude or primitive recreation. Although the eastern portion, adjacent to the existing wilderness area, provides a high potential for solitude, the potential drops off near the western edge, which is accessible by motor vehicles. Noise on the road/snowmobile trail forming the western border would also cause a reduction in solitude potential. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) at 97%, with some Semi-Primitive Non-Motorized (3%). The RA is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area.

d. Special Features:

Scenic- The southern portion of this parcel is visible from the panoramic view at the Breadloaf Campus of Middlebury College.

Scientific- There are no designated Research Natural Areas, Experimental Forests, or Special Areas in this RA.

Geological- There are no known areas of unique or rare rock formations in the roadless area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

There is one ecological feature of biological significance to note in this area:

- The Natural Turnpike – currently not designated any special status in the Forest Plan. At this site, the globally rare *Polemonium vanbruntiae* (Appalachian Jacob's ladder) occurs.

Rare and Endangered Plants- There is one area in the RA with known occurrences of plants that are either on the Regional Forester Sensitive Species (RFSS) list or are tracked by the state of Vermont. *Polemonium vanbruntiae* requires canopy gaps, or open habitat. If this area were designated as wilderness, the Forest would lose the ability to maintain open habitat for this species.

Historical- There are two known historic farmsteads on the south, one to the north. "Steam Mill" Clearing itself is enigmatically named (i.e., we do not have any evidence for a Steam mill there – perhaps it was a 20th c. portable mill operation). There is at least moderate potential for prehistoric sites along the tributaries into the Middle Branch of the Middlebury River.

e. Size, Shape and Manageability: The area is bordered on the west by Forest Road 54 and FR 59. These roads become a major snowmobile corridor trail (FT 259, the Turnpike Trail) in the winter months, as well as the Catamount Trail (a cross country ski trail). A parking lot is located on the area's western boundary, just north of the FR 54/ FR 59 intersection. This is maintained in the winter months for snowmobile trail access. In recent years FR 54 has been plowed to access private property and has created conflicts with winter sports use, and may be cause for future plans to relocate the winter trails off of the road. A two-acre "triangular" inholding (boundaries marked to FS standard) is located within the area, and has historically had motorized access.

f. **Boundary Conditions, Needs and Management Requirements:** All adjacent private boundaries are marked to FS standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Steam Mill Clearing is located on the edge of the RA, and offers scenic variety and primitive camping to the roadside corridor. This clearing would be lost if not maintained. A low amount of illegal ATV use has been a continuous problem on FT 275. Efforts including barricades and signage have not been successful. If designated wilderness, efforts to keep illegal ATV use of wilderness would continue to be a high priority and a problem for managers.

Non-motorized activities would still be allowed to continue at current levels, unless user controls may be needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy since there is already management of the Breadloaf Wilderness to the east.

Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. Areas adjacent to the road and trail on the western boundary have a significantly lower potential to provide a true wilderness experience. There may be room for some compromise to relocate the boundary to mitigate the majority of these effects.

The winter parking lot and the 0.5 miles of snowmobile trail in this RA would be eliminated if the area were designated as wilderness. A boundary setback of 300 feet from the road consistent with existing roadside boundaries in Breadloaf, would allow these uses to continue. Based on staff observations, the Turnpike snowmobile use in the winter months is up to 100 visitors per day on the weekends. The Catamount Trail has fewer than 20 visitors per day. There are eight bridges located on the Catamount Trail, one on Skylight Pond Trail, and one on the Norske Trail that will need to be monitored and maintained in the future.

As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness would provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

Sparks, Brandy, and Burnt Hill Brooks and Middle Branch Middlebury River in this RA provide aquatic habitat for brook trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities, habitat restoration, trout stocking, and Atlantic Salmon restoration activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 1,259 acres (91%) are classified as suitable for timber production (capable of producing commercial crops of timber). 219 acres of timber have been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: An inholding has historically had motorized access; this would have to be allowed to continue if designated as wilderness. Motorized use would cause detrimental effects to manager's abilities to mange that area to meet wilderness values. Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no records of rare of exemplary natural communities here, and no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern except for *Polemonium vanbruntiae*. *Polemonium vanbruntiae* requires canopy gaps, or open habitat. If this area were designated as wilderness, the Forest would lose the ability to maintain open habitat for this species. There is potentially suitable habitat for other rare plants in the RA, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are two acres of private lands within this roadless area. Motorized access has been ongoing to this parcel and would be allowed to continue if designated wilderness. This would be problematic for managers and limit their ability to manage the area for wilderness values.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Steam Mill Roadless area has moderate potential to provide the attributes and values appropriate for wilderness designation. Benefits would include expansion of the adjacent Breadloaf Wilderness's scenic value and solitude potential. Opportunities for solitude on the western edge of the RA are more modest, however, due to established dispersed recreation in and near the area, as well as the effects of noise and visual disturbance from adjacent roads and associated snowmobile trails. A half-mile of the highly used Turnpike Snowmobile Trail and its parking area are located in this RA. Impacts of designation would include elimination of mechanized methods for trail bridge repair and replacement, for stream improvement, and for maintenance of habitat for Appalachian Jacob's ladder, as well as forgoing timber management on 1,410 acres of suitable timber lands.

Roadless Area 92024 (Turnpike)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 73 acres
Private: 0 acres
Total: 73 acres

b. Location, Vicinity, and Access: The Turnpike Roadless Area (RA) is in the Town of Ripton, in Addison County. This small RA is bounded on the east by the Breadloaf Wilderness. The area is bounded on the west by FR 54, Natural Turnpike. In the winter this is also FT 258, a snowmobile corridor trail, and the Catamount Trail. There are no Forest System roads or trails located in this RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 77 percent of the Turnpike RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 23 percent occurs in the Northern Green Mountain Subsection. This RA lies along the west-facing lower slopes of the main ridge of Breadloaf Mountain, along the Green Mountains. Mountain slopes are only encountered along the eastern side of the area, as the slopes approach the ridge. Heading west, the slopes become gentler as they approach the valley of a tributary to Blue Bank Brook, which runs north-south through the western side of the RA. Elevations range from 1,850 feet at the northwestern corner to 2,200 feet in the southeastern corner. Another tributary to Blue Bank Brook runs through the northeastern corner of the RA.

Turnpike RA Land Type Associations (LTAs):	
Low mountains & hills	77%
Mountain slopes	23%

Turnpike RA Vegetation:	
Northern hardwood	97%
Open	3%

Turnpike RA Site Indices:	
<60 (moderate to low productivity)	100%

The potential natural vegetation of the area is primarily northern hardwoods, mixed with spruce in the southeastern corner where the slopes get a little steeper with outcrops toward a steep gap in these low mountains. There are no wetlands noted in the RA, although there are two areas of moist flats – one along the western tributary at the south end, and another on a bench along the lower slope. National Wetlands Inventory mapping does not note any wetlands in the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0									73			

Management Area 6.2A is managed primarily for Semi-Primitive Recreation.

Timber resource considerations:

- 70 acres (96%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past ten years.

There are no known Special Uses in this area. Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be low, except for the road/trail on the western boundary, which receives higher winter use.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This is a small RA that follows FR 54 on the western edge. Along the eastern edge is Breadloaf Wilderness. Some people drive for pleasure along FR 54 viewing the foreground scenery. Blue Bank Brook flows through the area. Beaver ponds and associated wetland exist along the road edge associated with the brook and extend onto a parcel of private property to the south. To the north is another parcel of private property with Blue Bank Brook and associated beaver ponds. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: As there are no trails or roads running through this RA, as well as no recent timber harvest, the area appears natural. As surveys for Non-Native Invasive Species have not occurred in this RA, the botanical integrity of the area cannot be estimated.

All of the stands in this were regenerated from harvests and other land uses, and now look like young to middle-aged forests. There are no stands of trees that are 15 years old or younger, nor stands of documented old growth in the roadless area. There has been no cutting in this roadless area over the last 40 years, although stands immediately to the west have seen some cutting but not regeneration harvests. Given its small size, this RA may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect it; in other words, one good wind event could level the entire area. As a part of Breadloaf Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its proximity to roads and development, the RA is judged to have very low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this area as Roaded Natural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, since non-conforming activities on adjacent private land may still affect the solitude of the area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests, or Special Areas in the Turnpike RA.

Geological- There are no known areas of unique or rare rock formations in the roadless area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of State or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There are no known or reported Heritage Resource sites. There is some possible prehistoric interest, however, given that the headwaters of the New Haven River are here (and there are known sites downstream).

e. Size, Shape and Manageability: This 73-acre area is located in the Town of Ripton. It abuts Breadloaf Wilderness boundary (unmarked) to the east; private lands to the north and south; and Forest Road 54 to the west.

f. Boundary Conditions, Needs and Management Requirements: An offset of 300 feet from the centerline of FR 54 would be consistent with existing road offsets for the adjoining Breadloaf Wilderness and would enhance wilderness characteristics. An offset would also avoid impacts resulting from road maintenance activities such as brushing, culvert replacements, and future trail relocations off plowed roads.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls may be needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest.

Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependant on trails. Management of probable recreation use from adjacent private land makes this a less desirable addition to the wilderness.

This area contains no Forest Service trails or recreational developments. On the boundary, Forest Road 54 is used for snowmobile and cross-country ski (Catamount Trail) corridors (FT 273) during winter. In recent years, plowing sections of the road to access private property has created conflicts with winter sports use, and may be cause for future plans to relocate the winter trails off of the road. The opposite side of the road is National Forest.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby

benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 70 acres (96%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Turnpike Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. While this small area could be considered as an expansion of the Breadloaf Wilderness, its proximity to Forest Road 54, with its year-round motorized use, detracts from potential wilderness values. Forest Road 54, on the western boundary, receives moderate motorized dispersed recreation use spring through fall, and it is a major snowmobile and cross-country ski trail. Noise and visual disturbances near Forest Road 54, private land, and associated snowmobile trails near the boundaries would adversely affect wilderness character and experience within the sight and sound distances of these edges.

Roadless Area 92025 (Blue Bank)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 246 acres
Private: 0 acres
Total: 246 acres

b. Location, Vicinity, and Access: The Blue Bank Roadless Area (RA) is in the Towns of Ripton and Lincoln, in Addison County. This RA is bounded on the east by the Breadloaf Wilderness. The area can be accessed by FR 201, Big Basin, which is the common border between this RA and the Cooley Glen Roadless Area (92026). There are no Forest Service system roads in this area. There are two hiking trails in the area, totaling less than a mile.

Blue Bank RA Trails	
Type	**Mileage**
Hiking	.8

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 85 percent of the Blue Bank RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 15 percent occurs in the Northern Green Mountain Subsection. This RA lies along the west-facing lower slopes of the main ridge of the Green Mountains. Mountain slopes are only encountered in the southeastern corner of the RA, as the slope climbs toward Breadloaf Mountain. Elevations range from 1,950 feet toward the southeast along the ridgeline from Breadloaf, to 1,600 feet in the northeastern corner along the New Haven River. Two streams influence the topography of the RA. The upper reaches of the New Haven River form the long northeastern boundary, and Blue Bank Brook forms a horseshoe on the western side of the area. A long gradual ridge separates the two streams and extends from the Breadloaf Mountain ridge northwest through the RA. A small hill sits west of Blue Bank Brook in the curve formed by the stream. Both streams are incised and have fairly steep banks within the area. The terrain becomes flat in the southwestern corner of the RA, around Blue Bank Brook.

Blue Bank RA Land Type Associations (LTAs):	
Low mountains & hills	47%
Valley bottoms	38%
Mountain slopes	15%

Blue Bank RA Vegetation:	
Northern hardwood	81%
Hardwood & hemlock	14%
Open	5%

Blue Bank RA Site Indices:	
60+ (moderately high productivity)	59%
<60 (moderate to low productivity)	41%

The potential natural vegetation of the area is mostly northern hardwoods mixed with spruce, primarily along the low slopes, streams and ridgeline, with northern hardwoods restricted to the mountain slope terrain to the southeast and the hill west of Blue Bank Brook. There are no wetlands noted from the area, although there is an area of wet flats in this southwestern corner.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						246						

Management Area 4.1 emphasizes Deer Wintering Areas.

Timber resource considerations:

- 233 acres (95%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- Eight acres of timber have been harvested in the past ten years.

There is an application under consideration for a Special Use Permit authorizing an access road for the private land adjacent to the northwest side of the RA. The proposed road would leave FR 54 in this RA on an existing low standard road headed northeast. New construction would lead off the existing road northerly to the property line.

Various outfitter/guides use the trails in the area for a variety of hiking and backpacking activities under outfitter/guide Special Use Permits.

Dispersed recreation activities in this RA are similar to those in other general forest areas throughout the National Forest. This use may include hiking, hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the area to be low, with higher use on the Cooley Glen and Emily Proctor Trails.

Visitor use numbers are estimates based on staff observations. Visitor use on Emily Proctor Trail is generally less than ten per day, with most use on summer and fall weekends. Although non-motorized winter use occurs, it is significantly less than in summer months. Winter parking is located on the Town portion of FR 54, as FR 201 is not maintained in winter. A high use snowmobile trail, FT 258, is located just east of the RA boundary, on FR 54, which is also part of the Catamount Trail.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: Blue Bank Brook flows through this small RA. The New Haven River on the northern edge of the parcel is a recreation and scenic attraction. A primitive campsite is located on the riverbank near the Emily Proctor and Cooley Glen trailhead. The Emily Proctor trail traverses through the site on an old roadbed until it reaches the Breadloaf Wilderness boundary on the eastern edge of the RA, before turning into a more natural appearing trail. The Cooley Glen Trail traverses back and forth between this parcel and the adjacent Cooley Glen RA to the north. The trail follows a branch of the New Haven River, and has had significant damage due to high water. The trail has been reconstructed within the last two to three years in these damaged areas. This RA has a portion of road on both the western edge and to the north. Private ownership with road frontage also borders a portion of this area on two sides. An obtrusive road cut was created at the intersection of FR54 and FR201 just before the RA boundary. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- The RA's proximity to the New Haven River is its key attraction.
- Upper reach of the New Haven River provides good fishing potential.
- Located adjacent to the Breadloaf Wilderness.
- Provides key access to the Breadloaf Wilderness and the Long Trail on the Cooley Glen and Emily Proctor Trails.
- Provides trail access to the Emily Proctor Shelter, located in the Breadloaf Wilderness on the Long Trail.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The northwest edge of the RA has features that reduce its scenic value, including the proximity to an adjacent road cut and a trailhead located in the RA. Surveys for Non-Native Invasive Species (NNIS) have occurred in the one opening, and no NNIS were found. The lack of NNIS at this disturbed site suggests that the surrounding forest in at least this section is also likely to be uninfested.

Most of the stands in this area were regenerated from harvests and other land uses, and now look like young to middle-aged forests. 25 acres (10%) of forested land in this RA are 15 years old or younger, and so are reorganizing after a regeneration harvest. One stand is along Blue Bank Brook to the north, and the other is along a lower slope to the south. There are no stands of documented old growth in the RA. In addition, there is a 13-acre upland opening, which is actively being maintained, in the center of the area along the ridge between the two streams, bringing the proportion of the area in reorganization phase to 15 percent. The same timber sale from the 1990s that regenerated the two stands noted above also resulted in some cutting in other stands. Consequently, evidence of this harvesting will be quite visible, primarily as stumps and slash piles of woody debris. Given its small size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect it; in other words, one good wind event could level the entire area. As a part of Breadloaf Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the west and good trail access on the northern boundary), the RA is judged to have a varying potential for providing solitude or primitive recreation. Although the eastern portion, adjacent to the existing wilderness area, provides a high potential for solitude, it drops off near the western edge, which is accessible by motor vehicles and has been subject to more management activities. This is somewhat inconsistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Roaded Natural (100%). It appears the road to the west dominated the mapping of the ROS maps and made the entire area Roaded Natural. Closer proximity to the wilderness appears to provide opportunities on the more primitive end of the Roaded Natural category. The area is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests, or Special Areas in this RA.

Geological- There are no known areas of unique or rare rock formations in the roadless area.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. There is one significant biological feature of note within the roadless area:

- Blue Bank Brook – this site has no special designation currently in the Forest Plan; it is a known location for Appalachian Jacob's ladder (*Polemonium vanbruntiae*).

Rare and Endangered Plants- There is a known occurrence of a plant that is on the Regional Forester's Sensitive Species (RFSS) list in this RA – *Polemonium vanbruntiae* (Appalachian Jacob's ladder) – although the actual occurrence appears to be just outside the RA, suitable habitat extends from the known populations into the roadless area. This species is considered globally rare. *Polemonium vanbruntiae* is suspected to require large areas of wetland or riparian habitat associated with somewhat frequent disturbance (small flood events and possibly beaver activity), and so requires openings in the forest canopy. Development of deep shade is considered a threat, although this is unlikely to occur in its more typical wetland habitat where canopy openings from windthrow and beaver activity regularly create partially-shaded habitat. If this area were designated as wilderness, the Forest would lose the ability to maintain open habitat for this species in the event that populations became too shaded.

Historical- Approximately 70 percent of the area has been surveyed for Heritage Resources. There are no known or reported sites.

e. Size, Shape and Manageability: This parcel is complicated by the private ownership on the western edge and its proximity to Blue Bank Brook. Managing a wilderness boundary in this parcel would be complicated with boundaries as currently shown.

This 256-acre area abuts the Breadloaf Wilderness boundary (unmarked) to the east; private land, and FR 201. FR 201 is a dead end road that provides access to trail head parking. An offset of 100 feet would enhance wilderness characteristics and avoid impacts resulting from road maintenance activities. The area also bounds a narrow piece of NF land along the New Haven River, and RA 92026 to the north. Private lands abut along the south, and Forest Road 54 and private lands to the west. An offset of 300 feet from the centerline of FR 54 would be consistent with existing road offsets for the adjoining Breadloaf Wilderness and would enhance wilderness characteristics. An offset would avoid impacts resulting from road maintenance activities such as brushing and culvert replacements.

f. **Boundary Conditions, Needs and Management Requirements:** Adjoining private land boundaries are marked to standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

Recreation, Including Tourism: Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, given the existing management

of the Breadloaf Wilderness to the east. Outfitter/ guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. On the other hand, there would be some detrimental effect on current recreation that requires motorized access. Since the areas are mostly located near the western edge of the area, boundary relocation may mitigate the majority of the effects on non-wilderness recreation.

Removal of blowdowns across the trail could be difficult without chainsaws. A Minimum Tool Analysis and Forest Supervisor approval would be necessary for use of chainsaws. In some cases, a trail section may need to be relocated around a blowdown area. Trail re-routes are allowed in wilderness, assuming environmental reviews were in place.

On the boundary, Forest Road 54 is used for snowmobile and cross-country ski (Catamount Trail) corridors (FT 273) during winter. FR 201 provides access to Emily Proctor and Cooley Glen trailhead parking, which also currently serves as a dispersed campsite. Emily Proctor and Cooley Glen Trails are National Recreation Trails accessing the Long Trail, and provide a popular 12.4-mile loop hike. The first 0.6 miles of Emily Proctor Trail is within this area, which continues within the existing Breadloaf Wilderness for 2.9 miles before connecting with the Long Trail. A high use snowmobile trail, FT 258, is located just west of the RA boundary on FR 54, which is also part of the Catamount Trail.

The New Haven River headwaters in this RA are popular for trout fishing, and has had several "fish habitat structures" installed by the agency in the past.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This RA is adjacent to a recognized deer wintering area (DWA). Management goals for lands directly adjacent to DWAs focus on food requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these areas adjacent to DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management.

Blue Bank Brook and the New Haven River in this RA provide aquatic habitat for brook trout and slimy sculpin. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD)

per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: Designation as wilderness would lead to the need to re-evaluate a proposed monitoring site (see below) and determine if it is an appropriate use of wilderness. The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 233 acres (95%) are classified as suitable for timber production (capable of producing commercial crops of timber). Eight acres of timber have been harvested in the past ten years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: There is an application under consideration for a Special Use Permit authorizing a road to provide access to the private land at the northwest side of this area. The proposed road would leave FR 54 within this roadless area on an existing low standard road headed northeast. New construction would lead off the existing road northerly to the property line. Given the land-locked status of the parcel to be served by the proposed road, there may be a requirement to provide access by road. A portion of the proposed route is existing road, and it continues further into this roadless area beyond the point where the proposed new construction turns north to the private land. The entirety of the proposed road is west of Blue Bank Brook.

Outfitter/ guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent.

There is a current proposal by Addison County Regional Planning Commission to install this spring (2004) an early warning flood monitor within this area. This would consist of a device that would use solar power and transmit data to a satellite monitored by the National Oceanic and Atmospheric Administration to provide early flood warnings to such Addison County towns as Lincoln and Bristol. This proposal for this location would need to be re-evaluated, as it is located in an area now inventoried as a Forest roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems and restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** The extensive suitable and potential habitat for Appalachian Jacob's ladder in this area would not necessarily be threatened by wilderness designation. *Polemonium vanbruntiae* requires canopy gaps, or open habitat. Flood events, windthrow, and beaver activity may be important natural disturbance factors for Appalachian Jacob's ladder. Road

maintenance activities, particularly roadside mowing, have kept some of the roadside swales open and may contribute to perpetuating the species' habitat. This roadside habitat is unlikely to be affected by wilderness designation, as the wilderness boundary likely would be well away from the roadside populations. Habitat along Blue Bank Brook itself would not necessarily be affected by designation, assuming beaver activity would be allowed in the area; it may in fact provide a slight benefit, as it will encourage managers to allow natural disturbances to occur. However, if natural disturbances were not adequate to maintain habitat for this species, wilderness designation could mean that managers would lose the ability to maintain open habitat for this species. Other than this habitat and species, there are no additional known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for other rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area; there is a pending application, however, to access exterior private property by building a road through this area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Blue Bank Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. While this small RA could provide some quality additional area for the adjacent Breadloaf Wilderness, its proximity to Forest Road 54 with its year-round motorized use detracts substantially from potential wilderness values in the western and northern portions. Opportunities for solitude are considered to be relatively high in the eastern portion near Breadloaf Wilderness (downslope from Mount Roosevelt) and low near the western edge due to its proximity to Forest Road 54 and private land. The New Haven River on the northern edge is a recreational and scenic attraction.

Noise and visual disturbances near Forest Roads 54 and 201 and the associated snowmobile trail would adversely affect wilderness character and experience within the sight and sound distances of these edges. About 233 acres (95 %) of this roadless area is suitable for timber production. With wilderness designation these acres would not be available for timber harvest. Appalachian Jacob's Ladder, a globally rare species, is known to occur with the area. This plant requires canopy gaps or open habitat. If designated wilderness, the Forest would not be able to actively manage for openings for this species. It is uncertain how this species would do with reliance on natural disturbances for maintaining favorable conditions.

Roadless Area 92026 (Cooley Glen)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 473 acres
Private: 0 acres
Total: 473 acres

b. Location, Vicinity, and Access: The Cooley Glen Roadless Area (RA) is in the Towns of Ripton and Lincoln, in Addison County. The RA is adjacent to the western portion of the Breadloaf Wilderness. A highly used snowmobile trail, FT 258, is located just east outside of the RA boundary on FR 54, which is also part of the Catamount Cross Country Ski Trail. The area can be accessed from FR 201, Big Basin, which is the common border between this RA and the Blue Bank RA (92025). There are no Forest Service roads in this area. There are 1.1 miles of trails in the area.

Cooley Glen Roadless Area Trails	
Type	**Mileage**
Hiking	1.1

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 81 percent of the Cooley Glen roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 19 percent occurs in the Southern Green Mountain Subsection. This RA lies along the west-facing lower slopes of the main ridge of the Green Mountains, primarily downslope from Mt. Cleveland and Mt. Grant. The New Haven River forms the western and southern boundary of the area, and the slopes transition from facing southwest at the western end to facing south at the eastern end. As the area climbs northeast from the river toward the summit of Mt. Grant, the landscapes transition from valley bottom to footslopes to main slopes to upper mountain slopes. A small tributary of the river passes through the center of the area. Slopes are generally moderate throughout, with steeper banks along the New Haven River, and a small area of gentle to flat slopes in the center of the RA at midslope. Elevations range from 2,600 feet in the northeastern corner upslope toward Mt. Grant to 1,550 feet in the northwestern corner along the New Haven River.

Cooley Glen RA Land Type Associations (LTAs):	
Mountain slopes	52%
Low mountains, hills, & footslopes	28%
Upper mountain slopes and tops	14%
Valley bottoms	6%

Cooley Glen RA Vegetation:	
Northern hardwood	78 %
Hardwood, spruce, & hemlock	20%
Paper birch	2%

Cooley Glen RA Site Indices:	
60+ (moderately high productivity)	71%
<60 (moderate to low productivity)	29%

The potential natural vegetation of the area is a mix of northern hardwoods mixed with spruce and hemlock, primarily along the low slopes, streams and convex slopes, with northern hardwoods restricted to midslopes, and northern hardwoods with spruce in rocky scoured areas in the upper slopes. There are no wetlands noted in the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						115	358					

Management Areas 4.1 and 4.2 emphasize Deer Wintering Areas.

Timber resource considerations:

- 380 acres (80%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past ten years.

Visitor use numbers are estimates based on staff observations during regular patrols. Visitor use on Cooley Glen Trail is generally 10 to 20 visitors per day on summer and fall weekends. Although non-motorized winter use occurs, it is significantly less than in summer months.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA contains southwest facing side slopes of Mt Grant. The New Haven River on the southern edge of the area is a recreation and scenic attraction, as well as a primitive campsite located on the riverbank near the Emily Proctor and Cooley Glen trailhead. The Cooley Glen Trail traverses back and forth between this RA and the adjacent Blue Bank RA to the south. An obtrusive road cut was created at the intersection of FR54 and FR201 just before the RA boundary. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Proximity to New Haven River.
- Access to the Cooley Glen Shelter, located in the wilderness on the Long Trail.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA appears natural, and contains a section of the southwest facing side slopes of Mount Grant. Surveys for Non-Native Invasive Species (NNIS) have occurred at the Cooley Glen/Emily Proctor Trailhead, and along the roadsides of FR 201, and no NNIS were found. The lack of NNIS at these disturbed sites suggests that the surrounding forest in at least these sections is also likely to be uninfested.

All of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There no areas of forested land that are 15 years old or younger, nor are there stands of documented old growth, in the RA. There was some limited cutting in five stands in this area in the 1980s, with two stands having been regenerated, accounting for 8 percent of the area. Consequently, evidence of this harvesting will be visible, primarily as stumps and piles of larger woody debris. Although limited in size, this area is unlikely to be completely destroyed by a catastrophic disturbance, and so while vulnerable the area could maintain some of its natural integrity in the face of disturbance regimes faced by northern hardwood forests. As an addition to Breadloaf

Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: As this RA is a "tongue" of non-wilderness land penetrating the Breadloaf Wilderness, designation of this RA has the potential to increase the solitude and wilderness values of the existing wilderness. A primitive campsite near the New Haven River, however, is popular, and occupied much of the summer and fall months.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests, or Special Areas in the Cooley Glen RA.

Geological- A band of the Battell member of the Underhill formation, which is generally carbonaceous schist and schistose quartzite with occasional limestone, passes through the middle of the RA. This member is uncommon in the state, accounting for a little over 3,000 acres statewide. Although this formation is unusual due to its small acreage, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the roadless area is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- There has been no systematic Heritage Resource inventory survey conducted in this RA. There are no known or reported sites.

e. Size, Shape and Manageability: This 473-acre area is located in the Towns of Ripton and Lincoln. It is bounded on the southwest by the New Haven River which eventually coincides with the Breadloaf Wilderness boundary; then follows the Breadloaf Wilderness boundary (boundary not marked) for the remaining boundary to the, east and approximately half of the northern boundary. This "tongue" of non-wilderness area was excluded from the Breadloaf designation because it contained timber sale units that had been sold at the time of the legislation. The remaining northern boundary abuts private, mostly forested, undeveloped lands.

This area has the potential to increase opportunities for solitude and wilderness values if added to Breadloaf Wilderness, by eliminating the current non-designated "tongue" of land penetrating into Breadloaf's core area.

f. **Boundary Conditions, Needs and Management Requirements:** Private boundaries adjoining this area are not marked to standard. Adjoining Breadloaf Wilderness Boundaries are not marked and difficult to field-locate.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Much of the Cooley Glen Trail is located on an old road. The trail closely follows the New Haven River, and has had significant damage due to high water. The trail has been reconstructed within the last two to three years in these damaged areas. A 51-foot span, utility pole stringer, major bridge spans the New Haven River near the existing trailhead, within the Roadless Area. This major bridge located on Cooley Glen Trail would eventually need maintenance or replacement (or removal). As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

As this RA contains a section of Mount Grant, designating this area could enhance the recreation value of this region.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Parcels currently maintained as early successional units would disappear with the passage of time.

This RA is adjacent to a recognized deer wintering area (DWA). Management goals for lands directly adjacent to DWAs focus on food requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these areas adjacent to DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management.

The New Haven River in this RA provides aquatic habitat for brook trout and slimy sculpin. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 380 acres (80%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- Wildfire occurrence is rare for this area and restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands located within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Cooley Glen Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. While this small RA could provide some quality additional area for the adjacent Breadloaf Wilderness, its proximity to Forest Road 54 with its year-round motorized use detracts substantially from potential wilderness values in the western and northern portions. Noise and visual disturbances near these roads would adversely affect wilderness character and experience within the sight and sound distances of these edges. The proximity of this area to Forest Road 201 also lessens the opportunity for solitude and other wilderness values, particularly in the western portion of the RA. The opportunity for solitude could be improved if Forest Road 201 was closed to motorized vehicles or eliminated. Currently this road represents a non-designated “tongue” of land penetrating into the Breadloaf Wilderness.

A 51 foot major stringer bridge on the Cooley Glen trail spans the New Haven River near the existing trailhead within this roadless area. This bridge will eventually need maintenance or replacement, and it could be difficult and costly to do this without mechanized equipment. Approximately 380 acres (80%) of this area is classified as suitable for timber production. With wilderness designation these acres would not be available for timber harvest.

Roadless Area 92027 (Mt. Abe)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 4,870 acres
Private: 0 acres
Total: 4,870 acres

b. Location, Vicinity, and Access: The Mt. Abe Roadless Area (RA) is in the Towns of Lincoln and Warren, in Addison and Washington County. This roadless area is a "stand alone" area, not attached to existing wilderness, in the northern most portion of the Green Mountain National Forest. FT 285, the Lincoln Gap Snowmobile Trail, borders part of the south boundary of the area.

An important access point in this RA is the Long Trail (LT). The LT passes through the area for 5.9 miles, and then becomes the eastern boundary of the RA. It provides direct access to the Mt. Abe RA from the Lincoln Gap Road at the southern boundary. The Mt. Abe RA can also be accessed by two other hiking trails, the Battell Trail, and the Lincoln Gap West Vista Trail, as well as a portion of the Catamount Trail.

Mt. Abe RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
291	Downingville	Unimproved	.1	Yes	Cr. Gravel	2
351	Osborne	Improved	.1	No	Soil	1
348A	Cutts Peak Spur	Improved	.5	No	Bank-run Gravel	2
	Unclassified	Unimproved	.5			

Mt. Abe RA Trails	
Type	**Mileage**
Hiking	7.4

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 87 percent of the Mt. Abe roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The remaining 13 percent occurs in the Southern Green Mountain Subsection. This RA encompasses a portion of the main ridge of the Green Mountains, including Mt. Ellen and Cutts Peak, Nancy Hanks Peak, Lincoln Peak, Mt. Abraham, and Lincoln Gap. The area includes the east and west-facing slopes of the main ridge south of Mt. Abe. North of Mt. Abe, the ridgeline becomes the RA's eastern boundary. In it's western section, the RA includes the gentle terrain of the Southern Green Mountain Subsection in Downingville. The RA's northwestern section includes hilly, plateau, and valley bottom landscapes, as well as 72 acres of wetlands. Most of the ridgeline down Lincoln Ridge, beyond Mt. Abe, down to 3,500 feet elevation contains alpine/krummholz landscape. Slopes are extremely steep along the upper slopes of the main ridgeline on both sides, and moderate toward the western and southern portions of the area. Elevations range from 4,006 feet on the top of Mt. Abe, to 1,400 feet along the westernmost edge of the area in wetlands associated with a tributary to Beaver Meadow Brook. Headwaters of several streams are found in this area, including Beaver Meadow Brook, the New Haven River, and Lincoln Brook.

Mt. Abe RA Land Type Associations (LTAs):

Upper mountain slopes & tops	48%
Mountain slopes	28%
Alpine/krummholz	11%
Small hills, low mountains & footslopes	8%
Valley bottoms	4%
Plateau	1%

Mt. Abe RA Vegetation:	
Northern hardwood	59%
Hardwood & red spruce	11%
Red spruce & balsam fir	23%
Swamps, plantations, open	7%

Mt. Abe RA Site Indices:	
60+ (moderately high productivity)	17%
<60 (moderate to low productivity)	83%

The potential natural vegetation of the area is krummholz/tundra along the ridgeline, boreal cliffs and outcrops with spruce and fir along the western crest of the ridge, montane spruce-fir along the upper slopes, spruce-northern hardwoods on convex steep midslopes and in cooler slopes on deep sediments, northern hardwoods on midslopes, and spruce-hardwood swamps and lowland spruce-fir in the wet area at the westernmost end of the roadless area. National Wetlands Inventory mapping indicates that the existing wetlands are a mix of open ponds with dead trees, deciduous scrub-shrub swamps, emergent marshes, and coniferous forested swamps.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0	526	772		1,436	963	322					606	245

Management Areas 2.1A, 2.1 B, 2.2B, and 3.1 emphasize roaded conditions. Management Area 4.1 emphasizes Deer Wintering Areas. Area 8.1 is managed as Special Areas, typically without harvest. The management strategy for Area 9.2 is to protect all options until studies determine the desired condition.

Timber resource considerations:

- 2,564 acres (53%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- In the past 10 years, 397 acres of timber have been harvested.

There are two Special Use Permits for maple sugar tapping in the north part of this RA. They are north of FR 348. Various outfitter/ guide permittees do a variety of hiking or backpacking activities on the trails in the RA. A Special Use Permit has also been issued for the management of the Long Trail shelters in the area. Also under Special Use Permit in the RA is 0.4 acre of a reservoir north of the junction of FR 401 and 351. The Sugarbush Ski Area borders the area to the east from Lincoln Peak north. It has a variety of lifts and runs that approach the Long Trail corridor that serves as the RA boundary. Lincoln Peak is also home to an electronic site under Special Use Permit. While the main building is out of the RA, below the summit on the east side, poles with antennas run up the hill. Some

of these antennas are tall enough to be visible from the west side of the ridge, in this RA. In addition, the Forest Service has received an expression of interest in obtaining a Special Use Permit for a private land access road in the Town of Lincoln, on the southeast boundary of this RA.

The Mountain Water Company has 12 acres of Surface Water Source Protection Area in this RA.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hiking, hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as moderate to high.

Visitor use numbers are estimates based on staff observations. The section of Long Trail through this RA is one of the heaviest used sections of the Long Trail. It includes part of the Monroe Skyline, connecting the summits of Mt. Abraham (Mt. Abe), Lincoln Peak, Nancy Hanks Peak, Cutts Peak and Mt. Ellen along the ridgeline. It receives visitor use levels of 100 or more day hikers per day from Lincoln Gap Road, where often on weekends all three parking lots are overflowing. Sugarbush Ski Area, providing access with its chair lifts and ski trails, borders much of the northeastern boundary of the area. Day hikers accessing the summit of Mt. Abe and the Monroe Skyline also heavily use the Battell Trail. Near the intersection of the Battell Trail and the Long Trail, is Battell Shelter, a three-sided Adirondack style overnight facility for hikers. It can sleep about eight. There is also a composting toilet and an overflow tenting area in the immediate vicinity. Lincoln Gap West Vista Trail is a short, but difficult trail leading to a rock outcrop with views to the west. It is accessed by a small pull off, just west of Lincoln Gap.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This parcel contains the four highest peaks on the Green Mountain National Forest (Mt Ellen 4,083; Cutts Peak 4,022; Mt Abraham 4,006; and Lincoln Peak 3,975). These prominent peaks and portions of the side slopes can be seen from numerous off site vantage points within two to five miles, and are seen as background from a much wider range. The Long Trail traverses along the spine of the Green Mountains along these peaks. The majority of the RA lies on west facing side slopes of the Green Mountains. The crest of the mountain chain, including the entire high mountain peaks, occurs in alpine tundra. This is a rare landform on the Green Mountain National Forest, and is characterized by alpine vegetation. To the east of the RA is Sugarbush Ski Area. This ski area has a long term permit with the Forest Service. Ski lifts and trails on the eastern edge of the parcel offer additional opportunities for viewing scenery. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- This RA contains the four highest peaks on the Green Mountain National Forest. Three of the peaks are over 4,000 feet in elevation.
- This RA contains part of the Long Trail, a popular distance-hiking trail.
- The hike to the top of Mount Abraham (4,006 feet) is extremely popular, and provides some of the best long distance views, especially to the west.
- The summit of Mt. Abe, the overnight facility at Battell Shelter, and the high ridge with several grand views is the major attraction of the area.
- The proximity to Sugarbush Ski Area, the amounts of snow cover, and the steep terrain attract backcountry adventure (ski, snowboard, snowshoe) enthusiasts.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: With the exception of a timber harvest on the western slope of Mt Abraham, this RA appears natural. Natural rock outcrops and low growing alpine vegetation have created opportunities for panoramic views from the mountain peaks. In addition, the Sugarbush Ski Area has a long-term permit with the Forest Service, bordering the eastern edge of this RA. Ski lifts and trails are highly visible along the eastern edge of this RA, from the Long Trail. At Lincoln Peak there is an electronic site with small outbuildings and towers as well as a wood constructed viewing platform along the Long Trail. A vista located via a short spur trail off of the Lincoln Gap Road does require maintenance to retain the view, however.

Surveys for Non-Native Invasive Species (NNIS) have occurred in the western-most lobe of this RA, and no NNIS were found. The Battell Trailhead and the Long Trail Trailhead at Lincoln Gap were also surveyed, and no NNIS were found. In addition, nine non-forested sites (see above description) were surveyed, and no NNIS were found. The lack of NNIS at these disturbed sites suggests that the surrounding forest in at least these sections is also likely to be uninfested.

Most of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are 76 acres of forested land in this RA that are 15 years old or younger, and so are reorganizing after a regeneration harvest. These stands are in the southwestern portion of the area and were cut during the Elk Road Sale; smaller aspen cuts were made during the Hill Brook sale further north along Hill Brook. There are no stands of documented old growth in the roadless area. There has been some cutting in this RA over the last 40 years, with regeneration harvests over more than 700 acres in 34 stands (16 percent) over that time. There will still be evidence of this harvesting visible, primarily as stumps and piles of large woody debris. In addition, a portion of the area was moderately to highly damaged by the ice storm of 1998. Damage was concentrated on the mountain tops and upper slopes, as well as some secondary ridges and middle slopes on the east side of the mountains. Every named mountain peak in the area was affected by this damage. Although such disturbance, while natural, can be catastrophic, in this case it may release the understory red spruce and speed up succession within these upper mountain slope stands, where red spruce is considered part of the potential natural vegetation. There are also some areas of paper birch and aspen in the area; these early successional species will succeed to other forest types over time.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility, as well as its proximity to private land and the Sugarbush ski area, this RA is judged by field personnel to have a relatively low to moderate potential for providing solitude or primitive recreation. Though relatively large, the area receives significant amount of use, and is affected by noise from the ski area and private land to the west and north. Though the views are impressive to the west, there is evidence of a relatively high amount of development in the Lake Champlain valley. This is somewhat inconsistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Semi-Primitive Non-Motorized (SPNM) (53%), with some Roaded Natural (45%), and only 2% Rural. It appears that consideration of the amount of use; noise from adjacent areas and the views of development may affect the solitude of the area more than the ROS mapping would indicate. Visitor use along the Long Trail, Battell Trail and at Battell Shelter is high from early summer through late autumn. Visitor use at the adjacent Sugarbush Ski Area, is high during the winter months. Typical activities associated with a ski area, such as the mechanical operations of ski lifts, grooming equipment, snow making, and summer trail maintenance may be heard from portions of the RA.

d. Special Features:

Scenic- This parcel contains the four highest peaks on the Green Mountain National Forest (Mt Ellen 4,083 feet; Cutts Peak 4,022 feet; Mt Abraham 4,006 feet; and Lincoln Peak 3,975 feet). These

prominent peaks can be seen from numerous off site vantage points. Views from these peaks are panoramic and were formed by natural rock outcrops and vegetative dieback from harsh winds and weather.

Scientific- There are no designated Research Natural Areas or Experimental Forests in this RA. The RA does include two Special Areas: Mt. Abe, and a section of the Appalachian/Long Trail that extends through the area along the ridgeline from the north to the south end.

Geological- The Mt. Abraham schist member of the Underhill formation underlies the ridgeline and upper slopes to the west and east. This formation is somewhat uncommon in the state, accounting for about 6,400 acres statewide. At the south end of the area, part of a band of the Battell member of the Underhill formation enters the RA, which is generally carbonaceous schist and schistose quartzite with occasional limestone. This member is also uncommon in the state. This member underlies Lincoln Gap, and outcrops and forests around this area are noted for having areas of enriched conditions suggestive of limestone influence. Areas of rock outcrops are dominant along the ridgeline, which passes over primarily the Mt. Abraham schist but also a bit of the Battell schist. Although there are two rock formations within this area that have small acreages in the state, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify any portion of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that a portion of the area along Lincoln Ridge was completely irreplaceable, having the only known example of alpine meadow on the Forest, and a substantial portion of subalpine krummholz. This signifies the ridgeline's critical importance in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. The remainder of this roadless area had quite low irreplaceability values.

There is one primary feature of ecological significance in this area:

- Mount Abraham/Lincoln Ridge – Mt. Abe is currently designated a Special Area in the Forest Plan. Mt. Abe is the known location for three plants of viability concern on the Forest that occur nowhere else on the Forest. Lincoln Ridge, north of Mt. Abe, is a known location for Bicknell's thrush, a bird of viability concern on the Forest, and small-flowered rush, an uncommon plant in the State. Mt. Abe consists of about 1 acre of alpine meadow that is transitioning out of subalpine krummholz. The meadow is a tiny representative of what is very common habitat in the alpine zone further north in the Green Mountains and in the White Mountains, but this is the only occurrence of this community on the Forest. Lincoln Ridge is predominantly subalpine krummholz intermixed with montane spruce-fir, and offers suitable habitat for the thrush and rush. Threats to Mt. Abe include significant recreational pressure – Mt. Abe offers a 360-degree view, and where the summit is not roped off most of the vegetation is gone. Threats to the ridgeline include potential wind tower and communication tower development, additional ski area development, and hiker traffic. The first two threats are more of an issue for the thrush and the general habitat; the last is a threat to the rush, which while requiring some disturbance can also be trampled and destroyed as it grows next to the Long Trail.

Rare and Endangered Plants- Within this RA, there are three sites – three mountain summits and one brook – with known occurrences of plants that are either on the Regional Forester Sensitive Species (RFSS) list or are tracked by the state of Vermont. On one of the peaks, there are three plants on the RFSS list – *Agrostis borealis* (boreal bentgrass), *Carex bigelowii* (Bigelow's sedge), and *Vaccinium*

uliginosum (alpine bilberry). On the second peak, there is one plant tracked by the state – *Luzula parviflora* (small-flowered rush); this species also occurs at a third peak. At the brook site, there is one plant on the RFSS list – *Sisyrinchium angustifolium* (narrow blue-eyed grass). There are also three non-forested sites (see description below) in this RA that have occurrences of *Geum laciniatum* (rough avens – RFSS).

Rare and Endangered Wildlife- Bicknell's thrush, a Regional Forester's Sensitive Species and a Vermont Species of Special Concern, is known to nest in this RA. This species occupies the highest elevations of the RA; generally, over 3000' elevation. Degradation of nesting habitat has been identified as one concern for this species. (see Rimmer, et al., Bicknell's Thrush (*Catharus bicknelli*) Conservation Assessment, 2001). Both environmental (e.g., acid precipitation, global warming) and human occupancy (e.g. recreation, telecommunication) factors have potential to degrade habitat. Wilderness designation would reduce human occupancy-related habitat degradation, in that ski areas, communication towers, wind generators and the like, would not be located in a wilderness area(s). Effects of environment agents, however, would change little with wilderness designation alone. Rectifying effects of environmental agents, that originate off-site and impact wide landscapes, would require broader reaching efforts.

Historical- Approximately 20% of the western/lower slopes have been surveyed for Heritage Resources. Near the summit there is one shelter and the possible remains of Joseph Battell's "summit house". There are remains of two farms in the southern section; another house-with-barn to the northwest. Prehistoric potential is moderate along the tributary streams, as along the lower slopes to the west; and the summit areas of Mt Abe almost certainly have significance for Native Americans.

e. Size, Shape and Manageability: This 4,870 acre area lies mostly within the Town of Lincoln with a small portion on the east side in Warren and is separated from Breadloaf Wilderness to its south by the Lincoln Gap Road (Lincoln Town Highway 34) and private lands. Area boundaries have a large number of jogs around private land that would make the area difficult to manage as wilderness, without some adjustments to eliminate the jogs.

f. Boundary Conditions, Needs and Management Requirements: About 30 percent of the boundaries adjoining private land are not marked to FS standards.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Some of the recreation use in this RA may be affected by designation of the entire area as wilderness. A few low standard roads (i.e. FR 291) that border, or enter the area currently provide motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to much of the use that is currently occurring.

Non-motorized activities would still be allowed to continue, though user controls may be needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. It isn't clear, however, if all types of non-motorized recreation would be desirable in an area designated for wilderness. For example, out of bounds skiing from Sugarbush ski area or rocket sledding on the Battell Trail may need to be more strictly managed if the area is designated for wilderness.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized

methods, or even on trails. There would be some detrimental effect, however, on current recreation that requires motorized access. Since the motorized use areas are primarily located near the western edge of the RA, boundary relocation may mitigate the majority of the effects on non-wilderness recreation. There are no current motorized trails located within this RA; however, it is bordered on south and west by snowmobile trails.

The Sugarbush Ski Area permit boundary and associated trails and lifts lie directly adjacent to the Long Trail. Mount Ellen, Nancy Hanks Peak, and Lincoln Peak have associated views toward the east due to ski area development. There needs to be a clearly defined wilderness boundary outside of the ski permit area. The Long Trail overlaps in part with the ski permit boundary, and may not be the best boundary in every case. The interface with the Long Trail, Sugarbush Ski Area and the wilderness boundary need to be carefully checked before determining the actual location.

The vista located via a short spur trail off of the Lincoln Gap Road does require maintenance to retain the view. Adjusting a boundary could accommodate this. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time. It is likely that wilderness designation would lead to the loss of the aspen clones in this area; this may be important, as loss of this habitat may lead to less diversity on the Forest and in this area in particular – there are some species for which this type is primary habitat.

This RA contains more than 50% of a Deer Wintering Area (DWA), totaling 293 acres. With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is highest when the RA contains a majority of a DWA.

An un-named tributary of Beaver Meadow Brook in this RA provides aquatic habitat for brook trout and rainbow trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural

forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The Mountain Water Company has 12 acres in Surface Water Source Protection Area in this RA. These are areas of land that directly contribute recharge to the public water supply source. The wellhead, however, is not in the RA. It is important that activities within the protection areas do not discharge contaminants, which may threaten the groundwater used for human consumption. Protection is currently provided by following Forest Plan Standards and Guidelines, as well as State Acceptable Management Practices (AMPs). No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 2,564 acres (53%) are classified as suitable for timber production (capable of producing commercial crops of timber). In the past 10 years, 397 acres of timber has been harvested. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Although wilderness designation would have no adverse effect on tangible Heritage Resources, Native American access to the summit for traditional use or spiritual reasons may be a concern, if future visitor use limits were ever considered necessary.

f. Land Uses: An outstanding water right is found in the RA, although the location remains unknown. There is also a utility easement on the RA, although it is unknown if the power line was ever built. The exact location of an additional power line easement is unknown.

If this area is designated wilderness, a decision would have to be made if the non-motorized and non-mechanized gathering of maple sap is an acceptable use. In addition, Outfitter/guide use might be curtailed if the Wilderness Implementation Schedule limits their activity to that which is wilderness-dependent. Management of the reservoir may also have to change to ensure no equipment is used to dredge it or otherwise maintain it.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest tent caterpillar, saddle prominent, and Bruce spanworm have occurred within the area over the last 20 years. Salvage harvesting of dying timber has occurred in the area. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** Mt. Abe and Lincoln Ridge are considered significant areas as representing natural communities that are nonexistent or rare anywhere else on the Forest, for their rare species habitat, and for their scenic value. *Agrostis borealis*, *Carex bigelowii*, and *Vaccinium uliginosum* are all on the RFSS list, and are species of the dry/mesic alpine heath meadow system, susceptible to trampling by hikers. Designation of this RA as wilderness might attract more hikers to this area, and thus might harm populations of these species. Impacts from trail maintenance and trampling may continue to be of concern regardless of designation, as the Long Trail passes through this habitat. In addition, because recreational pressure is so great on Mt. Abe, it is likely to continue to require human intervention via roping off areas and signs to minimize impacts to the alpine meadow. Also, if subalpine vegetation started to encroach on the alpine tundra habitat, which is possible with a warming trend, wilderness designation may

present some limits to the ability of managers to intervene as needed to preserve this rare community. In such a case, designation as wilderness would prohibit the maintenance activities that keep these species' habitats open, and they would most likely disappears from these sites. However, the Forest would still maintain the ability to reroute the trail or close an area to protect these species. *Luzula parviflora,* tracked by the state, is a species of disturbed sites such as trail edges. Designation as wilderness would not limit activities that maintain these sites, and would therefore likely have a neutral effect on this species. *Sisyrinchium angustifolium* and *Geum laciniatum* are both on the RFSS list, and are species of open, damp or wet habitats. Designation of this area as wilderness would prohibit the maintenance activities that keep these species' habitats open, and they would most likely disappear from these sites. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Mt. Abe Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. While this 4,870-acre RA offers scenic views and diverse vegetation and habitats, its extremely high recreational use, irregular boundaries, and adjacent ski area activity detracts substantially from its potential wilderness values.

This RA contains the four highest peaks on the Forest, including three that are over 4,000 feet. Views from these peaks and from the ridgeline are remarkably scenic. The Mt. Abe RA also exhibits diverse vegetation, including unique alpine/krummholz. Mount Abe has a 1-acre alpine meadow that, while common in the north Green Mountains, is the only occurrence of this community on the Green Mountain National Forest. There are also at least five plants and one bird (Bicknell's Thrush) on the Regional Forester's Sensitive Species list on this area.

This RA receives high use from hikers on the Long Trail and associated side trails (estimated to be 20-50 visitors daily and up to 200 or more on peak foliage viewing days). Motorized use and ski area development can be seen and sometimes heard on the upper ridge and in eastern portions of the RA. Because of these factors, a substantial portion of the area would not provide for wilderness values of solitude and isolation. Views to the east from Mount Ellen and other points along the ridgetop are dominated by the Sugarbush ski area and development in the Mad River Valley. Noise and visual disturbances near the south and east boundaries would adversely affect wilderness character and experience within the sight and sound distances of these edges. In addition, the irregular boundaries of this RA would pose challenges for wilderness stewardship. There are many places where the boundaries jog around private land that would make it difficult to enforce and monitor for compliance of restrictions. The Catamount and Long Trails are more easily maintained if motorized equipment can be used. Other impacts would include forgoing active management for habitat and timber on about 2,564 acres of suitable timberlands.

Roadless Area 92028 (Stetson Brook)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 2,023
Private: 14 acres
Total: 2,037 acres

b. Location, Vicinity, and Access: The Stetson Brook Roadless Area (RA) is in the Towns of Granville and Warren, in Addison and Washington Counties. This RA is located adjacent to the northeast portion of the Breadloaf Wilderness. The area is bounded on the south by FR 43, Stetson Brook Road. This road is a Town of Warren road that extends into Granville for about 0.5 miles, and has received major erosion damage. The Town has not repaired the damage, and the road is becoming less passable by vehicles. Local residents who hike, bike, snowshoe and ski are using this bordering road regularly. There are no Forest system trails located in this roadless area.

Stetson Brook RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
66	Lincoln Brook	Improved	.34	No	Cr. Gravel	2
66A	Lincoln Brook Spur	Improved	.2	No	Soil	1

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Stetson Brook roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA drapes over a ridgeline that extends northeast from the main spine of the Green Mountains north of Mt. Cleveland, with Stetson Brook forming the southern base of the ridgeline and Lincoln Brook forming the northern base of the ridgeline. While Stetson Brook also forms the southern boundary of the RA, Lincoln Brook is a little north of the northern boundary of the area. Slopes fall north, east, and south off the ridgeline to the boundaries of the area, and are very steep along the upper parts of the south face and along the crest of a southeast-trending spur off of the ridgeline. Slopes are also steep in the northwestern corner along the crest of a small spur there. Slopes are moderately steep along the slopes and two streams, and flatten out primarily along the ridgeline and spurs. Elevations range from 2,350 feet along the ridge at the western edge of the area, to 950 feet along the Mad River in the northeastern corner of the area.

Stetson Brook RA Land Type Associations (LTAs):	
Mountain slopes	91%
Footslopes	7%
Valley bottom	2%

Stetson Brook RA Vegetation:	
Northern hardwood	91%
Hardwood & red spruce	4%
Red spruce & balsam fir	1%
Hemlock	1%
Plantation/ open	1%
Plantation	1%
Paper birch	1%

Stetson Brook RA Site Indices:	
60+ (moderately high productivity)	77%
<60 (moderate to low productivity)	23%

The potential natural vegetation of the area is dominated by northern hardwoods, with potential for rich northern hardwoods along the south-facing slope off the ridgeline, and northern hardwoods mixed with red spruce at the ridgetops and along steep convex slopes. As shown on National Wetlands Inventory mapping, there is one wetland in the RA, located near the southern boundary. Aside from unnamed tributaries to Stetson and Lincoln Brooks, there are no streams that have headwaters or pass through the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	**Private**	2.1A	2.1B	2.2A	2.2B	3.1	4.1	4.2	6.1	6.2A	6.2B	8.1	9.2
Roadless Acres	**14**			**929**			**312**	**248**		**406**			**128**

Management Area 2.2A emphasizes a roaded environment, with Semi Primitive recreation opportunities. Areas 4.1 and 4.2 emphasize Deer Wintering Areas. Area 6.2A is managed primarily for Semi-Primitive recreation values. The management strategy for Area 9.2, Recently Acquired Lands, is to protect all options until studies determine its desired condition.

Timber resource considerations:

- 1,518 acres (74 %) are classified as suitable for timber production (capable of producing commercial crops of timber).
- 403 acres of timber have been harvested in the past 10 years.

There are no known Special Uses in this area. Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, fishing, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low, with moderate use on busy weekends.

A stream gauge is located near the RA's southern boundary, 10 to 12 feet north of FR43. The gauge consists of a four-inch diameter pipe partially buried in a brook, which measures high water and normal flow readings. This was installed in the spring of 2003 and is intended to be in place for a few years. This site is part of a research project with Norwich University and the Vermont Department of Environmental Conservation to quantify the sediment in this stream. This is then used as an indication of sediment movement in the Mad River Watershed. The site is monitored several times a month from spring to fall, and future plans are for additional gauges in the same stream.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA has a small amount of frontage on State Route 100 (a State designated Scenic Byway) and the Lincoln Gap Road. Private homes with associated openings line the northern edge of this parcel along the Lincoln Gap Road adjacent to Lincoln Brook. The area is located on mountain slopes projected down slope from Mt Grant. Views to the area can be seen from Route 100 and points east in the Northfield Mountains as well as from the Lincoln Gap Road and points north. The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.
- Remote deer hunting opportunities.
- Stetson Brook provides good fishing, but a washed out town road limits access to western sections of the brook.
- A popular dispersed camping area is located on FR 66, about ¼ to ½ mile within the boundaries of the area.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The RA is located on mountain slopes projected down slope from Mt Grant. Views to the area can be seen from Route 100 and points east in the Northfield Mountains as well as from the Lincoln Gap Road and points north. Recent timber harvest has occurred in this area. Surveys for NNIS (Non-Native Invasive Species) have occurred in the north-central portion of this RA. The lack of NNIS at these disturbed sites suggests that the surrounding forest in at least this section is also likely to be uninfested.

Most of the stands in this area are regenerating from harvests and other land uses, and now look like young to middle-aged forests. 53 acres of the RA's forested land are 15 years old or younger, and are reorganizing after a regeneration harvest. There are no stands of documented old growth in the RA. There has been some cutting in this roadless area over the last 40 years, with 173 acres of regeneration harvest in 7 stands over that time. Most of the cutting took place during the 1970s, 1980s and 1990s. Consequently, there will still be evidence of harvesting visible, primarily as stumps and occasional piles of woody debris, with logging slash possible in stands with recent cutting. A small area of severe ice damage from the 1998 ice storm enters into the RA in the southwestern corner along a side spur from the ridgeline. FR43 and State Route 100, because they are in the riparian zones of the streams that border the area, can pose problems for movement of small animals from riparian habitat to other suitable habitat. Furthermore, FR 43 follows Stetson Brook so closely that it would be difficult to find riparian habitat there without road in it.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the east), the RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness area, provides a high potential for solitude, it drops off near the eastern and northern edges, which are accessible by highways and other roads. High development levels occur near the area on Road 195 to the north, which has been characterized as "almost urban-interface". These findings are consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (69%), with some Rural (2%) and Semi-Primitive Non-Motorized (29%). The RA, located adjacent to the wilderness area, would provide some benefit to the solitude of the existing area.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- A small band of the acidic Mt. Abraham schist member of the Underhill formation underlies the RA from the southwestern corner into the center. This formation is somewhat uncommon in the state, accounting for about 6,400 acres statewide. Although this formation has small acreage in the

state, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portions of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of State or federally listed species, Regional Forester Sensitive Species, or other species of viability concern in this RA.

Historical- Approximately 50 percent of the area has been surveyed for Heritage Resources for an earlier timber sale. There are remains of three historic farmsteads near Stetson Brook Road, on the south, and limited potential for prehistoric sites.

e. Size, Shape and Manageability: This 2,027-acre area is located in the Town of Warren with a small portion extending into Granville. It abuts the Breadloaf Wilderness, with an unmarked boundary, to the west. A small inholding (boundaries marked to standard) abuts the county line to the south, and abuts Breadloaf Wilderness at one point of its "triangular" shape. The south boundary of this roadless area abuts the Stetson Brook Road (FR 43), which is also Warren Town Road 39. This accesses private lands/camp lying on both sides of the road at the county boundary. Stetson Brook Road has some major erosion, steep side hill sloughing, which has raised questions about the potential of the Town "downgrading" the road to a trail status in the future.

The east side boundary abuts private lands and the GMNF proclamation boundary. Most of the north side boundary abuts private land, and two sections of the Warren/Lincoln Gap Road. An offset of 300 feet from the Lincoln Gap Road would be consistent with existing road offsets for the adjoining Breadloaf Wilderness and would enhance wilderness characteristics. An offset would also avoid impacts resulting from road maintenance activities such as brushing and culvert replacements.

f. Boundary Conditions, Needs and Management Requirements: This RA would not be suitable as a stand-alone wilderness area, due to the relatively small size; however, it is adjacent to the northeast corner of the Breadloaf Wilderness. A 14-acre tract of private property abuts the existing wilderness boundary, and this roadless tract surrounds that private land. Designating this RA wilderness would create an inholding inside Breadloaf Wilderness. If this RA and the Austin Brook RA were both designated wilderness, FR43, also a town road, would penetrate the new wilderness lands. This would be an unacceptable condition, as the FS could not control or close that road. Adjoining private land boundaries are marked to FS standard except for two sections along the western portion of the north side boundary.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Some of the recreation use that occurs in the RA would be affected by designation of the entire area as wilderness. There are some low standard roads that enter the area from various places. These roads currently provide the motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to much of the use that is currently occurring.

Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, given the existing management of the Breadloaf Wilderness to the west.

Designation of this area as wilderness would provide some benefit for recreation dependant on wilderness, especially for individuals desiring a remote experience that isn't dependant on trails. On the other hand there would be some detrimental effect on current recreation that requires motorized access. Since the areas are mostly located near the northern edge of the area, there may be room for some compromise to relocate the boundary to mitigate the majority of the effects on non-wilderness recreation.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (7 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

Lincoln and Stetson Brooks in this RA provide aquatic habitat for brook trout and rainbow trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population monitoring activities, as well as soil and water improvements that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of the RA as wilderness.

c. Water Availability and Use: Designation as wilderness would lead to the need to re-evaluate the stream gauge-monitoring site and determine if it should remain. The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood production of wood products from this area, would not occur with wilderness designation. 1,518 acres (74%) are classified as suitable for timber production (capable of producing commercial crops of timber). 403 acres of timber have been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.
Forest Road 66, Lincoln Brook, has several large culverts, and provides access to wilderness.

g. Management Consideration: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent caterpillar, saddle prominent, and Bruce spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there areas of unique or exemplary natural communities in the area. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are 14 acres of private lands in this roadless area. As with any inholdings, “reasonable and necessary” access would need to be allowed if requested.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Stetson Brook Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. With limited roads, no designated trails, and with its adjacency to the Breadloaf Wilderness, the potential for solitude in the western portion of this RA is high. This RA is seen from Mt. Grant, Route 100, the Lincoln Gap Road, and the Northfield Mountains.

Impacts of designation would include forgoing active management for habitat and timber on about 1,518 acres of lands suitable for timber production, and addressing the need for closing and stabilizing the Stetson Brook Road, a washed-out and deteriorating road which serves as the RA’s southern boundary. The Town of Warren has jurisdiction over the Stetson Brook Road. The Town has expressed concern about the high cost of repairing the road and has no plans for doing so at this time. Current use of the road is mainly as a trail by hikers and mountain bikers. Some have expressed concern that with this road washout there is a lack of public camping opportunities on the northeast portion of the Forest.

Roadless Area 92029 (Rob Ford)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 2,541 acres
Private: 0 acres
Total: 2,541 acres

b. Location, Vicinity, and Access: The Rob Ford Roadless Area (RA) is in the Town of Granville, and a very small portion lies in the Town of Ripton, both located in Addison County. This roadless area is adjacent to the eastern and central portions of the Breadloaf Wilderness. The area is bordered on the east by FR50/ FT 750, and on the south by FR 55 /FT755. Both of these are snowmobile trails on Forest Roads. The Rob Ford RA can also be accessed by several Forest Trails.

Rob Ford RA Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
56	Deer Hollow	Unimproved	.3	No	Soil	1
50B, 50C, 50D, 50E, 55B	Patterson Brook Spur	Unimproved	.4	No	Soil	1
Spur ext.'s	Unclassified	Unimproved	1.9			

Rob Ford RA Trails	
Type	**Mileage**
Hiking	3.1
Snowmobile	.5

c-e. Geography, Topography, and Vegetation (including Ecosystem Type): According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Rob Ford RA lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA sits on the east-facing side and lower slopes of the main ridge of the Green Mountains from Battell Mountain in the south to Mt. Cleveland in the north. A large secondary ridge trends northeast from the main ridge between Mt. Roosevelt and Mt. Cleveland, and the RA curves to the northeast to follow the southeast-facing slopes of this ridge. Elevations range from 2,550 feet at the top of the northeastern ridge to the east, to 1,350 feet where Deer Hollow Brook enters the area in the north. The upper reaches of the White River and its tributaries dominate the southern half of the area, forming its southern boundary, while Deer Hollow Brook and some other unnamed streams flow through the area off the secondary ridge. Slopes are moderately steep throughout much of the area, becoming very steep to the north along south-facing crests of small ridges, and in some of the river valleys. A few gentle slopes are noted along some lower slopes that become benchy, and the ridgelines are flat on top in places.

Rob Ford RA Land Type Associations (LTAs):	
Mountain footslopes	45%
Mountain slopes	52%
Upper mountain slopes & tops	3%

Rob Ford RA Vegetation:	
Northern hardwood	55%
Hardwood & red spruce	29%

Red spruce & balsam fir	7%
Paper birch	3%
Open	3%
Plantations	3%

Rob Ford RA Site Indices:	
60+ (moderately high productivity)	50%
<60 (moderate to low productivity)	50%

The potential natural vegetation of the area is predominantly northern hardwoods, mixed with red spruce at the ridgetops, along some colder east-facing slopes, and along some of the steeper convex terrain, and in the deep valley that follows Patterson Brook. There are potential areas of spruce-hardwood swamps along the White River and Patterson Brook. As shown on National Wetlands Inventory mapping, two small wetlands occur along the southern boundary along the White River.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0					573	389	544		1,035			

Management Area 3.1 emphasizes a roaded environment. Areas 4.1 and 4.2 emphasize Deer Wintering Areas. Management Area 6.2A is managed primarily for Semi-Primitive Recreation values.

Timber resource considerations:

- 2,272 acres (89 %) are classified as suitable for timber production (capable of producing commercial crops of timber).
- 39 acres of timber have been harvested in the past 10 years.

The main area used within this roadless area is the “National Christmas Tree Meadow” north of the junction of FRs 50 and 208, and along FR 207. There are no known non-recreation Special Uses in the area.

Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. This use may include trail use, hunting, berry picking, fishing, bird watching, other wildlife viewing, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be moderate, with relatively high use on busy weekends.

The snowmobile trails bordering the RA, FR50/FT750 and FR55/FT755, are groomed regularly and receive significant levels of use throughout the winter season.

Visitor use numbers are estimates based staff observations. The area is primarily used for dispersed recreation activities such as hunting, hiking, and snowmobiling. Snowmobile use occurs on the Rob Ford Trail, and in two maintained openings in the RA. The trail is groomed, and gets levels of use of less than 50 snowmobiles per week. Less than 50 riders per year use the Rice Tract-Baker Brook Loop Trail. The trail does not get maintained regularly, and is not groomed. Hiking in the RA mainly occurs on the Clark Brook Trail. This trail is maintained to standard, and accesses the Breadloaf Wilderness as well as intersects with the Long Trail.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape. This RA is a popular destination for viewing scenery off the main State Highways of Vermont, as mountain scenery is easily accessible by vehicle and trail. Numerous opportunities for camping exist both by vehicle and trail. The Clark Brook Trail in the RA provides access to the adjacent Breadloaf Wilderness and to Mt Roosevelt. The Clark Brook Trail follows in close proximity to the upper White River. The rivers in this area are also an attraction, and are visible from many of the recreation use areas. Moss Glen Falls is a State facility located along State Route 100 outside of this parcel and down slope from Deer Hollow Brook. Openings maintained by a variety of sources, such as prescribed burning, mowing, and hand cutting exist throughout the RA. The Rob Ford Meadows along FR 208 offer panoramic views from a series of maintained openings. Dispersed camping sites are located in maintained openings along the Clark Brook Trail and FR 207. Timber harvest has occurred in this parcel recently, although it has been more intense outside of this parcel along FR101, where numerous views are offered from the road edge due to these temporary openings. Rob Ford Trail passes through several abandoned agricultural openings, which are maintained for recreational activities and to benefit wildlife.

The core of this area, running up the ridge southwest of Patterson Brook and along the upper reaches of the White River, is an historic landscape filled with 19th century archaeological sites and historic features, including cellar holes, roads, wells, stone fences, orchards, openings and a small cemetery. This area, the vistas from it, and the area surrounding the upper reaches of the White River in general, retain their character because of active management; it is a beautiful and popular place, evocative of its historic past.

i. Key Attractions:

- The Clark Brook Trail provides direct access to the White River and to Breadloaf Wilderness.
- The Rob Ford Trail passes through several maintained openings that provide opportunities for camping and other recreational activities.
- There are a number key dispersed sites located along roads that enter the area. Most notable are dispersed camping areas located along FR 207 and FR 794.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: The areas of the Rob Ford RA that border the Breadloaf Wilderness are highly scenic and appear natural. Areas closer to the road network, however, have had more manipulation and appear less natural. Surveys for Non-Native Invasive Species (NNIS) have occurred on skid trails in the northwest edge of this RA, and no NNIS were found. The lack of NNIS at these disturbed sites suggests that the surrounding forest in at least this section is also likely to be uninfested.

Most of the stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. 171 acres of forested land in this RA, in 11 stands, are 15 years old or younger, and so are reorganizing after a regeneration harvest. There are no stands of documented old growth. Cutting in the RA over the last 40 years has resulted in regeneration harvests on more than 541 acres in 46 stands over that time. Most of the cutting took place during the late 1970s, 1980s, and early 1990s. Consequently, there will still be evidence of this harvesting visible, primarily as stumps and occasional piles of woody debris, with logging slash possible in stands with recent cutting. There are a number of Forest Roads that follow borders of and enter into the RA. FR 55 follows the southern boundary and FR 50 follows a large part of the eastern boundary. Because these roads travel in riparian zones of the streams that also border the area, or cross a number of streams for a substantial

length of the roadless area, they can pose problems for movement of small animals from riparian habitat to other suitable habitat both within and outside the roadless area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative accessibility (good road access from the east), the RA is judged to have a varying potential for providing solitude or primitive recreation. Although the western portion, adjacent to the existing wilderness, provides a high potential for solitude, it drops off to low near the eastern edge, which is accessible by motor vehicles and has been subject to more management activities. This is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as primarily Roaded Natural (RN) at 84%, with some Semi-Primitive Motorized (SPM) at 15% and only a small amount of Semi-Primitive Non-Motorized (1%). The area is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area.

Visitation to the area is low to moderate throughout the year. Hiking visitation on the Clark Brook Trail and camping along the Rob Ford Trail is highest during the summer months. Trail counters from 2003 on the Clark Brook Trail showed use from July 1 through October 31 at approximately 700 visitors. Snowmobile use along the Rob Ford area occurs between mid-December to mid-March.

d. Special Features:

Scenic- Panoramic views exist from the Rob Ford Meadows along FR208.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the Rob Ford RA.

Geological- In the northeast portion of the RA, a small lens of Pinney Hollow greenstone is found, which is mafic in nature. This formation is uncommon in the state, accounting for only about 4,800 acres. Although this formation has small acreage, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the RA is composed of ecological types quite common and widespread throughout the Northern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portions of it as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicates that this area has quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of State or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- Approximately 70% of the section of the RA southwest of Patterson Brook has been surveyed for Heritage Resources. The section is characterized by the archaeological remains of numerous 19th century farmsteads, with several associated openings. Management, research, monitoring and interpretation of this population of historic sites are appropriate. Abenaki people have expressed the view that this area also has traditional use significance and sites, particularly associated with the White River and some upslope springs, as well as the occurrence of some important plants (e.g., sweetgrass beds).

Approximately 60% of the section of the RA northeast of Patterson Brook has been surveyed for Heritage Resources. There are two known historic farms along the eastern edge of the southern part of

this section. A 19th century mill and machine parts above Moss Glen Falls suggests a portable mill site, and there is the suggestion that John Deere's early home site is in this area as well. There could well be additional historic sites in this section that have yet to be recorded.

e. Size, Shape and Manageability: This 2,541 acre area lies mostly in Granville, with a small piece of the west end in Ripton. The RA is bounded on the west and north by unmarked boundaries of Breadloaf Wilderness. The south boundary is FR 55, which is also Granville Town Road 3. Near Clark Brook Trailhead the area follows the northern boundary of small parcel of private property that FR 55 intersects. The camp is situated to the south of the road outside of the roadless area.

f. Boundary Conditions, Needs and Management Requirements: The boundaries with the private inholding along FR 55, and the Forest Proclamation boundary are not marked to FS standard. If both this area and adjoining Texas Gap RA were designated as additions to the Breadloaf Wilderness, it would result in an undesirable "cherry stem". However, there is an opportunity with these areas to consolidate the current convoluted, and unmarked Breadloaf Wilderness boundary, to create a more easily managed location that contributes to the core area of Breadloaf Wilderness.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Some of the recreation use in this RA would be affected by designation of the area as wilderness. There are a number of low standard roads that enter the area from various places. These roads currently provide motorized access for dispersed camping, berry picking, hunting and other activities. In addition, the scenic views valued by driving visitors may be lost if this RA were designated wilderness, as over time the vegetation would mature to a closed forest canopy, and views to the surrounding landscape would be lost.

Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. The management of this wilderness recreation, including possible non-conforming activities, would be relatively easy, given the existing management of the Breadloaf Wilderness to the west.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. On the other hand, there would be significant detrimental effect on the current recreation that requires motorized access. Since these sections are primarily located near the eastern edge of the area, boundary relocation may mitigate the majority of these effects on non-wilderness recreation.

The Rob Ford RA is a popular attraction for snowmobilers. Total snowmobile trail mileage in the RA that would be lost due to wilderness designation is two miles. The Baker Brook/Rice Tract snowmobile loop trail, however, is currently not being maintained and could be removed from the motorized trail system. As is typical with wilderness management, it would be more challenging to maintain trails and structures with wilderness designation due to limitations on motorized and mechanized maintenance tools and equipment.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and

continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (40 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

Patterson and Clark Brooks and the headwaters of the White River in this RA are waters in which Atlantic salmon (ATS) have been released annually since the 1980s. The ATS is an indigenous species currently being restored to historic waters throughout the Connecticut River Basin. The Green Mountain National Forest cooperates with the Vermont Fish and Wildlife Department and U.S. Fish and Wildlife Service in this effort to restore salmon in the White and West River watersheds.

Accessing historic habitat to restore juvenile salmon populations is critical to the cooperative restoration program. Management goals for ATS focus on restoration of spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 15 percent pool habitat and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the stream habitat and fish population monitoring activities, as well as habitat restoration and maintenance activities that have occurred or will be implemented in the near future on this stream would be altered or eliminated by the designation of the RA as wilderness. In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 2,272 acres (89%) are classified as suitable for timber production (capable of producing commercial crops of timber). 39 acres of timber have been harvested in the past 10 years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation of the area southwest of Patterson Brook would have adverse effects on Heritage Resources and would also appear to be inappropriate from a "sense of place" perspective. The series of related 19th century agricultural sites and the remains of the historic landscape (openings, orchards, and road systems) should be maintained and preserved. In addition, designation would restrict access to the area for concerned Native people, many of whom are elderly. The current use and management of this section is generally compatible with the preservation of these resources. Restriction and/or elimination of maintenance and multiple-use activities would change and reduce its special character. However, designation of the area to the northeast of Patterson Brook would have no adverse effect on Heritage Resources or the character of the area.

f. Land Uses: There is a highway easement to the Town of Granville in this RA. This appears to be the road on a boundary, perhaps RT 100 (referred to as "Gulf Route"). There are also outstanding Vermont Fish and Game rights, deeded to have the rights to forever allow fishing to the State of Vermont. In addition, it states that there will be no closing of the fisheries on Alden Meadow Brook, which appears outside of the area. A 1967 letter stated, however, that no copies of agreement existed with State of Vermont Fish and Game. The RA contains two gravesites; this was a lifetime estate of a previous inholding and the graves might be in that location.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there unique or exemplary natural communities represented in this area. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Rob Ford Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. This 2,251-acre roadless area is bordered to the west and north by the Breadloaf Wilderness, and features quality views of meadows, slopes, and peaks. There is substantial use of this area for dispersed recreational use, including viewing scenery, wildlife, the headwaters of the White River, and the diverse landscape of forests, meadows, and peaks. Much of the use year-round is motorized, including significant motorized camping use.

There are moderate opportunities for solitude in this area, most of which are located in the western portion. Noise and visual disturbances near roads and snowmobile trails near the boundaries would adversely affect wilderness character and experience within the sight and sound distances of these edges.

The relatively high use of bordering roads and snowmobile trails would have long-term negative effect on wilderness values on the eastern edges. Although elimination of the snowmobile trails in the interior of this area would improve solitude and wilderness experiences and values, it would impact current users. Other changes, such as eliminating or altering active management of the area's heritage

resources, altering or eliminating Altlantic Salmon restoration efforts, and forgoing management on 2,272 acres of suitable timber lands would also have an impact on users as well as resources.

Roadless Area 92030 (South Link)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 51 acres
Private: 0 acres
Total: 51 acres

b. Location, Vicinity, and Access: The South Link Roadless Area is in the Town of Lincoln, in Addison County. This very small RA is bordered on the east by the Breadloaf Wilderness. There are no Forest system trails or roads located in this roadless area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the South Link roadless area lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA lies along the west-facing sideslopes of the main ridge of the Green Mountains, primarily downslope from Mt. Grant. A small tributary of the New Haven River follows the northern boundary of the area, where slopes are steep in the stream valley. The remaining slopes are steep to moderately steep, with steeper slopes in the southeastern corner, approaching the upper mountain slopes of Mt. Grant. Elevations range from 2,400 feet in the southeastern corner upslope toward Mt. Grant to 1,850 feet in the northwestern corner along the small stream.

South Link RA Land Type Associations (LTAs):	
Mountain slopes	96%
Upper mountain slopes & tops	4%

South Link RA Vegetation:	
Northern hardwood	100%

South Link RA Site Indices:	
60+ (moderately high productivity)	0%
<60 (moderate to low productivity)	100%

The potential natural vegetation of the area is a mix of northern hardwoods on the lower slopes, and northern hardwoods mixed with spruce on the steeper upper slopes that are convex through much of the area. There are no wetlands or headwaters noted from the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0								51				

Area 6.1 emphasizes primitive recreation opportunities. None of the area is classified for suitable timber production (capable of growing commercial crops of timber). In the past ten years no timber has been harvested.

There are no known Special Uses in this area. Dispersed recreation activities in the area are similar to those that occur in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be low. The lack of road and trail access to the RA limits its use to those desiring relatively remote dispersed recreation.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as primarily northern hardwood forest on a west-facing slope. Two stands in the area are over 100 years old, although there may have been some limited cutting in them in the 1970s.

i. Key Attractions:

- Remote area located adjacent to the Breadloaf Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA is located on a west-facing slope downhill from Mt Grant, and is visible from western vantage points. There are no trails, roads or other known developments. Surveys for Non-Native Invasive Species have not occurred there, so the botanical integrity of the area cannot be estimated.

Two stands in the RA are over 100 years old. There may have been some limited cutting in these stands in the 1970s. There no areas of forested land that are 15 years old or younger, nor are there areas of documented old growth in the RA. Given its small size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect it; in other words, one good wind event could destroy the entire area. As a physical continuation of Breadloaf Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative inaccessibility and lack of development, the RA is judged to have a moderate to high potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Semi-Primitive Non-motorized. The RA is adjacent to the Breadloaf Wilderness, and would provide some benefit to the solitude of that area. This is somewhat tempered, however, by the large amount of private land adjacent to the wilderness.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the South Link RA.

Geological- There are no known areas of unique or rare rock formations in the roadless area.

Ecological- The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern within this RA.

Historical- No Heritage Resource inventory surveys have been conducted. There are no known or reported sites. There should be moderate potential for prehistoric sites along a feeder stream running through section.

e. Size, Shape and Manageability: This 51-acre area is located in the Town of Lincoln and is a small square-shaped parcel. The east portion, which is bounded by the Breadloaf Wilderness, is an unmarked boundary. Isolated private lands bound the area to the north; west; and south. The northern boundary is a stream. The addition of this area would add almost 0.9 miles of wilderness boundary to manage for a net gain of only 51 acres. The marked private boundaries, however, would provide an identifiable wilderness boundary in place of the current unmarked interior boundary that is difficult to locate.

f. Boundary Conditions, Needs and Management Requirements: The property boundary lines are not marked to standard, though corners have been set. If this area were designated as an addition to Breadloaf Wilderness the boundaries would have to be brought to standard to protect the wilderness.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs in the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. Management of this wilderness recreation, including possible non-conforming activities, would be relatively difficult due to poor access and proximity to private lands.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated wilderness.

d. Livestock, Timber, and Minerals: None of the area is classified for suitable timber production (capable of growing commercial crops of timber). In the past ten years no timber has been harvested.

There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The South Link RA has moderate potential to provide the attributes and values appropriate for wilderness designation. It is visible from western viewpoints, is natural-appearing, and is relatively inaccessible. Opportunities for solitude are moderate to high. None of this area is classified for suitable timber production. This small (51-acre) RA could provide quality additional acres to the adjacent Breadloaf Wilderness. Wilderness designation would have little negative impact to users or cause other opportunities to be forgone.

Roadless Area 92031 (North Link)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 45 acres
Private: 0 acres
Total: 45 acres

b. Location, Vicinity, and Access: The North Link Roadless Area (RA) is in the Town of Lincoln, in Addison County. This very small RA is bordered on the east by the Breadloaf Wilderness. There are no Forest System trails or roads located in this roadless area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the North Link RA lies in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. This RA lies along the west-facing sideslopes of the main ridge of the Green Mountains, primarily downslope from Mt. Grant. A small tributary of the New Haven River passes through the area at the north end, following the RA's northern boundary. Slopes are steep to moderately steep, with very steep slopes in the southeastern corner as the area approaches the upper mountain slopes of Mt. Grant. Elevations range from 2,300 feet in the southeastern corner upslope toward Mt. Grant to 1,850 feet in the northwestern corner along the small stream.

North Link RA Land Type Associations (LTAs):	
Mountain slope	100%

North Link RA Vegetation:	
Northern hardwood	100%

North Link RA Site Indices:	
60+ (moderately high productivity)	0%
<60 (moderate to low productivity)	100%

The potential natural vegetation of the area is a mix of northern hardwoods on the lower slopes toward the southeastern corner. There are no wetlands or headwaters noted in the area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0								45				

Area 6.1 emphasizes primitive recreation opportunities. None of the area is classified for suitable timber production (capable of growing commercial crops of timber). In the past ten years no timber has been harvested.

There are no known Special Uses in this area. Dispersed recreation use in the area is similar to activities that occur in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall

recreation use of the area to be low. The lack of road and trail access to the RA would limit use of the area to those desiring relatively remote dispersed recreation.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as primarily northern hardwood forest on a west-facing slope. The stands are close to 100 years old, and there does not appear to have been any cutting in them over the last 40 years.

i. Key Attractions:

- Located adjacent to the Breadloaf Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA is located on a west-facing slope, visible from western vantage points. There are no trails, roads or other known developments. As surveys for Non-Native Invasive Species have not occurred here, the botanical integrity of the area cannot be estimated.

All stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There no areas of forested land that are 15 years old or younger, nor are there areas of documented old growth in the RA. The stands are close to 100 years old, and there does not appear to have been any cutting in them over the last 40 years. Given its small size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect it; in other words, one good wind event could destroy the entire area. As a physical continuation of Breadloaf Wilderness, which is adjacent, it enlarges the representation of natural communities that exist in that wilderness area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative inaccessibility and lack of development, the area is judged to have a moderate to high potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum (ROS) that identified this area as Semi-Primitive Non-motorized (SPNM). The area is adjacent to the wilderness area, and would provide some benefit to the solitude of the existing area. This is somewhat tempered, however, by the large amount of private land adjacent to the wilderness.

d. Special Features:

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the North Link RA.

Geological- The Battell member of the Underhill formation enters the northwest region of the RA; this is generally carbonaceous schist and schistose quartzite with occasional limestone. This member is uncommon in the state, being represented by a little over 3,300 acres statewide. Although this formation has small acreage, there are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- The Vermont Biodiversity Project (Thompson 2002) did not identify this area or any portion of it as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that the area had a low irreplaceability value, which reflects the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of state or federally listed species, Regional Forester Sensitive Species (RFSS), or other species of viability concern in this RA.

Historical- No Heritage Resource inventory surveys have been conducted in this RA. There are no known or reported sites. There should be moderate potential for prehistoric sites along the feeder stream running through this area.

e. Size, Shape and Manageability: This RA is a small, square-shaped 45 acre parcel located in Lincoln. It is bounded by Breadloaf Wilderness, with an unmarked boundary, to the east and isolated private lands to the north; west; and south. Addition of this area would add 0.8 miles of wilderness boundary to manage for a net gain of only 45 acres. The marked private boundaries, however, could provide an identifiable wilderness boundary in place of the current unmarked interior one.

f. **Boundary Conditions, Needs and Management Requirements:** The boundaries with adjoining private lands are not marked to FS standard, though boundary corners have been set. If this area were designated as an addition to Breadloaf Wilderness the boundaries would have to be brought to standard to protect the wilderness.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring a remote experience that isn't dependent on mechanized methods, or even on trails. The management of this wilderness recreation, including possible non-conforming activities, would be relatively difficult due to poor access and proximity to private lands.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Areas currently maintained as early successional units would disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: None of the area is classified as suitable for timber production (capable of producing commercial crops of timber). In the past ten years no timber has been harvested.

There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Wilderness designation would have no adverse effect on Heritage Resources.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- There are no natural communities within this roadless area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area, nor are there records of rare of exemplary natural communities here. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The North Link Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. It is visible from western viewpoints, is natural-appearing, and is relatively inaccessible. Opportunities for solitude are moderate to high. None of this area is classified as suitable for timber production. This small, 45-acre RA could add quality acres to the adjacent Breadloaf Wilderness. Wilderness designation would have little negative impact to users or cause other opportunities to be forgone.

Roadless Area 92032 (West Slope A)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 145 acres
Private: 0 acres
Total: 145 acres

b. Location, Vicinity, and Access: The West Slope A Roadless Area (RA) is in the Town of Bristol, in Addison County. This small RA is bordered on the east by the Bristol Cliffs Wilderness. The area is in close proximity to Lower Notch Road, a Bristol Town road, and could be accessed from there. There are no Forest system trails or roads located in this RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the West Slope A RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), this small RA is situated along the western escarpment, and does not represent any of the other landscapes within this subsection. The area comprises a small section of cliff and steep to very steep west-facing slope that moderates into cove slopes and more gentle slopes toward the base of the escarpment, along the Bristol Cliffs Wilderness. Elevations range from 1,250 feet along the upper limit of the slope to the southeast to 600 feet at the base of the escarpment along the western boundary.

West Slope A RA Vegetation:	
Northern hardwood	42%
Hardwood & hemlock	35%
Hemlock	17%
Open	5%
Wetland	1%

West Slope A RA Site Indices:	
60+ (moderately high productivity)	53%
<60 (moderate to low productivity)	47%

The potential natural vegetation of the area is northern hardwoods to the west, and hemlock-northern hardwoods and dry oak forest elsewhere. The RA contains a small one and a half acre wetland along a small bench along the steep slopes of the escarpment.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						95						50

Management Area 4.1 emphasizes Deer Wintering Areas. The management strategy for Area 9.2 is to protect all options until studies determine its desired condition.

Timber resource considerations:

- 103 acres (70%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past ten years.

Outfitter/guides have requested commercial climbing access to cliffs through this RA, but these have not been approved. A pole-mounted utility line is in the RA on the east side of Lower Notch Road.

Dispersed recreation use in the area is similar to activities that occur in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize the overall recreation use of the area to be low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA contains a steep landform called the Vermont escarpment. The adjacent Bristol Cliffs Wilderness is named after this steep landform. The entire Bristol Cliffs area, including the piece of escarpment that this RA sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Private homes exist along the road at the west edge of the parcel. The appearance of the West Slope A RA can be characterized by a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Bristol Cliffs Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the forested stands in this area are regenerated from harvest and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. There are records of a shelterwood harvest in a portion of the northern stand in the area, although the Forest Service did not own it at the time of harvest. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could level the entire area. As a physical continuation of Bristol Cliffs Wilderness, which is adjacent, it enlarges the representation and diversity of natural communities in that wilderness area. As surveys for Non-Native Invasive Species (NNIS) have not occurred there, the botanical integrity of the area cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to the proximity to roads and development (adjacent to a road and nearby houses), the RA is judged to have low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this RA as Rural and Roaded Natural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, as the cliffs already provide a form of barrier to the effects of outside activities.

d. Special Features:

Scenic- Views from the cliffs look out to the west toward the Champlain Valley, with the Adirondack Mountains of New York as a scenic backdrop.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas. Additional features of scientific value within the roadless area are noted below.

Geological- There are no known areas of rare or unique rock formations in this RA.

Ecological- The roadless area is composed of some ecological types that are common in this subsection. A field survey of Bristol Cliffs identified the following rare, exemplary or uncommon natural communities: mesic red oak-northern hardwood forest, open talus, temperate acidic cliff, cold air talus woodland, dry oak-hickory-hophornbeam forest, red pine forest/woodland, and northern hardwood talus. The Bristol Cliffs are also an historical site for timber rattlesnake, which had a high population at one point in the cliffs. It is not clear, however, if any of these rare or uncommon communities are represented in this RA, although it is likely that some are, particularly the cliff and talus communities. The Vermont Biodiversity Project (Thompson 2002) did not identify any of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001), however, indicated that the Bristol Cliffs portion of the escarpment, including this RA, had high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are three known occurrence of *Juglans cinerea* (butternut – RFSS) in this RA, but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect.

Historical- There are no known or reported Heritage Resource sites in this section. The potential for significant prehistoric sites, however, is very high. Based on the area's proximity to the high density cluster of prehistoric archaeological sites around Winona Lake to the North (an attractive location, based in part on the availability of quartzite for making tools); the fact that the Bristol Cliff backdrop to this section is itself a quartzite cliff; and because the shores of the post-glacial Champlain Sea would have lapped up against this area, there is a strong possibility of very early/old ("PaleoIndian") and deeply buried sites.

e. Size, Shape and Manageability: Located in Bristol, this 145 acre RA abuts the existing Bristol Cliffs boundary to the east side. The wilderness boundary was marked with metal wilderness signs in late 70s, at every 500 feet, but the signs have not been updated or maintained in this portion of boundary. The area is bounded by private land to the south side, with several homes, including one very close to the boundary. The southern portion of the western boundary is the Lower Notch Road, which has a power line running parallel to and near the road. The remaining west side boundary abuts private land with a number of homes and a gravel bank. The northern boundary abuts private lands.

f. Boundary Conditions, Needs and Management Requirements: All adjoining boundaries with private land have been surveyed to FS standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Designation of this area as wilderness would provide little benefit for recreation dependant on wilderness. Furthermore, the management of wilderness recreation, including possible non-conforming activities, in this RA would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (18 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, designation would limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the RA were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 103 acres (70%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Roadless Areas 92032 through 92036 are unique on the Forest, because they are the only place[s] where post-glacial Champlain Sea beaches co-occur with quartzite bedrock outcrops. Consequently, these RA's potentially contain rare, early PaleoIndian archaeological sites. Appropriate and mandated prehistoric site inventory work for these sites would likely require significant ground-disturbing test excavations and removal of attendant vegetation. Hence, designation could have an adverse effect on these potential resources by restricting these activities.

f. Land Uses: The south half of this RA has a 20-foot wide road right-of-way, spring rights, and a power line easement. It appears the Road ROW is no longer an outstanding right, however. The spring right and power line easement are still valid. In addition, the south half of this RA has a water pipeline, and spring box with maintenance rights that are outstanding to third parties. These road and water rights would make the area very difficult to manage for wilderness values, as the agency could not limit road construction or ongoing maintenance of water lines and spring boxes. Also, the location of the utility lines should be considered when setting the boundary if the area were designated as wilderness.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are three known occurrence of *Juglans cinerea* (butternut – RFSS), but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect. There is potentially suitable habitat for other rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The West Slope A Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. Although the addition of this RA to the adjacent Bristol Cliffs Wilderness could expand the representation of natural communities in that area, it would not provide quality solitude or other wilderness experiences or values due to its proximity to roads and private lands. This RA is located on the steep edge of the Vermont Escarpment. These cliffs, on the eastern edge of the RA, are a scenic attraction, as well as being important in achieving conservation goals for the Forest

Noise and visual disturbances near the Lower Notch Road, on the RA's western edge, would adversely affect wilderness character and experience within the sight and sound distances of these edges. Private homes along roads at the south and west edges inhibit opportunities for solitude. In addition, about 103 acres of suitable timberlands would not be available for timber harvest with wilderness designation. This area is also of high archeological interest because post-glacial sea beaches have potential to contain rare, early archeological sites. Exploration of this area could be more difficult if mechanized equipment and motorized access were eliminated.

Roadless Area 92033 (West Slope B)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 11 acres
Private: 0 acres
Total: 11 acres

b. Location, Vicinity, and Access: The West Slope B Roadless Area (RA) is in the Town of Bristol, in Addison County. This extremely small RA is bordered on the east by the Bristol Cliffs Wilderness. The area is in close proximity to Lower Notch Road, a Bristol Town road and could possibly be accessed from there. There are no Forest system trails or roads located in this roadless area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the West Slope B roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), this small RA is situated along the western escarpment, and does not represent any of the other landscapes within this subsection. There is a section of cliff along the eastern edge of the RA, progressing downhill and to the west to extremely steep slopes, to steep slopes and talus slopes at the base along the western boundary. Elevations range from 1,100 feet along the upper limit of the slope to the northeast, to 650 feet at the base of the escarpment along the western boundary.

West Slope B RA Vegetation:	
Northern hardwood	100%

West Slope B RA Site Indices:	
60+ (moderately high productivity)	55%
<60 (moderate to low productivity)	45%

The potential natural vegetation of the area is northern hardwoods to the west, and hemlock-northern hardwoods and dry oak forest elsewhere. There are no streams or wetlands associated with this area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						11						

Management Area 4.1 emphasizes Deer Wintering Areas.
Timber resource considerations:

- 6 acres (52%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- No timber has been harvested in the past ten years.

There is a pole-mounted utility line on the east side of Lower Notch Road. In addition, outfitter/ guides have requested access through the area for commercial climbing on the adjacent cliffs. These requests have not been approved.

Dispersed recreation activities in the RA are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This 11-acre parcel contains a steep landform called the Vermont Escarpment. The adjacent Bristol Cliffs Wilderness is named after the steep landform. The appearance of the RA can be characterized as primarily northern hardwood forest on a west-facing slope.

i. Key Attractions:

- Located adjacent to the Bristol Cliffs Wilderness and the scenic attraction of the cliffs.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the forested stands in this area are regenerated from past harvests and other former land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. There is no evidence of cutting in this area over the last 40 years. As a part of Bristol Cliffs Wilderness, which is adjacent, it enlarges the representation and diversity of natural communities in that wilderness area. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could level the entire area. As surveys for Non-Native Invasive Species (NNIS) have not occurred there, the botanical integrity of the area cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its proximity to roads and development (adjacent to a road and nearby houses), the area is judged to have low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this area as Rural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, since the cliffs already provide a form of barrier to the effects of outside activities.

d. Special Features:

Scenic- Views from the cliffs look out to the west toward the Champlain Valley with the Adirondack Mountains of New York as a scenic backdrop.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- There are no known areas of rare or unique rock formations in this RA.

Ecological- The roadless area is composed of some ecological types that are common in this subsection. In addition, a field survey of the adjacent Bristol Cliffs identified the following rare, exemplary or uncommon natural communities: mesic red oak-northern hardwood forest, open talus, temperate acidic cliff, cold air talus woodland, dry oak-hickory-hophornbeam forest, red pine forest/woodland, and northern hardwood talus. The Bristol Cliffs are also an historical site for timber rattlesnake, which had a high population at one point in the cliffs. It is not clear, however, if any of

these rare or uncommon communities are represented in this RA, although it is likely that some are, particularly the cliff and talus communities. The Vermont Biodiversity Project (Thompson 2002) did not identify any of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001), however, indicated that the Bristol Cliffs portion of the escarpment, including this area, had high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There is one known occurrence of *Juglans cinerea* (butternut – RFSS) in this RA, but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect.

Historical- There are no known or reported Heritage Resource sites in this section. The potential for significant prehistoric sites, however, is very high. Based on the area's proximity to the high density cluster of prehistoric archaeological sites around Winona Lake to the North (an attractive location, based in part on the availability of quartzite for making tools); the fact that the Bristol Cliff backdrop to this section is itself a quartzite cliff; and because the shores of the post-glacial Champlain Sea would have lapped up against this area, there is strong possibility of very early/old ("PaleoIndian") and deeply buried sites.

e. Size, Shape and Manageability: This 11-acre area is in Bristol and abuts Bristol Cliffs Wilderness; a small, narrow rectangle thrusting out from the west side of existing Bristol Cliffs Wilderness boundary. Addition of this area would add about 0.6 miles of wilderness boundary to manage for a net gain of only 11 acres. The area is bounded by the Lower Notch Road on the western side, and private lands on the north and south boundaries. An offset of 300 feet from the centerline of Lower Notch Road would enhance wilderness characteristics by avoiding impacts resulting from road maintenance activities such as brushing and culvert replacements. The wilderness boundary was marked with metal wilderness signs in the late 70's, approximately every 500 feet. Signs have not been updated or maintained in this portion of boundary.

f. Boundary Conditions, Needs and Management Requirements: Adjoining private property boundaries are marked to FS standards.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest.

Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping

mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units will disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 6 acres (52%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Roadless Areas 92032 through 92036 are unique on the Forest, because they are the only place[s] where post-glacial Champlain Sea beaches co-occur with quartzite bedrock outcrops. Consequently, these RA's potentially contain rare, early PaleoIndian archaeological sites. Appropriate and mandated prehistoric site inventory work for these sites would likely require significant ground-disturbing test excavations and removal of attendant vegetation. Hence, designation could have an adverse effect on these potential resources by restricting these activities. In addition, lands maps show a trail in this RA labeled the "Money Diggings Trail"; no further information is available.

f. Land Uses: There is a Town right-of-way for Highway 23, in this RA, with "land use restrictions and covenants". The land use restrictions and covenants were researched and are not problematic. Location of the utility lines must be considered when setting the boundary if the area is designated wilderness.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would

die. **Rare Plants and Unique Ecosystems-** There is one known occurrence of *Juglans cinerea* (butternut – RFSS), but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands contained within this small roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The West Slope B Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. Although the addition of this RA to the adjacent Bristol Cliffs Wilderness could expand the representation of natural communities in that area, it would not provide quality solitude or other wilderness experiences or values due to its proximity to roads and private lands. This RA is located on the steep edge of the Vermont Escarpment. These cliffs, on the eastern edge of the RA, are a scenic attraction, as well as being important in achieving conservation goals for the Forest

Noise and visual disturbances near the Lower Notch Road, on the RA's western edge, would adversely affect wilderness character and experience within the sight and sound distances of these edges. Private homes along roads at the south and west edges inhibit opportunities for solitude. This area is also of high archeological interest because post-glacial sea beaches have potential to contain rare, early archeological sites. Exploration of this area could be more difficult if mechanized equipment and motorized access were eliminated.

Roadless Area 92034 (West Slope C)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 13 acres
Private: 0 acres
Total: 13 acres

b. Location, Vicinity, and Access: The West Slope C Roadless Area (RA) is in the Town of Bristol, in Addison County. This extremely small RA is bordered on the east by the Bristol Cliffs Wilderness. The area is in close proximity to Lower Notch Road, a Bristol Town road and can be accessed from there. There are no Forest system trails or roads located in this RA.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the West Slope C roadless area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), this small RA is situated along the western escarpment, and does not represent any of the other landscapes within this subsection. The area comprises a section of cliff along the eastern edge, progressing downhill and to the east to extremely steep slopes, to steep slopes and talus slopes at the base along the western boundary. Elevations range from 1,000 feet along the upper limit of the slope to the east, to 650 feet at the base of the escarpment along the western boundary.

West Slope C RA Vegetation:	
Northern hardwood	100%

West Slope C RA Site Indices:	
60+ (moderately high productivity)	62%
<60 (moderate to low productivity)	38%

The potential natural vegetation of the area is northern hardwoods to the west and hemlock-northern hardwoods and dry oak forest elsewhere. There are no streams or wetlands associated with this area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						13						

Management Area 4.1 emphasizes Deer Wintering Areas. 8 acres (58%) are classified as suitable for timber production (capable of producing commercial crops of timber). In the past ten years, no timber has been harvested.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks though the forest (non-trail use). Though we have no detailed use inventory for the area, forest staff familiar with this RA characterize the overall recreation use of the area to be relatively low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA contains a steep landform called the Vermont escarpment. The adjacent Bristol Cliffs Wilderness is named after the steep landform. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. A power line passes along the road's edge. The appearance of the West Slope C RA can be characterized by a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape.

i. Key Attractions:

- Located adjacent to the Bristol Cliffs Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the forested stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. There is no evidence of cutting in this area over the last 40 years. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could level the entire area. As a part of Bristol Cliffs Wilderness, which is adjacent, it enlarges the representation and diversity of natural communities in that wilderness area. There is a road that follows the western boundary, and it does separate riparian and wetland habitat outside the roadless area from other important habitat inside the area, which can be a problem for small animals. As surveys for Non-Native Invasive Species (NNIS) have not occurred in this RA, the botanical integrity of the area cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its proximity to roads and development (adjacent to a road and nearby houses), this RA is judged to have very low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this area as Rural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, since the cliffs already provide a form of barrier to the effects of outside activities.

d. Special Features:

Scenic- Views from the cliffs look out to the west toward the Champlain Valley with the Adirondack Mountains of New York as a scenic backdrop.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- There are no known areas of rare or unique rock formations in this RA.

Ecological- The RA is composed of some ecological types that are common in this subsection. In addition, a field survey of Bristol Cliffs identified the following rare, exemplary or uncommon natural communities: mesic red oak-northern hardwood forest, open talus, temperate acidic cliff, cold air talus woodland, dry oak-hickory-hophornbeam forest, red pine forest/woodland, and northern hardwood

talus. The Bristol Cliffs are also an historical site for timber rattlesnake, which had a high population at one point in the cliffs. It is not clear, however, if any of these rare or uncommon communities are represented in this RA, although it is likely that some are, particularly the cliff and talus communities.

The Vermont Biodiversity Project (Thompson 2002) did not identify any of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001), however, indicated that the Bristol Cliffs portion of the escarpment, including this area, had high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There is one known occurrence of *Juglans cinerea* (butternut – RFSS) in this RA, but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect.

Historical- There are no known or reported Heritage Resource sites in this section. The potential for significant prehistoric sites, however, is very high. Based on the area's proximity to the high density cluster of prehistoric archaeological sites around Winona Lake to the North (an attractive location, based in part on the availability of quartzite for making tools); the fact that the Bristol Cliff backdrop to this section is itself a quartzite cliff; and because the shores of the post-glacial Champlain Sea would have lapped up against this area, there is a strong possibility of very early/old ("PaleoIndian") and deeply buried sites.

e. Size, Shape and Manageability: This 13 acre area is located in the Town of Bristol - a small rectangle thrusting out from the west side of existing Bristol Cliffs Wilderness boundary. The wilderness boundary was marked with metal wilderness signs in late 70s, approximately every 500 feet but not updated or maintained in this portion of boundary. The area is bounded by the Lower Notch Road on the western side, and private lands on the north and south boundaries. An offset of 300 feet from the centerline would enhance wilderness characteristics and avoid impacts resulting from road maintenance activities such as brushing and culvert replacements. A house lies very close to the south side boundary. Addition of this area would add about 0.4 miles of wilderness boundary to manage for a net gain of only 13 acres.

f. **Boundary Conditions, Needs and Management Requirements**: Boundaries with adjoining private land are marked to FS standards.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation activities in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely effect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Areas currently maintained as early successional units would disappear with the passage of time.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as Wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 8 acres (58%) are classified as suitable for timber production (capable of producing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Roadless Areas 92032 through 92036 are unique on the Forest, because they are the only place[s] where post-glacial Champlain Sea beaches co-occur with quartzite bedrock outcrops. Consequently, these RA's potentially contain rare, early PaleoIndian archaeological sites. Appropriate and mandated prehistoric site inventory work for these sites would likely require significant ground-disturbing test excavations and removal of attendant vegetation. Hence, designation could have an adverse effect on these potential resources by restricting these activities.

f. Land Uses: There is a 50-foot utility ROW to Central Vermont Public Service (CVPS), "with land use restrictions" in this RA. The location, however, appears to be on the edge of the RA, and could be avoided with proper boundaries. The land use restrictions and covenants were researched and are not problematic. No special use permits are issued for this area.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would

die. **Rare Plants and Unique Ecosystems-** There is one known occurrence of *Juglans cinerea* (butternut – RFSS), but no other known occurrences of plants that are on the Regional Forester's Sensitive Species (RFSS) or Species of Viability Concern (SVC) lists, or plants that are tracked by the state. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect. There is additional habitat present in the area for this species, and so effects of wilderness designation would be the same in these areas. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The West Slope C Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. Although the addition of this RA to the adjacent Bristol Cliffs Wilderness could expand the representation of natural communities in that area, it would not provide quality solitude or other wilderness experiences or values due to its proximity to roads and private lands. This RA is located on the steep edge of the Vermont Escarpment. These cliffs, on the eastern edge of the RA, are a scenic attraction, as well as being important in achieving conservation goals for the Forest

Noise and visual disturbances near the Lower Notch Road, on the RA's western edge, would adversely affect wilderness character and experience within the sight and sound distances of these edges. Private homes along roads at the south and west edges inhibit opportunities for solitude. This area is also of high archeological interest because post-glacial sea beaches have potential to contain rare, early archeological sites. Exploration of this area could be more difficult if mechanized equipment and motorized access were eliminated.

Roadless Area 92035 (West Slope D)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 13 acres
Private: 0 acres
Total: 13 acres

b. Location, Vicinity, and Access: The West Slope D Roadless Area (RA) is in the Town of Bristol, in Addison County. This extremely small RA is bordered on the east by the Bristol Cliffs Wilderness. The area is in close proximity to Lower Notch Road, a Bristol Town road and could be accessed from there. There are no Forest system trails or roads located in this roadless area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the West Slope D RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), this small RA is situated along the western escarpment, and does not represent any of the other landscapes within this subsection. The area comprises a section of cliff along the eastern edge of the RA, progressing downhill and to the west to extremely steep slopes, to steep slopes and talus slopes at the base and the more moderate slopes along the western boundary. Elevations range from 1,050 feet along the upper limit of the slope to the east, to 700 feet at the base of the escarpment along the western boundary.

West Slope D RA Vegetation:	
Northern hardwood	100%

West Slope D RA Site Indices:	
60+ (moderately high productivity)	30%
<60 (moderate to low productivity)	70%

The potential natural vegetation of the area is northern hardwoods to the northwest, and hemlock-northern hardwoods and dry oak forest elsewhere. There are no streams or wetlands associated with this area.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0						13						

Management Area 4.1 emphasizes Deer Wintering Areas.

Timber resource considerations:
- 4 acres (29%) are classified as suitable for timber production (capable of growing commercial crops of timber).
- No timber has been harvested in the past ten years.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hunting, berry picking, bird watching, and casual walks

though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its recreation use as low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This RA contains a steep landform called the Vermont escarpment. The adjacent Bristol Cliffs Wilderness is named after the steep landform. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Private homes exist along the road edge to the west of the parcel. The appearance of the RA can be characterized as primarily northern hardwood forest on a west-facing slope.

i. Key Attractions:

- The cliffs are a scenic attraction of the area.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: All of the forested stands in this area were regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no stands that are 15 years old or younger, nor are there stands that are documented old growth. There is no evidence of cutting in this area over the last 40 years. The entire Bristol Cliffs area, including the piece of escarpment that this area sits on, is considered biologically significant for the rare or outstanding natural communities that exist on the cliffs, ledges, and outcrops, as well as for rare species associated with these areas. Given its size, this area may not be large enough to maintain its integrity in the face of natural disturbances that are likely to affect the escarpment; in other words, one good wind event could level the entire area. As a physical continuation of Bristol Cliffs Wilderness, which is adjacent, it enlarges the representation and diversity of natural communities in that wilderness area. There is a road that follows the western boundary, and it does separate riparian and wetland habitat outside the roadless area from other important habitat inside the area, which can be a problem for small animal migrations and movements. As surveys for Non-Native Invasive Species (NNIS) have not occurred here, the botanical integrity of the area cannot be estimated.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its proximity to roads and development (adjacent to a road and nearby houses), the area is judged to have low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent inventory for the Recreation Opportunity Spectrum that identified this area as Rural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area, since the cliffs already provide a form of barrier to the effects of outside activities.

d. Special Features:

Scenic- Views from the cliffs look out to the west toward the Champlain Valley with the Adirondack Mountains of New York as a scenic backdrop.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in this RA.

Geological- There are no known areas of rare or unique rock formations in this RA.

Ecological- The RA is composed of some ecological types that are common in this subsection. In addition, a field survey of Bristol Cliffs identified the following rare, exemplary or uncommon natural communities: mesic red oak-northern hardwood forest, open talus, temperate acidic cliff, cold air talus

woodland, dry oak-hickory-hophornbeam forest, red pine forest/woodland, and northern hardwood talus. The Bristol Cliffs are also an historical site for timber rattlesnake, which had a high population at one point in the cliffs. It is not clear if any of these rare or uncommon communities are represented within this RA, although it is likely that some are, particularly the cliff and talus communities. The Vermont Biodiversity Project (Thompson 2002) did not identify any of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001), however, indicated that the Bristol Cliffs portion of the escarpment, including this area, had high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- In this RA, there are two sites with known occurrences of plants on the Regional Forester's Sensitive Species (RFSS) list - *Collinsonia canadensis* (Canada horse-balm), which is found near a road in a significant rich northern hardwoods community, as well as *Juglans cinerea* (butternut). The *Collinsonia* population is the northernmost population in Vermont. *Collinsonia canadensis* is a species of rich, moist, shady woods. Since this species is on the RFSS list, and would automatically be protected if forest management activities occurred at this site, designation of this area as wilderness would have a neutral effect. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect on this species.

Rare and Endangered Animals- The Jefferson salamander, a Regional Forester's Sensitive and Vermont Species of Concern, has been observed on lands directly adjacent to roadless area 92035 (West Slope D). It is presumed that this species is breeding in a vernal pool on private land, and dispersing onto adjacent lands – it is likely that the species disperses into, and may breed in, this RA. Wilderness designation would provide for the long-term suitability of Jefferson salamander dispersal habitat (the upland forest), and any ancillary breeding sites in the area. Because primary breeding occurs on private lands, however, wilderness designation would not fully address all of the Jefferson salamander's life requirements.

Historical- There is one reported, unconfirmed historic residence. The potential for significant prehistoric sites, however, is very high. Based on the area's proximity to the high density cluster of prehistoric archaeological sites around Winona Lake to the North (an attractive location, based in part on the availability of quartzite for making tools); the fact that the Bristol Cliff backdrop to this section is itself a quartzite cliff; and because the shores of the post-glacial Champlain Sea would have lapped up against this area, there is strong possibility of very early/old ("PaleoIndian") and deeply buried sites.

e. Size, Shape and Manageability: This 13-acre area is located in Bristol. It is a small rectangle thrusting out from the west side of existing Bristol Cliffs Wilderness boundary. The wilderness boundary was marked with metal wilderness signs in late 70s approximately every 500 feet but not updated or maintained in this portion of boundary. The area is bounded by the Lower Notch Road on the western side and private lands on the north and south boundaries. An offset of 300 feet from the centerline would enhance wilderness characteristics and avoid impacts resulting from road maintenance activities such as brushing and culvert replacements. A house lies very close to the south side boundary. If this area were added to Bristol Cliffs it would add about 0.4 miles of wilderness boundary to manage for a net gain of only 13 acres, in place of the currently marked boundary.

f. Boundary Conditions, Needs and Management Requirements: Adjoining boundaries with private land are marked to FS standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: The type of recreation use that occurs in this RA would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the forest. Designation of this area as wilderness would provide little benefit for recreation dependent on wilderness. The management of wilderness recreation, including possible non-conforming activities, on this parcel would be relatively difficult.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g. wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire, etc.). Areas currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (7 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, designation would limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 4 acres (29%) are classified as suitable for timber production (capable of growing commercial crops of timber). No timber has been harvested in the past ten years. There are no outstanding mineral rights within this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: Roadless Areas 92032 through 92036 are unique on the Forest, because they are the only place[s] where post-glacial Champlain Sea beaches co-occur with quartzite bedrock outcrops. Consequently, these RA's potentially contain rare, early PaleoIndian archaeological sites. Appropriate and mandated prehistoric site inventory work for these sites would likely require significant

ground-disturbing test excavations and removal of attendant vegetation. Hence, designation could have an adverse effect on these potential resources by restricting these activities.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent, and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** Populations of *Collinsonia canadensis* and *Juglans cinerea* occur in the roadless area. *Collinsonia canadensis* is a species of rich, moist, shady woods. Since this species is on the RFSS list, and would automatically be protected if forest management activities occurred at this site, designation of this area as wilderness would have a neutral effect. *Juglans cinerea* requires light for reproduction, and could be lost from a site where no forest management activities are occurring; however, its overall decline is due to disease, and so the loss of individual trees is not a major threat to the species. Thus, designation as wilderness would likely have a neutral effect. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The West Slope D Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. Although the addition of this RA to the adjacent Bristol Cliffs Wilderness could expand the representation of natural communities in that area, it would not provide quality solitude or other wilderness experiences or values due to its proximity to roads and private lands. This RA is located on the steep edge of the Vermont Escarpment. These cliffs, on the eastern edge of the RA, are a scenic attraction, as well as being important in achieving conservation goals for the Forest

Two plants from the Regional Forester's Sensitive Species list are known to occur in this area: Canada horse balm, rare in Vermont, is found along the lower slopes. Butternut trees are known to occur here also. The Jefferson Salamander, a Regional Forester's Sensitive Species, has been observed on lands directly adjacent to this roadless area. It is likely that this species disperses into this roadless area. Wilderness designation would provide for long-term habitat (upland forest) for this species.

Noise and visual disturbances near the Lower Notch Road, on the RA's western edge, would adversely affect wilderness character and experience within the sight and sound distances of these edges. Private homes along roads at the south and west edges inhibit opportunities for solitude. This area is also of high archeological interest because post-glacial sea beaches have potential to contain rare,

early archeological sites. Exploration of this area could be more difficult if mechanized equipment and motorized access were eliminated.

Roadless Area 92036 (West Slope E)

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 16 acres
Private: 0 acres
Total: 16 acres

b. Location, Vicinity, and Access: The West Slope E Roadless Area (RA) is in the Town of Bristol, in Addison County. This small RA is bordered on the east by the Bristol Cliffs Wilderness. The area is in close proximity to Lower Notch Road, a Bristol Town road, and can be accessed from there. There are no Forest system trails or roads located in this roadless area.

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the West Slope E RA lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. Based on local ecological mapping of Landtype Associations (LTAs), this small RA is situated along the western escarpment, and does not represent any of the other landscapes within this subsection. The area comprises a section of cliff along the eastern portion of the area and includes some flat or gentle areas at the top of the escarpment. The RA progresses downhill and to the east to extremely steep slopes, to steep slopes and talus slopes at the base. Elevations range from 1,400 feet along the top of the escarpment to the east, to 800 feet at the base of the escarpment along the western boundary.

West Slope E RA Vegetation:	
Northern hardwood	100%

West Slope E RA Site Indices:	
60+ (moderately high productivity)	0%
<60 (moderate to low productivity)	100%

The potential natural vegetation of the area is hemlock-northern hardwoods. There are no streams or wetlands associated with this area.

f. Current Use: The Management Area distribution in the current Forest Plan for this RA is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	0												16

This RA is a Recently Acquired Land (MA 9.2). The management strategy for these lands is to protect all options until studies determine its desired condition.

None of the RA is classified for suitable timber production (capable of growing commercial timber crops). In the past ten years no timber has been harvested.

Recreational use of this RA is similar to that of other general forest areas throughout the National Forest, including hunting, berry picking, bird watching, and casual walks though the forest (non-trail activities). Though we have no detailed use inventory for the area, forest staff familiar with the area characterize the overall recreation use of the area to be low.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the West Slope E RA can be characterized by a mix of vegetative types and landforms, with young to mature stands dominating the forested landscape, and including a steep landform called the Vermont escarpment.

In the surrounding area, the Bristol Cliffs Wilderness contains more of the escarpment landform, as well as biologically significant, relatively uncommon natural communities.

i. Key Attractions:

- Bristol Cliffs are a scenic attraction.
- Located adjacent to the Bristol Cliffs Wilderness.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: This RA has characteristics similar to Bristol Cliffs Wilderness, which is adjacent. Because of this, West Slope E RA could potentially enlarge the representation and diversity of natural communities in that wilderness area. The botanical integrity of this RA cannot be estimated, as surveys for NNIS (Non-Native Invasive Species) have not occurred here. Given its size, this RA may not be large enough to maintain its natural integrity in the face of natural disturbances; in other words, one good wind event could level the entire area. When viewed as a component of the landscape, however, such a disturbance may not affect natural integrity. In addition, the natural integrity of the RA is potentially compromised by the limits to small animal migration posed by a road in the area.

The stands in this area were regenerated from past harvest and other land uses, and now appear as young to middle-aged forests. There are no acres of forested land that are 15 years old or younger, nor are there stands with documented old growth conditions here.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its proximity to roads and development, this small RA is judged to have low potential for providing solitude or primitive recreation. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this area as Rural and Roaded Natural. Though adjacent to the wilderness area, this area does little to add value to the solitude of the existing area.

d. Special Features:

Scenic- Views from the cliffs look out to the west toward the Champlain Valley with the Adirondack Mountains of New York as a scenic backdrop.

Scientific- There are no designated Research Natural Areas, Experimental Forests or Special Areas in the West Slope E RA.

Geological- There are no known areas of rare or unique rock formations in this RA.

Ecological- Most of the RA is composed of ecological types that are quite common in this subsection. Although the adjacent Bristol Cliffs Wilderness contains significant ecological features, it is not clear if any of these rare or uncommon communities are represented here. The Vermont Biodiversity Project (Thompson 2002) did not identify any of this area as part of a larger representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife

Service 2001), however, indicated that the Bristol Cliffs portion of the escarpment, including this RA, had high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- There are no known records of plant species that are state or federally listed, Regional Forester Sensitive Species (RFSS), or other species of viability concern within this RA.

Historical- There are no known or reported Heritage Resource sites in this section. The potential for significant prehistoric sites, however, is high. Based on the area's proximity to the high density cluster of prehistoric archaeological sites around Winona Lake to the north, there is a strong possibility of very early/old ("PaleoIndian") and deeply buried sites on this RA.

e. Size, Shape and Manageability: This 16 acre small rectangle thrusting out from the west side of existing Bristol Cliffs Wilderness boundary is located in the Town of Bristol. The wilderness boundary was marked with metal wilderness signs in late 70s, every 200 feet but not updated or maintained in this portion of boundary. Private lands bound the area on three sides. A narrow strip of private land separates the western boundary from the Lower Notch Road. Incorporating this area into wilderness would add about 0.5 mile of wilderness boundary to manage.

f. Boundary Conditions, Needs and Management Requirements: Boundaries with adjoining private land are marked to FS standard.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Non-motorized recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry and is provided in many places throughout the Forest.

Designation of this RA as wilderness would provide little benefit for recreation dependent on wilderness. The management of recreation, including possible non-conforming activities, on this parcel would be relatively difficult due to the proximity of private land.

b. Wildlife And Fish: Wilderness designation will benefit those animal species relying upon mature forest habitats (for example wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas will become a mature and continuous forest. Designation will also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (for example black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation likely would adversely affect those species relying on early successional habitats (for example leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers will lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, fire and the like). Parcels currently maintained as early successional units would disappear with the passage of time.

This RA contains a small portion (15 acres) of a Deer Wintering Area (DWA). With wilderness designation, some vegetative management options would not be available for DWA's. Wilderness designation of this RA would reduce, but not totally eliminate, options to manage shelter and browse

vegetation. Natural forces, such as wind, ice, fire, disease and pestilence, would manage vegetative conditions, such as shelter perpetuity and browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA habitat stability that can be provided by regulated management. In addition, Wilderness designation will limit intervention and control of disease and pest outbreaks. Without treatment, disease (e.g., armillaria) or pests (e.g., balsam wooly adelgid, spruce budworm, and the hemlock wooly adelgid [non-native]) could reduce, or eliminate, a DWA's ability to support deer. Concern about the DWA's stability, and long term suitability, is somewhat alleviated through the current availability of management options for portions of the affected DWA.

This area does not contain any streams or riparian areas with fisheries resources.

c. Water Availability and Use: Any streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: There are no livestock operations or potential for such operations. None of the area is classified for suitable timber production (capable of growing industrial crops of timber). In the past ten years no timber has been harvested. There are no outstanding mineral rights within this area.

e. Heritage Resources: Roadless Areas 92032 through 92036 are unique on the Forest, because they are the only place[s] where post-glacial Champlain Sea beaches co-occur with quartzite bedrock outcrops. Consequently, these RA's potentially contain rare, early PaleoIndian archaeological sites. Appropriate and mandated prehistoric site inventory work for these sites would likely require significant ground-disturbing test excavations and removal of attendant vegetation. Hence, designation could have an adverse effect on these potential resources by restricting these activities.

f. Land Uses: No special use permits are issued for this area. There are no known easements or other encumbrances to the lands in this roadless area.

g. Management Considerations: Fire- Fire and insect infestations are important natural disturbance factors that regulate or help to maintain several natural communities along the western escarpment in general, of which a portion is included in this roadless area. With wilderness designation, there are trade-offs regarding the extent to which these escarpment communities will benefit or not. As long as natural occurrences of fire and infestations by native insects are not controlled within a wilderness designation, these disturbances will continue to regulate or maintain these communities. Conversely, when these factors occur less frequently than average and to the extent that some natural communities are losing key species and are shifting in composition and structure, wilderness designation will prevent the agency from using management techniques to introduce disturbances back into the system to maintain the existing natural communities. This may result in the loss of some species from the Forest as these natural communities shift. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern hemlock forests. If HWA were to invade Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this roadless area. There is potentially suitable habitat for rare plants in the area, although the effect of Wilderness designation depends on species and so is uncertain until

species are located there. **Non-Federal Lands-** There are no private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The West Slope E Roadless Area has low to moderate potential to provide the attributes and values appropriate for wilderness designation. Although the addition of this RA to the adjacent Bristol Cliffs Wilderness could expand the representation of natural communities in that area, it would not provide quality solitude or other wilderness experiences or values due to its proximity to roads and private lands. This RA is located on the steep edge of the Vermont Escarpment. These cliffs, on the eastern edge of the RA, are a scenic attraction, as well as being important in achieving conservation goals for the Forest

Noise and visual disturbances near the Lower Notch Road, on the RA's western edge, would adversely affect wilderness character and experience within the sight and sound distances of these edges. Private homes along roads at the south and west edges inhibit opportunities for solitude. This area is also of high archeological interest because post-glacial sea beaches have potential to contain rare, early archeological sites. Exploration of this area could be more difficult if mechanized equipment and motorized access were eliminated.

Roadless Area 92037 (Abbey Pond)[1]

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 5375 acres
Private: 78 acres
Total: 5453 acres

b. Location, Vicinity, and Access: The Abbey Pond Roadless Area (RA) is in the towns of Ripton, Middlebury, and Bristol, in Addison County. This roadless area is a "stand alone" area, not attached to existing wilderness, in the northwest portion of the Green Mountain National Forest. FT 259, the Corridor 7A snowmobile trail, borders the south boundary of the area.

The Abbey Pond RA accessed by approximately 8 miles of predominantly unimproved roads, including FR90 from the north, FR298 from the east, and FR95 and 237 from the south. None of these roads extend far into the roadless area. The RA can also be accessed by approximately 5 miles of trails, including the Abbey Pond Trail, FT 160, and the Beaver Meadow Trail, FT 270. The western edge of the RA is formed by the escarpment.

Abbey Pond Roadless Area Roads						
	Name	**Improved**	**Mileage**	**Gated?**	**Surface**	**Main. Lev.**
237	Dow Brook	Unimproved	.3	No	Gravel	1
90C, 90A	Beaver Meadow Spur	Unimproved	1.5	No	Native Material	1
298	Notch Road	Improved	.7	No	Native Material	2
294	St. Therese	Improved	.6	No	Improved Native Material	
Unclassified			4.7			

Abbey Pond Roadless Area Trails	
Type	**Mileage**
Hiking	4.7

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), 99% of the Abbey Pond Roadless Area occurs in the Northern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest-Coniferous Forest-Alpine Meadow Province. The remaining 1% lies in the Champlain Glacial Lake and Plains Subsection of the St. Lawrence Valley Section within the Laurentian Mixed Forest Province. The area is centered on a small plateau of wetlands, ponds, and beaver meadows, which divide the Middlebury and New Haven River watersheds. The plateau is at a low to moderate elevation of 1,500 to 1,800 feet. From here, the landscape climbs to the summit of Frost Mountain at about 2,500 feet elevation along the southern edge of the roadless area, and plunges precipitously down the cliffs and steep slopes of the western escarpment of the Green Mountains to about 650 feet elevation in the Champlain Valley along the

[1] The Abbey Pond Roadless Area was added to the Roadless Inventory in 2005 as a result of new information following the release of the Draft Environmental Impact Statement.

western edge of the roadless area. Slopes are generally gentle to moderate throughout the area except in association with Frost Mountain and the western escarpment. Headwaters of the Middlebury River and the New Haven River are found in this area, which is part of the Otter Creek Subbasin. Abbey Pond and the Beaver Meadows are distinct features on the plateau in this area. National Wetlands Inventory mapping indicates that the existing wetlands and beaver meadows are classified as emergent, scrub- shrub, and forested variety, including ponds, totaling over 200 acres. Northern hardwoods composed of sugar maple, red maple, yellow birch and beech are currently the dominant forest type. Hemlock stands dominate the Green Mountain escarpment.

Abbey Pond RA Land Type Associations (LTAs):	
Low mountains & hills	45%
Plateau	30%
Vermont Escarpment	21 %
Mountain slopes	4%
Valley bottoms	1%
Upper mountain slopes & tops	<1%

Abbey Pond RA Vegetation:	
Northern hardwood	78%
Hemlock	10%
Open uplands and wetlands	8%
Aspen & paper birch	2%
Red spruce & balsam fir	1%
White pine, oak, mixed hardwoods & softwoods, plantations	1%

Abbey Pond RA Site Indices:	
60+ (moderately high productivity)	65%
>60 (moderate to low productivity)	35%

The potential natural vegetation of the RA is predominantly northern hardwoods and mixtures of oaks and northern hardwoods, with small areas of wetlands and conifer dominated wetlands on the level ground of the plateau, and along the southwestern edge of the area. Along the western edge of the area on the escarpment, a variety of natural communities have the potential to occur, with mixed hemlock and hardwoods the dominant type, along with small patches of northern hardwoods mixed with red spruce, dry oak and oak-pine forests, red spruce mixed with hardwoods, and interspersed with north-south trending temperate acidic outcrops and cliffs.

f. Current Use: The Management Area distribution in the current Forest Plan for this roadless area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Roadless Acres	78					2780	1532					616	447

Management Area 3.1 emphasizes roaded conditions. Management Area 4.1 emphasizes Deer Wintering Areas. MA 8.1 is managed as Special Areas, typically without harvest. The management strategy for Area 9.2 is to protect all options until studies determine the desired condition.

Timber resource considerations:

- 3624 acres (67%) are classified as suitable for timber production (capable of producing commercial crops of timber).
- In the past 10 years, 456 acres of timber have been harvested.

There is one deeded Right of Way on the eastern edge of the boundary of the Roadless Area that provides access from the Ripton Road to private land. This right of way has not been developed on the ground. There is one outfitter and guide permitted to lead day hiking and snowshoeing in the Abbey Pond area for 54 service days between 6/1/2005 and 6/1/2006.

Dispersed recreation activities in the area are similar to those in other general forest areas throughout the National Forest. This use may include hiking, hunting, berry picking, bird watching, cross-country skiing, snowshoeing, and casual walks through the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the RA characterize its overall recreation use as moderate, with high use levels on the bordering snowmobile trail.

Visitor use numbers are estimates based on staff observations. The Abbey Pond Trail received moderate visitor use during weekends and holidays during the summer and fall months. During the winter the Abbey Pond Trail receives light use by those snowshoeing and cross-country skiing. The Beaver Meadows trail receives light visitor use. Most of the visitor use originates from its northern terminus off of FSR 90C to access the beaver ponds for fishing and other dispersed recreation activities. Forest Trail 259 (Corridor 7A) receives heavy snowmobile use during the winter months. It is one of the few access points to NFS lands from the Middlebury area. There are no other developed recreation facilities located within this RA.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: The appearance of the RA can be characterized as a mix of open and forest types and landforms, with young to mature stands dominating the forested landscape, and openings associated with the wetlands and ponds in the center, and with the cliffs and outcrops along the western edge. The parcel's highest peak is Robert Frost, at 2513 feet. Other features include Abbey Pond, the large network of wetlands known as Beaver Meadows, and the prominent cliffs, ledges, outcrops, and talus slopes along the western edge of the area, known collectively as the escarpment. This section of the area is part of a large north-south-trending line of cliffs and bedrock outcrops extending from north of Bristol to the Massachusetts border, and divides the Green Mountains from the Champlain and Vermont Valleys. The cliffs and outcrops in the RA are prominent when viewed from the Champlain Valley, and the open areas along the top of the escarpment provide panoramic views of the Champlain Valley and Adirondacks. The wetlands, ponds, and portions of the escarpment in this RA have been identified as ecologically significant to Vermont by the Vermont Nongame and Natural Heritage Program (VNNHP). On private lands adjacent to the Abbey Pond trailhead are active gravel pits.

i. Key Attractions:

- Abbey Pond & Beaver Meadows Special Area
- The western escarpment, Robert Frost Mountain, and associated views to the Champlain Valley, with the Adirondack Mountains of New York as a scenic backdrop.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: With the exception of past timber harvest on approximately 400 acres, this RA appears natural. Most of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are 120 acres of forested

land in this RA that are 15 years old or younger, and so are reorganizing after a regeneration harvest. These stands are in the eastern and western portion of the area and were cut during the Dow Brook and St. Therese timber sales. Most stands are 120 years old or younger, and so won't show signs of developing old growth characteristics for likely another 50 years or so. While there are no stands older than 170 years, there are two stands older than 120 years (134 and 154 years old). Both are hemlock stands associated with the cliffs of the escarpment, and likely have very old trees associated with them. There are no stands of documented old growth in the roadless area. There has been some cutting in this RA over the last 40 years, with regeneration harvests over more than 413 acres in 23 stands (34%) over than time. There will be evidence of this harvesting visible, primarily as stumps and piles of large woody debris.

There are several roads that enter the area from the north, east, and south. All are light duty or dirt roads. One road, Forest Road 90, provides access to the wetlands at the center of the area. While none of these roads are extensive enough to divide one portion of the area from another, there is an extensive network of trails surrounding the central portion of the area associated with the wetlands. Some of these trails are old roads or skid trails and are wide. When combined with Forest Road 90, this network of trails and roads may be large enough to form barriers to amphibian movement into and out of the wetland complexes.

Surveys for NNIS have not occurred in this area, and the extent to which it is infested is unknown.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to its relative easy access, as well as its proximity to private land, this RA is judged by field personnel to have a low to moderate potential for providing solitude or primitive recreation. Opportunities for solitude are best found away from designated roads and trails. Visitor use is highest during the summer and fall season. The active gravel pits on private lands near the Abbey Pond trailhead influence the opportunity for solitude on the western edge of the roadless area.

d. Special Features:

Scenic- This parcel contains a panoramic view from Robert Frost Mountain toward the west with views to the Champlain Valley and the Adirondack Mountains as a scenic backdrop beyond. Maintenance is required to perpetuate this view. In addition, the Abbey Pond Trail offers opportunities to view small waterfall cascades.

Scientific- There are no designated Research Natural Areas or Experimental Forests in this RA. The RA does include a Special Area: the Beaver Meadows and Abbey Pond Special Area is located in this RA, in the towns of Bristol, Ripton, and Middlebury. This special area encompasses 470 acres, and was established to preserve the area's isolated meadows and ponds and associated Great Blue Heron rookeries and rare plant communities. The area was also recommended by the 1987 Plan for evaluation as a candidate Research Natural Area. An analysis of this area indicated that its land use history was extensive and made it a less attractive candidate than some other areas. The area is still considered to have special ecological values associated with the ponds, wetlands, and plant and animal species associated with them.

Geological- There are no known areas of unique or rare rock formations in this roadless area, although the extensive acidic temperate outcrops with occasional bands of calcareous rock along the escarpment of Elephant Mountain are important ecological features and so are considered significant by the State of Vermont (VNNHP 1997).

Ecological- The Vermont Biodiversity Project (Thompson 2002) identified the southwestern portion of the escarpment in this area as part of a larger representative landscape to consider for conservation of biodiversity in a state-wide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that much of the escarpment in this area had relatively high irreplaceability values, reflecting the high importance of this portion of the area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest. Aside from the escarpment, however, the remainder of the RA had low irreplaceability values.

There are two primary features of ecological significance in this area:

- Beaver Meadows & Abbey Pond Special Area – Beaver Meadows & Abbey Pond are currently designated a Special Area in the Forest Plan. This Special Area is a known location for Eastern Jacob's ladder (*Polomonium van-bruntiae*), a globally rare (G3) species, and for matted spikerush (*Eleocharis intermedia*), which is rare in Vermont. Also protected in the Beaver Meadows & Abbey Pond Special Area is a great blue heron (*Ardea heodias*) rookery with former (6 pairs in 1988) nests at Abbey pond and ponds north of Beaver Meadows, and 1-2 active nests at the pond southwest of Abbey Pond in 1993. For the last decade, access to the ponds within ½ mile of Abbey Pond and neighboring ponds has officially restricted between May and August to protect nesting herons.
- Elephant Mountain – the escarpment along the western side of the RA along Elephant Mountain is considered ecologically significant by VNNHP due to the presence of two rare natural communities and several rare or uncommon plants. In particular, the area has a high quality example of temperate calcareous outcrops, and a good quality example of dry oak-hickory-hophornbeam forest, both uncommon natural communities in Vermont and rare on the Forest. These two natural communities include four rare or uncommon plant occurrences, including American ginseng (*Panax quinquefolius*), rock spikemoss (*Selaginella rupestris*), climbing fumitory (*Adlumia fungosa*), and slender wheatgrass (*Agropyron trachycaulum*). A small patch of old northern hardwood forest less than five acres in size has also been noted along this stretch of the escarpment.

Rare and Endangered Plants- Within this RA, there are three significant communities with rare plants known to occur in them. In one, a shallow emergent marsh community, there are three known rare plant occurrences: Appalachian Jacob's ladder (*Polemonium vanbruntiae*) and matted spikerush (*Eleocharis intermedia*), both on the Regional Forester Sensitive Species (RFSS) list, and ovate spikerush (*Eleocharis ovata*), which is on the list of other Species of Viability Concern (SVC). In the second and third communities, a temperate calcareous outcrop community perched above a dry oak-hickory-hophornbeam forest, there are four known rare plant occurrences: American ginseng (*Panax quinquefolius*) and rock spikemoss (*Selaginella rupestris*), both on the RFSS list, and climbing fumitory (*Adlumia fungosa*) and slender wheatgrass (*Agropyron trachycaulum*), both uncommon in Vermont but not on either the RFSS or other SVC lists.

Rare and Endangered Wildlife- There are no known records of federally listed Threatened or Endangered species within this roadless area. There is one current record of a Regional Forester Sensitive Species (wood turtle), and one record for a species of viability concern (blue spotted salamander) within this roadless area.

Historical- The Abbey Pond RA holds significant potential for the presence of prehistoric Native American archaeological sites. During the late 19th and early 20th centuries it was home to several farms and at least one mill, but appears to have been settled later and for a shorter duration than most areas of the Forest.

More specifically, there are four general areas with prehistoric site potential: the west-facing escarpment consists largely of exposed quartzite bedrock (a good source of tool making material); the well-drained margins of the extensive beaver meadows; the area of loess deposits in the northwest quadrant of the RA; and the confluences of streams in the southeastern corner of the RA.

There are more than a dozen recorded historic period archaeological sites. Most of these are residential or agricultural, but there is also a mill site associated with Abbey Pond, and the footprint/site of the former Robert Frost Mountain fire lookout tower.

e. Size, Shape and Manageability: This 5,453-acre area lies within the Towns of Ripton, Middlebury, and Bristol, and is located south of Bristol Cliffs Wilderness and east of Vermont Route 116. The Roadless Area boundaries do contain a number of jogs around private land that would make the area challenging to manage as wilderness, without some adjustments to eliminate the jogs.

f. Boundary Conditions, Needs and Management Requirements: The southern boundary of the RA follows FT 259 (Corridor 7A), an identifiable boundary. Most property boundary lines in the area are not marked to standard, although some corners have been set.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: Some of the recreation use in this RA may be affected by designation of the entire area as wilderness. A few low standard roads (i.e. FR 291) that border, or enter the area currently provide motorized access for dispersed camping, berry picking, hunting and other activities. Designation would essentially close these areas to motorized access and much of the visitor use that is currently occurring will likely decrease.

Non-motorized activities would still be allowed to continue, though user controls may be needed to manage resource conflicts. Some of this use is dependent on remote backcountry and though provided in many places throughout the forest, there would be some benefit if the area was designated as wilderness. It isn't clear if all types of existing non-motorized recreation activities would be desirable in an area designated for wilderness. Designation of this area as wilderness would provide some benefit for wilderness dependent recreation activities, especially for individuals desiring a remote experience that isn't dependent on motorized (or mechanized) methods, or even on trails. There would be some detrimental effect on current recreation activities that are facilitated by motorized access. Although there are no current motorized trails located within this RA, it is bordered on south by a corridor snowmobile trail.

b. Wildlife and Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (e.g., wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (e.g., black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness will provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (e.g., leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats will depend on natural forces (wind, ice, and fire). Important and unique habitat conditions that require maintenance, such as early succession, apple orchards, and aspen communities, would disappear with the passage of time.

The Abbey Pond RA contains all or portions of 3 separate Deer Wintering Areas (DWA), totaling 982 acres. Management goals for DWAs focus on food and shelter requirements of wintering deer. Objectives are accomplished through vegetative manipulations that create a mixture of grass, forbs, shrubs and young trees. With wilderness designation, vegetative management options would not be available to address browse objectives in these DWAs. Rather, natural forces, such as wind, ice, fire, disease and pestilence, would manage the vegetation and associated browse availability. It is unlikely that natural events will occur at a frequency and degree of severity to support the DWA's browse stability that can be provided by management. When an entire DWA is located within a RA, concern for long term DWA stability is greatest.

The Abbey Pond RA contains a portion of the North Branch Middlebury River, Abbey Pond Brook, and approximately 10 small unnamed streams. These streams provide aquatic habitat for blacknose dace and native brook trout. Management goals for brook trout and other resident fish species and their habitats focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach maximum levels for another 80 to 150 years depending on forest type (Nislow personal communication). In the near-term, wilderness designation would limit our ability to restore stream habitat and enhance recreational fishing opportunities.

c. Water Availability and Use: A small part of the RA drains north into the Middlebury Municipal water supply. No change in water quality is anticipated if the roadless area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 3624 acres (67%) acres are classified as suitable for timber production (capable of producing commercial crops of timber). In the past 10 years, 456 acres of timber have been harvested; 183 acres of this was a part of the Dow Brook Timber Sale. There are no outstanding mineral rights in this area. There are no livestock operations or potential for such operations.

e. Heritage Resources: This RA is not likely to be a candidate for on-site interpretation of Heritage Resources, nor are the known historic period archaeological sites prime candidates for active research activities. On the other hand, the several areas with potential for the presence of prehistoric sites offer some unusual and interesting differences from other areas (e.g., loess deposits, escarpment access, headwaters of significant streams) which makes them among the more attractive locations for investigation on the north half of the Forest in the future. As long as active research is allowed within any future land-use/MA designation, there should be no adverse effect to Heritage Resources.

f. Land Uses: There is one deeded right of way on the eastern edge of the Roadless Area boundary in Tract 648B that provides access from the Ripton Road to private land. This right of way has not been developed on the ground. This RA also contains a water rights easement in Tract 500M, in the southeast part of the area. This easement is to control the flow of the North Branch of the Middlebury River. Its exact location is unknown. Outfitter/guide use in the area might be curtailed if a Wilderness Implementation Schedule limited their activity to that which is wilderness-dependent.

g. Management Considerations: Fire- Wildfire occurrence is rare for this area and restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock

Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** In the shallow emergent marsh community, the known occurrences and potential habitat for Appalachian Jacob's ladder, matted spikerush, and ovate spikerush would not necessarily be threatened by wilderness designation. All three require canopy gaps or open habitat. Flood events, wind-throw, and beaver activity may be important natural disturbance factors for these three species. However, if natural disturbances were not adequate to maintain habitat for this species, wilderness designation could mean that managers would lose the ability to maintain open habitat for this species. In the temperate calcareous outcrop community, where climbing fumitory, slender wheatgrass, and rock spikemoss occur, designation as wilderness would not affect the suitability of the substrate for these species. However, the exact location of each of these species relative to canopy gaps is uncertain, as is the extent to which canopy openness is required their survival. In places that have extreme slopes and lots of exposed bare rock, it would take hundreds of years of natural processes to change the nature of these communities, but in places of lesser slope, change could occur at a relatively faster pace. In either case, it is uncertain how these changes would affect these species, and uncertain whether designation as wilderness, and thus an inability to manage for these species, would be detrimental to their continued existence. In the associated forest that is the more suitable habitat for American ginseng, designation as wilderness is unlikely to have any affect of the continued existence of this shade-loving species. While there is potentially suitable habitat for other rare plants in the area, the effect of wilderness designation depends on the species, and so its effects would be uncertain until species are located there. **Non-Federal Lands-** There are 78 acres of private lands contained within this roadless area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Abbey Pond Roadless Area has moderate potential to provide the attributes and values appropriate for wilderness designation. The area is natural-appearing and contains scenic views to the Champlain Valley, with the Adirondack Mountains of New York as a backdrop. The proximity of this area to the Corridor 7A snowmobile trail lessens the opportunity for solitude and other wilderness values, however, particularly in the southern portion of the RA.

Known occurrences and potential habitat for ecologically-significant features, Appalachian Jacob's ladder, matted spikerush, and ovate spikerush, could potentially be impacted by wilderness designation. If natural disturbances were not adequate to maintain habitat for this species, wilderness designation could mean that managers would lose the ability to maintain it. Wilderness designation would also impact potential active habitat and timber management on 3624 acres of suitable timberlands.

Lamb Brook (not a Roadless Area)

Note: This area did not meet national criteria to be categorized as an inventoried roadless area. Due to long-standing public interest in the area, however, the Forest Supervisor exercised his discretionary authority to evaluate the area in order to better assess potential wilderness qualities.

1. OVERVIEW

a. Acres: (As calculated by GIS, actual ground surveyed acres will likely vary)
Forest Service: 4,795 acres
Private: 0 acres
Total: 4,795 acres

b. Location, Vicinity, and Access: Lamb Brook is within the Towns of Searsburg and Readsboro, in Bennington County. The Lamb Brook area is a stand-alone roadless area, as the closest existing wilderness is the George D. Aiken, more than a mile to the east. The Lamb Brook area is bordered by Vermont RT 8 on the west, and by private property on the remaining boundaries. Access to Lamb Brook is provided by trails as well as roads. The interior of Lamb Brook is accessed by two snowmobile trails, as well as 1.5 miles of a Forest System Road and 4.4 miles of a Readsboro Class 4 Town Road.

Lamb Brook Roads				
	Name	**Mileage**	**Improved/Unimproved**	**Gated?**
	Old Stage Road/ Albany-Boston Turnpike	4.4	This is a town of Readsboro road, and is also a snowmobile trail, Corridor 9/FT391	
266		1.5	Improved	Yes

Lamb Brook Trails	
Type	**Mileage**
Snowmobile	5.7

c-e. Geography, Topography, and Vegetation (including Ecosystem Type):
According to ecological mapping (Bailey et al. 1994; Keys, Jr. et al. 1995), the Lamb Brook area lies in the Southern Green Mountain Subsection of the Green, Taconic, Berkshire Section within the Adirondack-New England Mixed Forest – Coniferous Forest – Alpine Meadow Province. The area is dominated by a mountain ridge that curves northeast to south to southeast, forming an east-facing cove in the eastern two-thirds of the area; these slopes drain through Wilder Brook to Harriman Reservoir. Slopes in the area that trend toward the south and west drain into the West Branch of the Deerfield River. A small area to the north drains into Medbury Brook. Slopes are moderately steep, with gentle slopes and flats generally restricted to river valleys and mountain tops. Steep slopes can be found along the upper mountain slopes of the ridgelines and peaks, in some isolated patches along the west-facing slopes of the ridge, and in association with a peak in the northeast corner of the area. National Wetlands Inventory mapping indicates that Lamb Brook wetlands are a predominantly mixed emergent and broad-leaved scrub-shrub wetlands, with a small patch of forested wetland dominated by conifers, predominantly spruce and fir.

Lamb Brook Land Type Associations (LTAs):

Upper mountain slopes & mountain tops	11%
Mountain slopes	48%
Low mountains & hills	41%

Lamb Brook Vegetation:	
Northern hardwood	80%
Northern hardwood & spruce	17%
Spruce & fir	2%
Open	1%

Lamb Brook Site Indices:	
60+ (moderately high productivity)	24%
<60 (moderate to low productivity)	76%

The potential natural vegetation of the area is a mix of northern hardwoods on the midslopes of the ridge, with spruce-northern hardwoods in the colder hollows and riparian areas and associated with outcrops along the steeper slopes near the crest of the ridge. Spruce-fir occurs along the highest portions of the ridgeline. There are about seven small patches of wetlands in the area accounting for approximately 13 acres of wetlands in this area. These wetlands are primarily riverine wetland complexes associated with Lamb Brook, Wilder Brook, and another unnamed stream. This area contains some small tributaries to the West Branch of the Deerfield River, as well as the headwaters of Lamb Brook, Wilder Brook, and Medbury Branch. Elevations range from 3,100 feet at the highest peak along the ridge to the west to 1,800 feet along Wilder Brook as it leaves the eastern edge of the area.

f. Current Use: The Management Area distribution in the current Forest Plan for the Lamb Brook area is:

MA	Private	**2.1A**	**2.1B**	**2.2A**	**2.2B**	**3.1**	**4.1**	**4.2**	**6.1**	**6.2A**	**6.2B**	**8.1**	**9.2**
Acres	0	619				4,112							65

Management Areas 2.1A and 3.1 emphasize roaded conditions. The management strategy for Area 9.2 is to protect all options until studies determine its desired condition.

Timber resource considerations:

- 3,427 acres (71%) are classified as suitable for timber production.
- In the past 10 years, no timber has been harvested.

Dispersed recreation activities in this RA are similar those in other general forest areas throughout the National Forest. This use may include hunting, fishing, dispersed camping, berry picking, bird watching, and casual walks though the forest (non-trail use). Though there is no detailed use inventory for the area, forest staff familiar with the area characterize its overall recreation use as relatively low, except for key times during hunting season and during the peak of snowmobile season.

This area has two snowmobile trails within its borders, FT 391 (part of Corridor 9) and Dome Trail FT 393. Corridor 9 is a major, groomed snowmobile route running west to east through southern Vermont. Based on staff observations, the Corridor 9 Trail experiences use on peak winter weekends of 500 to a 1,000 people per day. The secondary, ungroomed FT 393

Dome Trail experiences use of less than 100 people per day on peak days. There is also illegal snowmobile use in the area currently under investigation.

Two operators provide snowmobile tours on trails in the area under the authority of outfitter/guide permits. One outfitter/guide does day hikes under permit into this area. The hikes are for the purpose of studying and teaching about habitat, wildlife, and other forest ecology issues.

There are two wind-measuring stations under permit on the ridge at the headwaters of Medbury Brook. Access to them is by ATV on an existing access-trail along the ridge, coming south from the existing wind generator development on private land.

g-h. Appearance of the Area and Characteristics of Surrounding Contiguous Areas: This parcel is surrounded by use areas of high visual sensitivity, with State Routes 8, 9, and 100 located to the west, north and south of the Lamb Brook parcel, and Harriman Reservoir to the east. The appearance of the area can be characterized as a mix of vegetative types and landforms, with young to mature northern hardwood stands dominating the forested landscape.

The area is also characterized by rolling hills, perennial streams, and mountains with ridges over 2,500 feet in elevation. An old road corridor running through the area, now a snowmobile trail, contains overgrown apple orchards, a planted tree lined lane, and stonewalls. A grouping of eleven wind turbines lies on a ridge that joins this parcel to the northeast. These towers are visible from portions of the parcel as well as from numerous offsite views as the 200-foot high wind turbines rise above the tree canopy that surrounds them.

i. Key Attractions:

- The Old Stage Road, now used by snowmobiles, is a major feature of the area.

2. WILDERNESS CAPABILITY

a-b. Natural Integrity and Appearance: In general, the Lamb Brook parcel appears forested, with some wetland vegetation. Although the parcel has evidence of past management with remnants of apple orchard plantings and the tree lined Old Stage Road, the area has a high degree of natural integrity. These indicators of past management also offer positive scenic attributes.

Most of the stands in this area are regenerated from past harvests and other land uses, and now look like young to middle-aged forests. There are no acres of forested land that are 15 years old or younger; and there are four stands, 136 acres, that are over 170 years old (originating between 1819 and 1830), and so may be approaching old forest conditions. One of these stands was checked for old growth conditions in 1992, however, and was found to have been heavily cut in the 1940s, with occasional large yellow birch scattered among saplings and young trees documenting the old condition. The remaining three stands are described in timber inventory as either being unique or inoperable, suggesting that they may in fact be transitioning into old conditions. Stand records do not show any stands that have been regenerated since 1949. Based on this history of harvesting, there may still be evidence of this harvesting visible, primarily as stumps, blackberry thickets, young stands with occasional large old trees, and occasional piles of large woody debris.

Route 100 follows along a small portion of the southwestern boundary, and separates a stream riparian zone from the area for most of this boundary, which could present a small barrier to migration in that area. The other small roads and trails do not appear to limit migration of small animals between riparian or wetland habitat and the area.

c. Opportunity for Solitude, Challenge and Primitive Recreation: Due to a variable degree of accessibility (good road access from the west, and interior snowmobile trail access), the area is judged to have a varying potential for providing solitude or remote recreation. Although portions of Lamb Brook adjacent to the highway, the open portion of FR 266, and snowmobile trails provide a low potential for solitude, areas away from trails and roads would have higher potential for providing solitude. This is consistent with information gained from a recent Inventory for the Recreation Opportunity Spectrum that identified this area as primarily Roaded Natural (32%), and Semi-Primitive Motorized (68%).

d. Special Features:

Scientific- Within the Lamb Brook area, there are no designated Research Natural Areas, Experimental Forests or Special Areas.

Geological- There are no known areas of unique or rare rock formations here that have been identified as significant by the State.

Ecological- Most of the area is composed of ecological types quite common and widespread throughout the Southern Green Mountain Subsection. The Vermont Biodiversity Project (Thompson 2002) did not identify this area or portions of this area as a representative landscape to consider for conservation of biodiversity in a statewide system. An analysis of ecological land unit groups using the conservation planning program C-Plan (New South Wales National Parks and Wildlife Service 2001) indicated that this area had quite low irreplaceability values, reflecting the low importance of this area in achieving conservation goals for the diversity and rarity of ecological land unit groups on the Forest.

Rare and Endangered Plants- It is uncertain whether or not any rare plants occur in the Lamb Brook area.

Historical- Approximately twenty percent of this area has been surveyed for Heritage Resource sites. There are archaeological remains of several historic farmsteads and associated landscapes, including stone walls, wells, and orchards. Perhaps most notably, the National Register-eligible, late-18th century Stage Road, which originally ran from Troy, NY to Boston, passes through the area. In addition there is moderate to high potential for prehistoric sites in association with the stream corridors, especially those to the north (Medbury Branch) and east (Wilder Brook) – both of which flow into the Deerfield River.

e. Size, Shape and Manageability: Lamb Brook is defined by distinctive boundaries that are, for the most part, shared with private property. Adjacent private lands may indicate potential for manageability problems.

f. Boundary Conditions, Needs and Management Requirements: All of the boundaries along national forest and private lands are surveyed and marked with the exception of Tract 59. This is the southern most tip of the Lamb Brook area.

3. AVAILABILITY FOR WILDERNESS DESIGNATION

a. Recreation, Including Tourism: A portion of the recreation use that occurs within the area would be relatively unaffected by designation of this area as wilderness. Non-motorized activities would still be allowed to continue at current levels, unless user controls were needed to manage resource conflicts. This use is not dependent on remote backcountry, and is provided in many places throughout the forest.

Designation of this area as wilderness would provide some benefit for recreation dependent on wilderness, especially for individuals desiring an experience that isn't dependent on trails. The management of the area for wilderness recreation, including possible non-conforming activities such as motorized use on the Town road, would be relatively difficult due to poor internal access and proximity to private lands on much of the boundary.

Some of the recreation use that occurs within the area would be affected by designation of the entire area as wilderness. There are a number of snowmobile trails in Lamb Brook that would need to be closed. Wilderness designation would require closure of any motorized trails that aren't located on town roads.

b. Wildlife And Fish: Wilderness designation would benefit those animal species relying upon mature forest habitats (for example wood frog, red-backed salamander, ovenbird, scarlet tanager, woodland jumping mouse and fisher); with the passage of time, these designated areas would become a mature and continuous forest. Designation would also limit the type and amount of human occupancy, thereby benefiting those species seeking remote habitats (for example black bear, bobcat and northern goshawk). Generally speaking, larger areas designated as wilderness would provide greater benefit for reclusive species relying on mature forest conditions. Wilderness designation would adversely affect those species relying on early successional habitats (for example leopard frog, indigo bunting, field sparrow, meadow vole and eastern cottontail). With designation, managers would lose the option of manipulating habitat conditions; creation of early successional habitats would depend on natural forces such as wind, ice, and fire. Parcels currently maintained as early successional units would disappear with the passage of time.

Medbury, Lamb, and Wilder Brooks and two unnamed tributaries are found in the Lamb Brook Area. Fish habitat and population inventory and monitoring in Lamb and Medbury Brooks and one tributary found brook trout to be the only fish species inhabiting these streams. While fish population sampling has not been conducted in Wilder Brook and the other unnamed tributary, it is likely they also contain only brook trout populations.

Management goals for brook trout and their habitat focus on maintaining, enhancing or restoring spawning and rearing habitat. Wilderness designation may limit the ability to restore this stream habitat by limiting habitat management options. The Forest Plan directs that habitat be managed for 30 percent pool area and at least 52 pieces of large woody debris (LWD) per mile; wilderness designation would limit LWD placement and force reliance on natural forces for pool and LWD distribution. It is estimated, however, that natural LWD recruitment would not reach desirable levels for another 80 to 150 years depending on forest type (Nislow personal communication). Furthermore, the habitat and fish population

monitoring activities that have occurred or will be implemented in the near future in these streams would be altered or eliminated by the designation of Lamb Brook as wilderness.

c. Water Availability and Use: The streams in this area are not part of a municipal watershed and there are no known water storage needs. No change in water quality is anticipated if the area were to be designated as wilderness.

d. Livestock, Timber, and Minerals: Timber harvest, and the associated production of wood products from this area, would not occur with wilderness designation. 3,427 acres (71%) are classified as suitable for timber production. No timber has been harvested in the past ten years. There are no livestock operations or potential for such operations. There are no outstanding mineral rights within this area.

e. Heritage Resources: Wilderness designation may have an adverse effect on some Heritage Resources, specifically the Stage Road corridor. The maintenance of the Road and sites would be restricted, and the character of the Road would be diminished or lost. The current Stage Road is open, passable to snowmobiles, and retains the stone walls in places. The road generally reflects the scale and character of its historic past, because it remains in use. Designation would likely require it to be eliminated or become a narrow pedestrian path, and not be maintained to the current corridor conditions. Both of these would be an adverse effect to a National Register eligible property and require mitigation measures to be negotiated with the State Historic Preservation Office.

f. Land Uses: The boundary of Lamb Brook near Vermont RT 100, on tract 92, has a power line ROW. This could be avoided by proper boundary placement. Tracts 150c, 92 and 390h were acquired in 1980 and were subject to the 66-foot right-of-way (ROW) along the Old Stage Road. This Stage Road, used as snowmobile Corridor 9, is within the jurisdiction of the Town of Readsboro. As the Forest Service has no authority over town roads and would therefore not be able to close this road or its associated snowmobile use, as is typical in a wilderness, the Old Stage Road would present a management challenge.

Designation of the area as wilderness may require the termination of the existing permit for wind measurement. The snowmobile tour activity under permit would likely be terminated. The environmental education oriented outfitter/guide activity could continue to the extent it is wilderness dependent and allowed by any subsequent wilderness management plan.

g. Management Considerations: Fire- There are no natural communities within this area that are fire-regulated or rely on a fire disturbance regime to maintain their ecological integrity. Natural fire is a rare occurrence in these ecosystems. Restrictions on fire control techniques would be minimal. **Insects/Disease-** Periodic outbreaks of Forest Tent Caterpillar, Saddle Prominent and Bruce Spanworm have occurred within the area over the last 20 years. Hemlock Wooly Adelgid (HWA) is an exotic insect that is threatening eastern Hemlock forests. If HWA invades Vermont, under wilderness designation, routine control measures could not occur in the area and most of the hemlock trees would die. **Rare Plants and Unique Ecosystems-** There are no known records of state or federally listed plant species, Regional Forester Sensitive Plant Species, or other plant species of viability concern within this area, nor are there records of rare or exemplary natural communities here. There is potentially suitable habitat for rare plants in the area, although the effect of wilderness designation depends on species and so is uncertain until species are located there. **Non-Federal Lands-** There are no private lands within this area.

4. SUMMARY OF WILDERNESS EVALUATION: BENEFIT & IMPACT

The Lamb Brook area was not included in the Forest's inventory of roadless areas as it did not meet the roadless area criteria of having no roads under non-Forest Service jurisdiction This area is being evaluated as potential wilderness in response to public interest.

There has been high interest by some of the public in wilderness designation for this area. In the long term, with changes in management and use, the area would develop into older forests and mature wildlife habitat. This area provides some relatively remote habitat for bears and other wildlife species. These species could benefit from wilderness or other management areas that restrict motorized use in the interior of the area.

Management of the Lamb Brook area as wilderness will be complicated by the town road, Old Stage Road, which dissects the area. The town jurisdiction over this road means the Forest Service could not close the road or control access to it. Therefore, the road could not be included in the wilderness area, and the area would need to be divided in half. Neither of these sections meet the size criteria for wilderness (USDA Forest Service 1992).

The quality of this area as a possible addition to the wilderness system is also limited by its proximity to relatively high motorized use and development on adjacent lands, and by the changes that would need to be made in current motorized use within the area. The surrounding private land, roads, and wind towers, and significant snowmobile trails within the area, contribute to current limited opportunities for solitude and primitive experience. Noise and visual disturbances near Route 8 and private property would adversely affect wilderness character and experience within the sight and sound distances of these edges. Although the potential quality of wilderness character in the interior of this area would be improved by eliminating roads and snowmobile trails, these changes would impact current road and trail users. Other impacts of wilderness designation include forgoing timber management on approximately 3,427 acres of the area that are classified as suitable for timber harvest, and forgoing management on a relatively a large portion of the area that could provide active forest management for diverse habitats, forest products, and other benefits.

2004 Summary of Roadless Inventory Process

The following summary of the roadless inventory process is based on a report prepared for the GMNF by Tetra Tech FW, Inc., Bothell, Washington.

Introduction

This roadless area inventory was conducted in support of the Green Mountain National Forest (GMNF) Plan Revision. The effort included the roadless area inventory and the preparation of GIS-based analyses to support the wilderness assessment for the GMNF. The roadless area inventory process was designed to identify and describe areas that later will be evaluated as roadless areas for recommendation as potential wilderness. There were four tasks in the work effort: 1) project initiation, data collection, and background review; 2) initial roadless area inventory; 3) recreational opportunity spectrum (ROS) determination; 4) refinement of the roadless area inventory and development of roadless area attribute tables and maps. The final step included refinement of roadless area boundaries to include features that are describable on maps and recognizable on the ground.

This report summarizes two processes: 1. the methodology and rationale used to delineate ROS land classes and 2. the methodology and rationale used to identify roadless areas to be considered further during the subsequent roadless area evaluation.

RECREATIONAL OPPORTUNITY SPECTRUM

The ROS is a land classification system developed to help identify and describe possible combinations of recreation activities, settings, and experiences for management purposes. The ROS system portrays the appropriate combination of activities, settings, and experiences along a continuum that ranges from highly modified to primitive environments. Six classifications are identified along this continuum: Urban (U), Rural (R), Roaded Natural (RN), Semi-Primitive Motorized (SPM), Semi-Primitive Non-Motorized (SPNM), and Primitive (P).

Methodology

ROS classes were delineated for the GMNF based on the ROS Users Guide, the ROS Users Guide Eastern Region Supplement, and the ROS Access Coordinator Eastern Region Supplement, as appropriate (USDA Forest Service, nd; 1985; 1986). ROS classes are identified by analyzing the physical, social, and managerial setting components for each area. The ROS Users Guide identifies five mapping criteria that address these setting components and may be used to delineate ROS classes: remoteness, size, evidence of humans, user density, and managerial regimentation and noticeability (Table C-2).

The ROS delineation (presented in maps available from the Forest Service upon request) was developed using the mapping criteria identified in Table C-2. The first step in this process involved buffering the roads and trails used by motor vehicles in accordance with the remoteness criteria identified in Table C-2. Improved Forest Service roads (from the Improvement_level_rds.shp GIS layer) and Class 1 to 3 Town Highways (from the rdsall.shp GIS layer) were assumed to represent better-than-primitive roads and given a 0.5-mile buffer

using GIS. Areas inside the 0.5-mile buffer were initially identified as RN areas, based on the remoteness criteria.

Primitive roads and trails used by motor vehicles, including snowmobiles, were also buffered to help delineate SPM areas, which are defined, based on remoteness criteria, as areas within 0.5 mile of primitive roads and trails used by motor vehicles but further than 0.5 mile from better-than-primitive roads. It was apparent from this buffering exercise that there are no Primitive areas on the GMNF based on the remoteness criteria identified in Table C-2, because all areas are within 3 miles of a road or trail with motorized use.

This buffering exercise formed the main basis for differentiating between RN, SPM, and SPNM areas. SPNM areas are defined, based on remoteness criteria, as areas between 0.5 mile and 3 miles of all roads or trails with motorized use. Size was also an important factor in identifying ROS classes. SPNM and SPM areas should typically be 2,500 acres or greater in size to ensure that the appropriate experience opportunities are available (see Table C-2). However, 2,500 acres is not an absolute minimum. Smaller areas, down to approximately 2,000 acres, were considered if they appeared to be topographically isolated, or the shape and location supported an SPNM experience. These criteria were generally applied in delineating these areas. In addition, the level of disturbance and presence of structures (evidence of humans) were considered in the delineation process.

Table C-2. ROS Delineation Criteria

Primitive	SPNM	SPM	Roaded Natural	Rural	Urban
1 **REMOTENESS**[1/]					
At least 3 miles from all roads, railroads or trails with motorized use	At least 1/2 mile but not further than 3 miles from all roads, railroads or trails with motorized use; can include the existence of primitive roads and trails if usually closed to motorized use	Within 1/2 mile of primitive roads or trails used by motor vehicles; but not closer than 1/2 mile from better than primitive roads	Within 1/2 mile from better than primitive roads and railroads	No distance criteria	No distance criteria
2 SIZE					
5,000 acres[2/]	2,500 acres[3/]	2,500 acres	No size criteria	No size criteria	No size criteria
3 EVIDENCE OF HUMANS					
Setting is essentially an unmodified natural environment. Evidence of humans would be unnoticed by an observer wandering through the area.	Natural setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area.	Natural setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area.	Natural setting may have modifications that range from being easily noticed to strongly dominant to observers within the area, but not from sensitive travel routes and use areas.	Natural setting is modified to the point that it is dominant to the sensitive travel route observer.	Setting is strongly structure dominated.
Evidence of trails is acceptable.	Little or no evidence of primitive roads and the motorized use of trails and primitive roads.	Strong evidence of primitive roads and the motorized use of trails and primitive roads.	Strong evidence of designated roads and/or highways.	Strong evidence of designated roads and/or highways.	Strong evidence of designated roads and/or highways and/or streets.
Structures are extremely rare.	Structures are rare and isolated.	Structures are rare and isolated.	Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive travel route observer.	Structures are readily apparent and may range from scattered to small dominant clusters.	Structures and structure complexes are dominant, and may include major resorts and marinas, towns, etc.

Table C-2. (continued)

4 SOCIAL SETTING CRITERIA					
Usually less than 6 parties per day encountered on trails and less than 3 parties visible at campsites	Usually 6-15 parties per day encountered on trails and 6 or less visible at campsites	Low to moderate contact frequency [4/]	Frequency of contact is: moderate to high on roads; low to moderate on trails and away from roads4/	Frequency of contact is: moderate to high in developed sites, on roads and trails, and water surfaces; moderate away from developed sites[4/]	Large numbers of users onsite and in nearby areas
5 MANAGERIAL SETTING CRITERIA					
On-site regimentation is low with controls primarily off-site[5/]	On-site regimentation and controls present but subtle	On-site regimentation and controls present but subtle	On-site regimentation and controls are noticeable, but harmonize with the natural environment	Regimentation and controls obvious and numerous largely in harmony with the man-made environment	Regimentation and controls obvious and numerous
Notes: 1/Criteria can be modified to conform to natural barriers and screening, or other relevant features of local topographic relief and vegetative cover. 2/May be smaller if contiguous to SPNM 3/May be smaller if contiguous to Primitive class 4/Specific numbers must be developed to meet regional or local conditions 5/Controls can be physical (such as barriers) or regulatory (such as permits) Source: Tetra Tech Table 1.					

Table C-3 summarizes the number of acres by ROS class for the Forest as a whole. It is apparent from this summary that SPM is the largest single ROS class on the GMNF, which primarily reflects the presence of better-than-primitive roads.

Table C-3. Summary of Acres by ROS Class

ROS Class	Acres
Primitive[1/]	0
Semi-Primitive Non-Motorized	9,850
Semi-Primitive Motorized	213,126
Roaded Natural	98,328
Rural	71,770
Urban	0

Note:
1/There are no Primitive ROS settings on the GMNF because there are no areas that are greater than 3 miles from a road or trail receiving motorized use.
Source: Tetra Tech Table 2.

The GIS Layer that represents the maps of the ROS designations on the GMNF is ros.shp and was submitted on November 4, 2003.

Assumptions

As the above discussion suggests, the ROS delineation process involved a number of assumptions. These included the following:

- Forest Service roads were identified with the Improvement_level_rds.shp GIS layer and non-jurisdictional roads were identified using the rdsall.shp GIS layer.
- The roads identified as improved in the Improvement-level-rds.shp GIS layer were assumed to be better than primitive roads. Town Highways identified as Class 1 to 3 in the rdsall.shp GIS layer were assumed to be better than primitive roads.
- The designated use for trails was identified in the GIS layer trail_managed_uses. Snowmobile trails were considered trails used by motor vehicles for the purposes of differentiating between SPM and SPNM areas. Two trails are identified for ATV use (Nos. 756 and 281). Because they are for Forest Service Administrative ATV use, they are classified as non-motorized for the ROS analysis.
- Areas within view of an electric transmission line corridor were considered RN based on the Evidence of Humans criteria (see Table C-2).
- Areas adjacent to major thoroughfares and residential and commercial development, such as State Highway 9, were identified as Rural, as were areas containing residential and other buildings. Areas containing ski lifts were also identified as Rural.
- Areas harvested within the last 10 years were excluded from SPNM areas based on the assumption that this type of alteration to the landscape would draw the attention of an observer visiting the area (see Table C-2, Evidence of Humans Criteria)
- ROS for existing wilderness on the GMNF was delineated in accordance with the ROS Users Guide, which points out that many designated wildernesses include SPNM, SPM, and RN opportunities.

- Surrounding land use was included in the evaluation of ROS for smaller isolated GMNF parcels. In some cases, surrounding undeveloped acreage was included for SPM areas that were otherwise less than 2,500 acres in size. However, areas adjacent to the Forest may have motorized use that is not included in GIS information. This information, when known, was provided by GMNF personnel.

ROADLESS AREA ANALYSIS

Background

The Wilderness Act of 1964 defines wilderness as an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions. It is further defined as an area that generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; has outstanding opportunities for solitude or a primitive and unconfined type of recreation; has at least 5,000 acres of land or is of sufficient size as to make its preservation and use in an unimpaired condition practicable; and may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

36 CFR 219.17(a)(1)(i) states “When revising the forest plans, roadless areas of public lands within and adjacent to the forest shall be evaluated and considered for recommendation as potential wilderness areas…”

Chapter 7 in the US Forest Service Land and Resource Management Planning Handbook (USDA Forest Service 1992) describes the process for identifying potential wilderness in the National Forest System. Roadless areas qualify for designation as potential wilderness if, in addition to meeting the statutory definition of wilderness, they meet at least one of the following:

- Contain 5,000 acres or more
- Contain less than 5,000 acres but:
  - Are manageable in their natural condition due to physiography or vegetation.
  - Are self-contained ecosystems such as an island.
  - Are contiguous to existing wilderness, primitive areas, or roadless areas under other Federal jurisdiction.
- Do not contain improved roads maintained for travel by standard passenger vehicles, except as permitted in areas east of the 100th meridian.

The Handbook further states that roadless areas may contain the following and still qualify for potential wilderness:

- Airstrips and heliports
- Cultural treatments where the use of mechanical equipment is not evident.
- Electronic installations, such as repeaters, provided their impact is minimal
- Areas with evidence of historic mining (50 years old or older)
- National Grasslands
- Areas of less than 70-percent Federal ownership, if it is manageable as wilderness, independent of the private land.
- Minor structural range improvements.
- Recreation improvements, not including developed sites.
- Timber harvest areas where logging and prior road construction are not evident.
- Ground-return telephone lines without a cleared right-of-way
- Watershed treatment areas if the use of mechanical equipment is not evident.

Section 7.11b of the Handbook has additional criteria for the inventory of roadless areas in the eastern United States (east of the 100th meridian). The criteria are modified to recognize that National Forest System lands in the East have been acquired over time and much of the land shows some signs of human activity or modification. Therefore, roadless areas in the East may qualify for potential wilderness if they fulfill the following:

- The land is regaining a natural, untrammeled appearance
- Improvements are being affected by the forces of nature rather than by humans and are disappearing or muted.
- The area has ownership patterns that could ensure perpetuation of wilderness values.
- The location of the area is conducive to the perpetuation of wilderness values.
- The area contains no more than a half mile of improved, Forest Service road for each 1,000 acres of roadless area.
- The area contains no more than 15 percent of the area in non-native, planted vegetation.
- The area contains no more than 20 percent of the area has been harvested within the past 10 years.
- The area contains only a few dwellings on private land and their effects on the natural conditions of Federal lands are insulated by location.

In addition to the Handbook direction, the Regional Forester provided guidelines (dated August 13,1997) to clarify the application of the Handbook direction within the Eastern Region (USDA Forest Service 1997). These guidelines include the following:

- To be considered contiguous to an existing wilderness, there should be no improved road, railroad, or utility corridor separating the area from the wilderness.
- An outstanding or reserved mineral rights alone does not preclude an area from the roadless area inventory.
- Non-native planted vegetation includes wildlife openings, seeded roads, non-native tree plantations, etc.
- An area may qualify for the roadless area inventory if twenty percent or less has been harvested in the last ten years.
- An area should provide for solitude, which is interpreted as land providing semi-primitive non-motorized or primitive recreation opportunities under the Recreation Opportunity Spectrum (ROS). Therefore, the area should generally be at least 2,500 acres in size, unless it is contiguous with existing wilderness. The 2,500-acre minimum size is based on the ROS criteria for semi-primitive non-motorized recreation, but is meant to only be a guide. Some areas that are more or less than 2,500 acres may or may not provide solitude. Topography, influences of water bodies, proximity to population centers and other sights and sounds of human activity, and proximity to type and use of roads are to be considered.

The regional guidelines also clarify selection of boundaries for the roadless areas. In general, they indicate that boundaries should follow features that make them easy to describe and recognize both on a map and on the ground. The boundaries should provide for ease of management, should wilderness designation eventually occur. This can include natural features and human-made features that are relatively permanent. The following are specific guidelines to be used for boundary selection during the inventory process:

- Boundaries should not cross powerlines, state/county roads or major access roads.
- Narrow or gerrymandered areas are not suitable.
- ‘Cherry-stemming’ of boundaries around roads into roadless areas is not appropriate.

- Less than 70-percent ownership is acceptable if it is realistic to manage the Federal lands as wilderness while providing traditional access to the private land.
- Boundaries should conform with terrain where possible to provide barriers to external influences and aid in regulating uses.
- Avoid conflict with important existing or potential public uses outside the boundary that could result in non-conforming demands on the area.
- Provide reasonable and appropriate access for wilderness trailhead facilities.

METHODOLOGY

General

The roadless areas on GMNF were determined following three primary steps based on the Forest Service guidance listed above. The first step was to identify an initial list of candidate roadless areas on maps. The step was a preliminary delineation of roadless areas and, as such, was intended to allow for flexibility in the following steps. Thus, the selection of roadless areas did not account for ROS, harvest, ownership, manageability, shape, or limit road inclusion to 0.5 mile per 1,000 acres. In this way, no potentially viable roadless areas were excluded prematurely. Table C-4 lists the candidate roadless areas identified in this task. Several roadless areas were removed from further consideration during this step because they would not meet the criteria as listed above. The following identifies characteristics of the areas deemed to not meet the criteria during this step.

- Less than 1,000 acres and not adjacent to an existing wilderness. This size was considered to be too small to attain the values defined in the Wilderness Act and the roadless area guidelines.

- Less than 2,500 acres but greater than 1,000 acres, not adjacent to an existing wilderness, and with physiography/shape that would obviously not meet the semi-primitive non-motorized (ROS) core criterion.

Table C-4. Candidate Roadless Areas and removals.

South Half GMNF

Candidate Roadless Area Number	Total Acres	Non-National Forest System Acres	Removed from further consideration?	Final Decision[2]
1	1,688	2	Yes, Task 2	S,R,A
2	797		Yes, Task 2	SS
3	1,864	64	Yes, Task 2	S
5	1,269	26	Yes, Task 2	S,A
4	6,885	19	No	Roadless Area 92001
6				
7				
8				
9	4,391	111	No	Roadless Area 92002
10	4,808	10	Yes, Task 4	Area bisected by non-jurisdictional road
11	98		Yes, Task 4	W
12	1,052	1	Yes, Task 2	S,R,A
13	53,587	45	No	Roadless Area 92003
14	5,690		Yes, Task 4	R
15	540	2	Yes, Task 2	SS,A
16	1,731	6	Yes, Task 2	S,R
17	3,886	3	Yes, Task 4	R
18	1,736		Yes, Task 2	S,R,W
19	1,772		Yes, Task 2	S,R,W
20	4,078	3	No	Roadless Area 92004
21	13,341	34	No	Roadless Area 92005
22	32		Yes, Task 4	R,W
23	204		No	Roadless Area 92006
24	6,344		Yes, Task 4	R,A
25	1,949		Yes, Task 2	S,R,A
26	2,445	90	Yes, Task 4	S
27	8,041	26	No	Roadless Area 92007
28	1,256		Yes, Task 4	R,W,D
29	870		No	Roadless Area 92008
30	1,094		No	Roadless Area 92009

[2]

SS	Removed because less than 1,000 acres and not adjacent to an existing Wilderness and because size of the area not conducive to wilderness values
S	Removed because between 1,000 and 2,500 acres, not adjacent to an existing Wilderness, and because physiography/shape of the area not conducive to wilderness values
R	Removed because ratio of edge to area relatively high; a long, narrow, or 'amoeba' like shape
A	Removed because adjacent land is developed
W	Removed because narrow in areas, less than 1-2 miles wide
H	Removed because more than 20% of area harvested in last 10 years
D	Removed because significant development in area

Candidate Roadless Area Number	Total Acres	Non-National Forest System Acres	Removed from further consideration?	Final Decision[2]
31	4,285	437	No	Roadless Area 92010
39				
32	534		No	Roadless Area 92011
33	31,521	569	No	Roadless Area 92012
34	954		No	Roadless Area 92013
35	42		No	Roadless Area 92014
36	236		No	Roadless Area 92015
37	715		Yes, Task 2	SS
38	631		Yes, Task 2	SS
40	2,964		Yes, Task 4	R
41	3,775	62	Yes, Task 4	H
42	141		No	Roadless Area 92016
43	467		Yes, Task 2	SS
44			No	Roadless Area 92017

North Half GMNF

Candidate Roadless Area Number	Total Acres	Non-National Forest System Acres	Removed from further consideration?	Final Decision[3]
50	4,556	0	Yes, Task 4	R, A
51	2,285		Yes, Task 4	S
52	12,712	351	Yes, Task 4	H
53	24,119	132	No	Roadless Area 92018
54	27,972	839	No	Roadless Area 92019
55				
56	168		Yes, Task 2	SS
57	227		No	Roadless Area 92020
58	280		Yes, Task 4	R
59	5,086		No	Roadless Area 92021
60				
61	860	53	No	Roadless Area 92022
73				

3

SS	Removed because less than 1,000 acres and not adjacent to an existing Wilderness and because size of the area not conducive to wilderness values
S	Removed because between 1,000 and 2,500 acres, not adjacent to an existing Wilderness, and because physiography/shape of the area not conducive to wilderness values
R	Removed because ratio of edge to area relatively high; a long, narrow, or 'amoeba' like shape
A	Removed because adjacent land is developed
W	Removed because narrow in areas, less than 1-2 miles wide
H	Removed because more than 20% of area harvested in last 10 years
D	Removed because significant development in area

Candidate Roadless Area Number	Total Acres	Non-National Forest System Acres	Removed from further consideration?	Final Decision[3]
62	1,388	2	No	Roadless Area 92023
63	73		No	Roadless Area 92024
64	246		No	Roadless Area 92025
65	473		No	Roadless Area 92026
66	6,330	9	No	Roadless Area 92037
67	5,287	66	No	Roadless Area 92027
68	6,913	181	Yes, Task 4	D
69	984	40	Yes, Task 2	SS,W
70	2,902		Yes, Task 4	D, R
71	2,372	187	Yes, Task 4	S,R
72	338		Yes, Task 4	R
74	760		Yes, Task 2	SS,A
75	2,035	14	No	Roadless Area 92028
76	2,869	15	No	Roadless Area 92029
77	1,830		Yes, Task 4	S,R
78	523	438	Yes, Task 2	SS,R
79	51		No	Roadless Area 92030
80	45		No	Roadless Area 92031
81	145		No	Roadless Area 92032
82	11		No	Roadless Area 92033
83	13		No	Roadless Area 92034
84	13		No	Roadless Area 92035
85	16		No	Roadless Area 92036

The second step refined the candidate list to incorporate the ROS analysis, provided alternative areas that allowed up to 0.5 mile of improved road for each 1,000 acres of roadless area, and refined the boundaries to conform to the above guidelines for a roadless area inventory.

The last step was to incorporate local management input to supplement the GIS-based information and select the preferred boundaries for Forest Roadless Areas. The boundaries were refined to follow features that are describable on maps and recognizable on the ground and to make the areas more manageable as wilderness. The final product was an inventory of roadless areas on the GMNF that can be further evaluated for possible wilderness recommendations during the planning process. The GIS layer for this product is roadless_fs and was submitted on November 4, 2003. It is available from the Forest Service upon request.

Boundaries

The boundaries used to delineate roadless areas included National Forest ownership boundaries, Forest Service improved roads, roads with jurisdiction other than the Forest Service, and pipelines, transmission lines or other utility corridors.

Roads were considered to be boundaries if they were identified as Forest Service jurisdiction and improved or if they were non-jurisdictional roads, whether improved or not. Snowmobile routes identified by Vermont Association of Snow Travelers (VAST) as major snowmobile connection routes were also used as boundaries. These routes can be found on the 2003-2004 VAST State Trail Maps. Other snowmobile routes were allowed in the roadless areas, as were unimproved Forest Service roads.

Several GIS road coverages were used in determining boundaries. The rdsall.shp GIS layer, from the Vermont Agency of Transportation, includes all roads and some trails in the state of Vermont. This was used to identify non-jurisdictional roads. Roads shown in rdsall.shp, but with unknown jurisdiction were found in either Trail_managed_uses.shp or in Improvement_level_rds.shp coverages from the GMNF to determine jurisdiction. Finally, improved roads with Forest Service jurisdiction were found in Improvement_level_rds.shp. Utility corridors were identified using Easement_lines.shp and land ownership boundaries were identified using Gm_ownership.shp.

Non-jurisdictional roads may not be in roadless areas. Jurisdiction was determined using the rdsall.shp layer and the road_core_data.shp layer. The rdsall.shp layer contains arcs for all town and state highways as well as many private roads in the state of Vermont. The road_core_data.shp layer includes a jurisdiction designation for most roads on the GMNF. Where there was a conflict, a determination was made by Forest Service personnel.

Roads with a road class (RCL) of 8 and 96 in rdsall.shp are not shown on the paper or electronic maps. RCL 8 is defined as private road and RCL 96 is defined as discontinued. The roads classed as RCL 8 within the Forest boundary are Forest Service jurisdiction and mapped using the improvement_level_roads.shp layer. The RCL 96 arcs within the Forest boundaries were covered by trails_managed_uses.shp or improvement_level_roads.shp layer.

Characteristic Identification

Two GIS layers were used for harvest status. The harvest_accomplishment_10yrs.shp layer identified the type and year of harvest so that harvests of even-aged management systems could be separated from those that were thinnings or uneven-aged systems. The second layer, harvests.shp, provides harvest information for more recent acquisitions. It identifies the date of the parcel acquisition and whether there had been harvest. The harvests.shp layer does not specify the type of harvest or the

specific acres that had been harvested in the tract. Therefore, the entire tract in the harvests.shp layer is included in the total of acres harvested in the last 10 years and can be evaluated at a later date.

Access easements in areas without known roads or trails were allowed in the roadless areas. It was not known whether these would be improved or unimproved access routes. If desired and necessary, the roadless areas can be redrawn around these easements. Easements with known locations were identified using the easement_lines.shp layer. There were two other easement layers available. The easements.shp layer shows general tracts of land with known easement type but without specific locations. These were not shown on the maps, but the acreage was included in a roadless area attribute table. The easements_unknown.shp layer was not included in either the maps or table because the easement type is not known and the tracts of land are covered by the acreage in the easements.shp layer

Forest Roadless Areas not Adjacent to Existing Wilderness

- Forest roadless areas are required to have opportunities for solitude or primitive and unconfined type of recreation. To meet this, the area should generally have a minimum core area of an ROS class of Primitive or Semi-Primitive Non-Motorized (SPNM). The recommended minimum core area is 2,500 acres, but can be as small as 2,000 acres if the area is isolated. No acreage on the GMNF is classed as Primitive ROS. All roadless areas not adjacent to wilderness have a core area of SPNM ROS.
- All roadless areas that are not additions to existing wilderness are greater than 5,000 acres. While this acreage minimum has some flexibility, there were no roadless areas identified in Task 2 that were smaller than 5,000 acres and also met the minimum ROS core guideline discussed in the next item.
- An area will not qualify for the roadless area inventory if over 20 percent of the area has been harvested in the last 10 years. This includes regeneration cuts under even-aged management systems, and does not include thinning or uneven-aged harvest prescriptions. None of the roadless areas have more than 20 percent of their acres harvested in the last 10 years.

Forest Roadless Areas Adjacent to Existing Wilderness

- Roadless areas were considered to be adjacent to existing wilderness if there were no major barriers (improved roads or utility corridors) separating the two areas. Adjacent roadless areas are included in the final Forest Roadless Area list regardless of ROS designation or small size.
- There are attributes for which there is a desirable allowable amount in a roadless area (e.g. harvested acres, improved roads). The areas adjacent to wilderness may not meet the criteria necessary if evaluated as individual roadless areas and are being evaluated as additions to the existing wilderness. Therefore, to be conservative and consider as many areas as possible, the existing wilderness acreage was added to the adjacent roadless area acreage to determine if characteristics with limits were exceeded.

Existing Inventoried Roadless Areas

Existing Inventoried Roadless Areas (RARE II areas) were evaluated to determine whether they still possess roadless characteristics. Five areas that were included in existing Inventoried Roadless Areas were not included in the Forest Roadless Area inventory. One RARE II RA, Austin Brook Road, was re-examined pursuant to public comments on the proposed revised Forest Plan. As a result, the 143 acres of land surrounding this road will remain in the 2004 Forest Roadless Area Inventory. The road buffer for Austin Brook Road on the north end of Breadloaf Wilderness was part of Breadloaf Inventoried Roadless Area.

There are two areas adjacent to roads that were in the Inventoried Roadless Areas and were not included as Forest Roadless Areas. They are narrow strips of land (on the order of 100 to 200 meters

wide) between a non-jurisdictional or improved road and a wilderness. They appear to have been set aside when the wilderness was established to buffer the wilderness from the road.

- The road buffer for Mad Tom Road at the southern border of the Peru Peak Wilderness was part of the Griffith Lake Inventoried Roadless Area. It was not included in the wilderness acreage. It is mapped as approximately 136 acres and 100 – 125 meters wide and was not included in a roadless area.
- Between Vermont Highway 125 and Breadloaf Wilderness is a narrow strip that also appears to be a road buffer. It is mapped as approximately 270 acres and 200 meters wide.
- The road and its buffer were not included in the wilderness acreage. It is mapped as approximately 129 acres and variable widths (approximately 100 to 220 meters wide).[4]

The following three areas were also in existing Inventoried Roadless Areas and were not included in a Forest Roadless Area:

- The Devils Den Inventoried Roadless Area (approximately 9170 acres) does not have a core area with an ROS designation as SPNM. It is separated from the Peru Peak Wilderness area by an improved road and could not be assessed as an addition to an existing wilderness area. More than half the acreage (5,989 acres) is within the White Rocks National Recreation Area.
- The northern portion of Woodford Inventoried Roadless Area lies east of the George D. Aiken Wilderness. It does not have a core area with an ROS designation as SPNM and could not be assessed as an addition to the existing wilderness. It is separated from the George D. Aiken Wilderness by an improved road and is separated from the Forest Roadless Area to the south by a major snowmobile connection route as designated by VAST.
- A portion of the Griffith Lake Inventoried Roadless Area lies between Big Branch Wilderness and Peru Peak Wilderness. It includes a major snowmobile connection route as designated by VAST.

[4] Austin Brook Road and its buffer were re-examined pursuant to public comments on the Revised Forest Plan. As a result, 143 acres of land surrounding this road that were originally inventoried in RARE II remain in the 2004 Forest Roadless Area Inventory.

2004 Summary of Roadless Areas in Management Areas, by Alternative

In the different management alternatives, the 37 Roadless Areas that are not proposed as Wilderness Study Areas will be managed as one of a variety of other management areas. The Roadless Area allocations in the different management alternatives are shown in Table C-4.

Table C-4. Roadless Areas Allocation in Management Alternatives.

	Management Area	*Alternative A*	*Alternative B*	*Alternative C*	*Alternative D*	*Alternative E*
Management Areas where activities could be less consistent with Roadless Area criteria	Diverse Forest Use	24,976	52,850	17,150	8510	15,761
	Diverse Backcountry	41,397	27,570	34,640	11,838	14,010
	Remote Wildlife			1,728	15,079	11,949
	Escarpment		199	1441	4,876	4,815
	Moosalamoo			1,195		1,193
Management Areas where activities could be more consistent with Roadless Area criteria	Alpine/Subalpine		494	494	494	494
	Appalachian Trail	3,404	2,623	2,617	1,063	2,625
	CRNA/RNA	1339	113	113	113	113
	Ecological Special Area	197	2,003	1458	2593	2594
	Long Trail	1,652	1,524	1,395	691	1,523
	National Recreation Area	11,840	12,653	12,653	12,653	12,653
	Newly Acquired Lands	30,889				
	Remote Backcountry	8,301	21,701	22,970	16,322	28,797
	Wilderness Study Area		2,265	26,142	49,763	27,468
	inholding (private)	326	326	326	326	326
	Less Consistent Total	66,373	80,619	56,093	40,303	47,806
	More Consistent Total	57,948	43,702	66,956	82,806	76,515
	Total All	124,321	124,321	124,321	124,321	124,321

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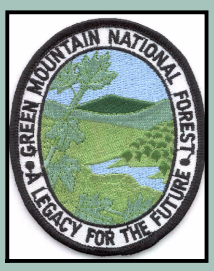
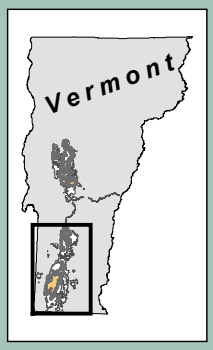




Legend

Scale 1:350,000

0 3.5 7

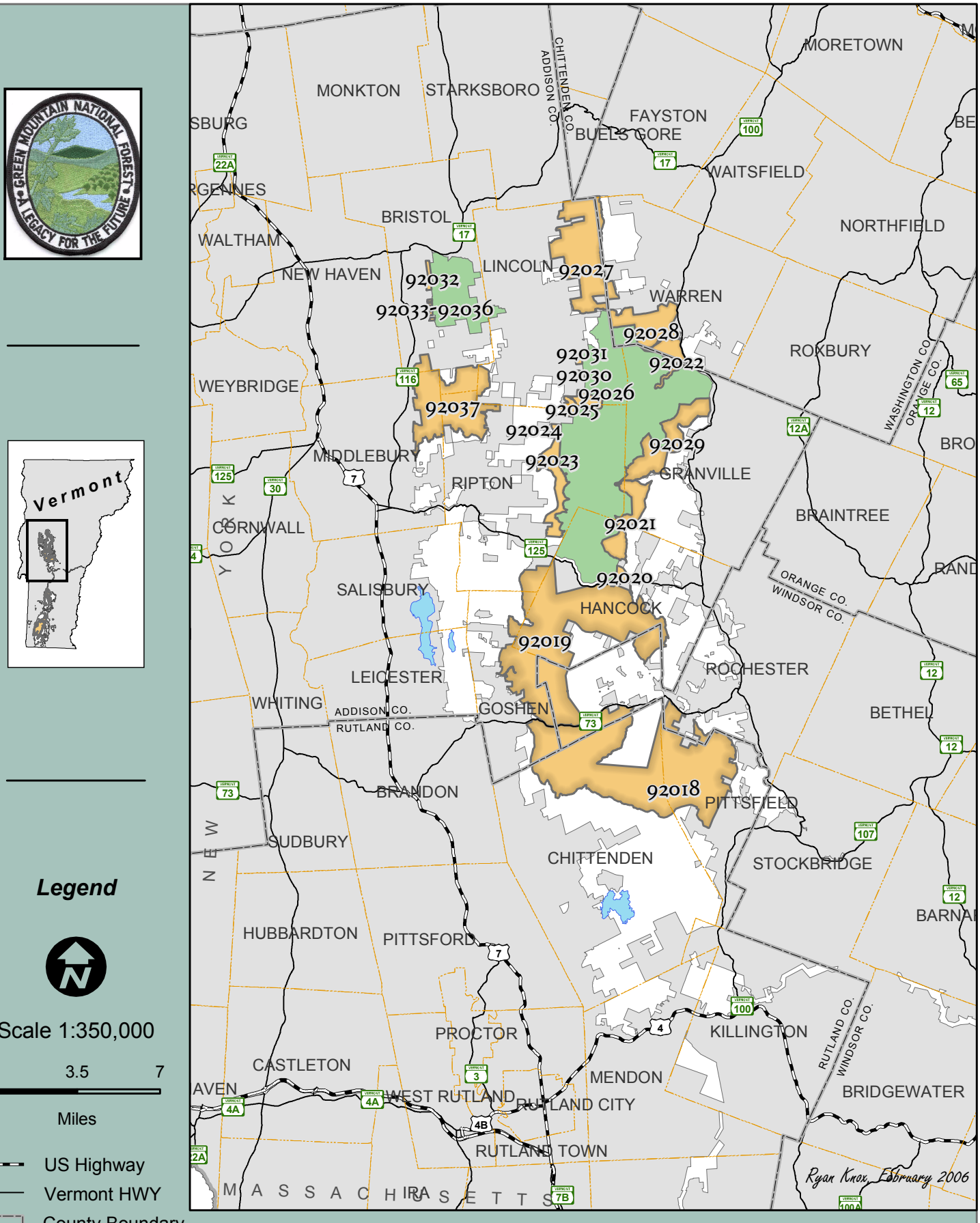
Miles

- US Highway
- Vermont HWY
- County Boundary
- Wilderness Area
- Town Boundary
- Roadless Area
- Green Mountain National Forest

Forest Roadless Area Inventory
92001 - 92017
South Half

U.S. DEPARTMENT OF AGRICULTURE
GREEN MOUNTAIN
National Forest

Ryan Knox, February 2006



Legend

Scale 1:350,000

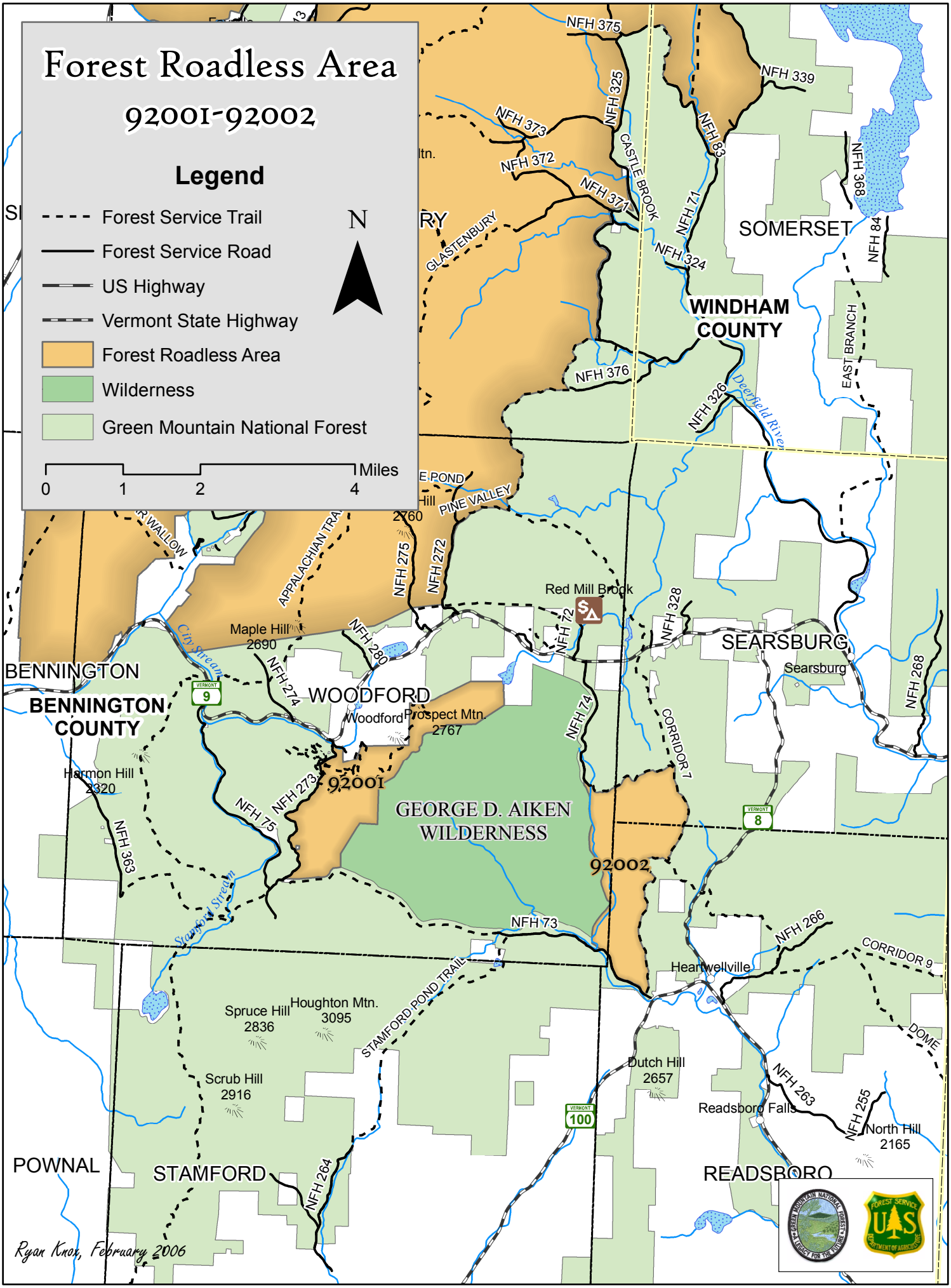
0 3.5 7

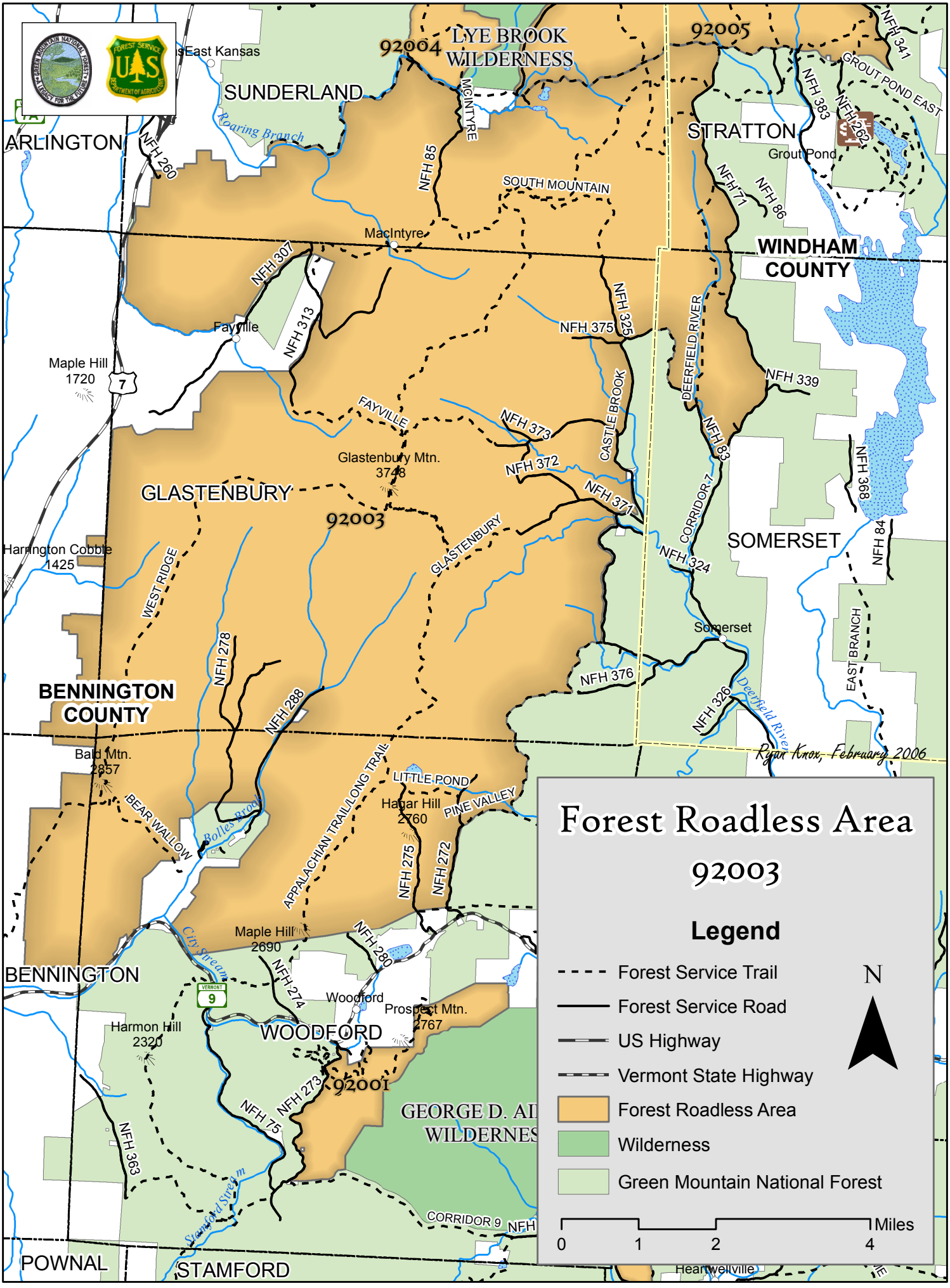
Miles

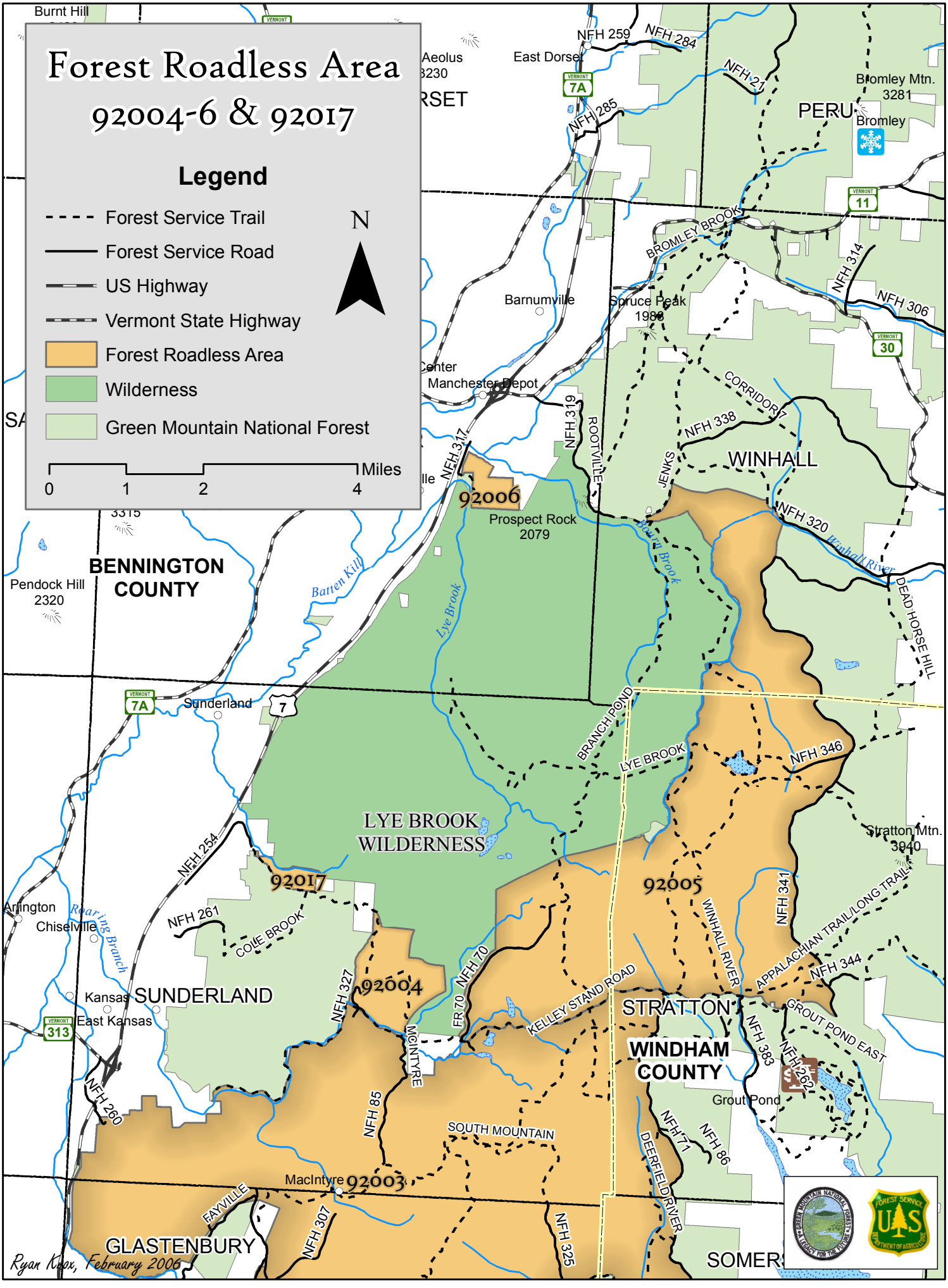
- US Highway
- Vermont HWY
- County Boundary
- Wilderness Area
- Town Boundary
- Roadless Area
- Green Mountain National Forest

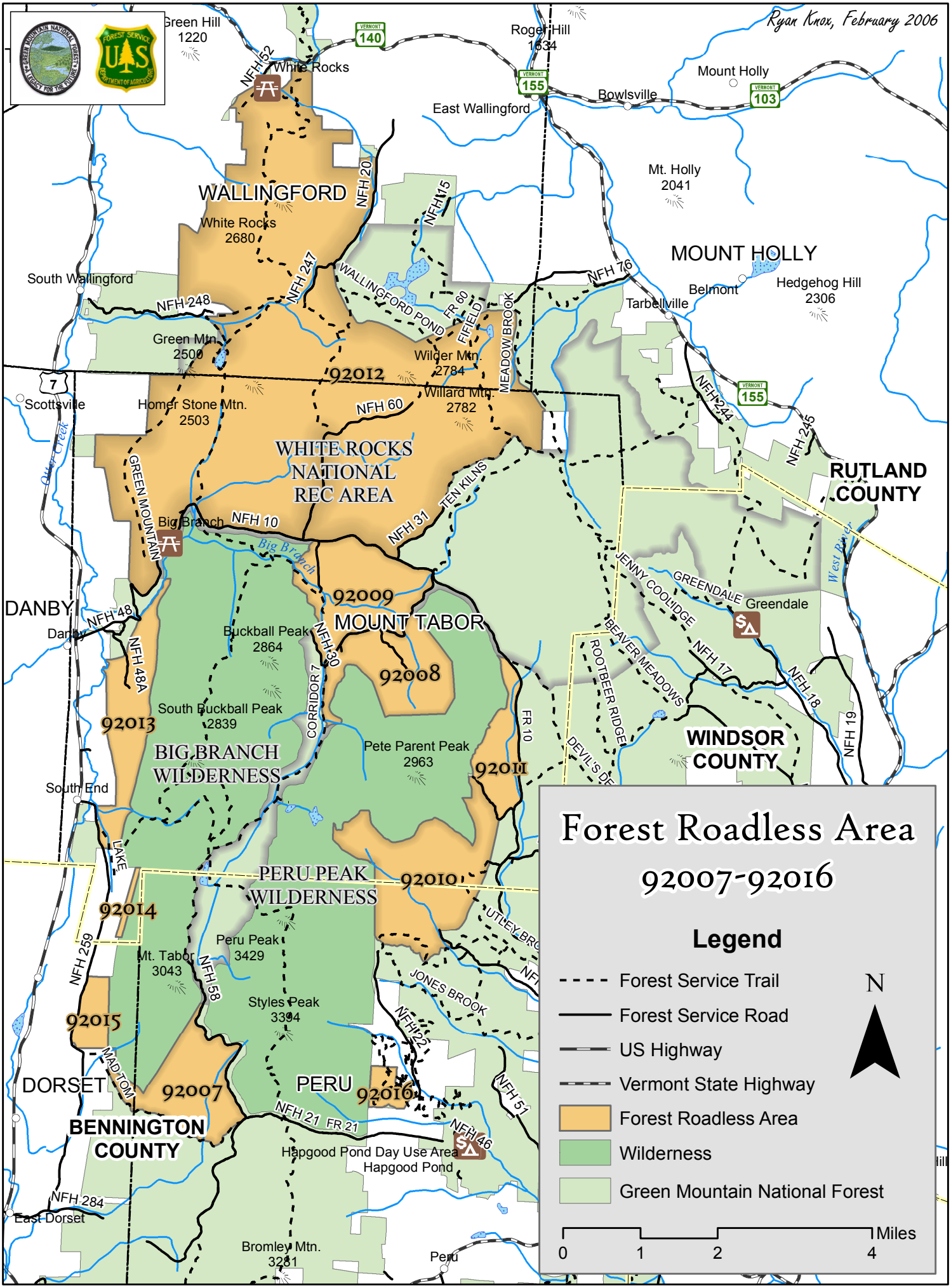
Forest Roadless Area Inventory
92018 - 92037
North Half

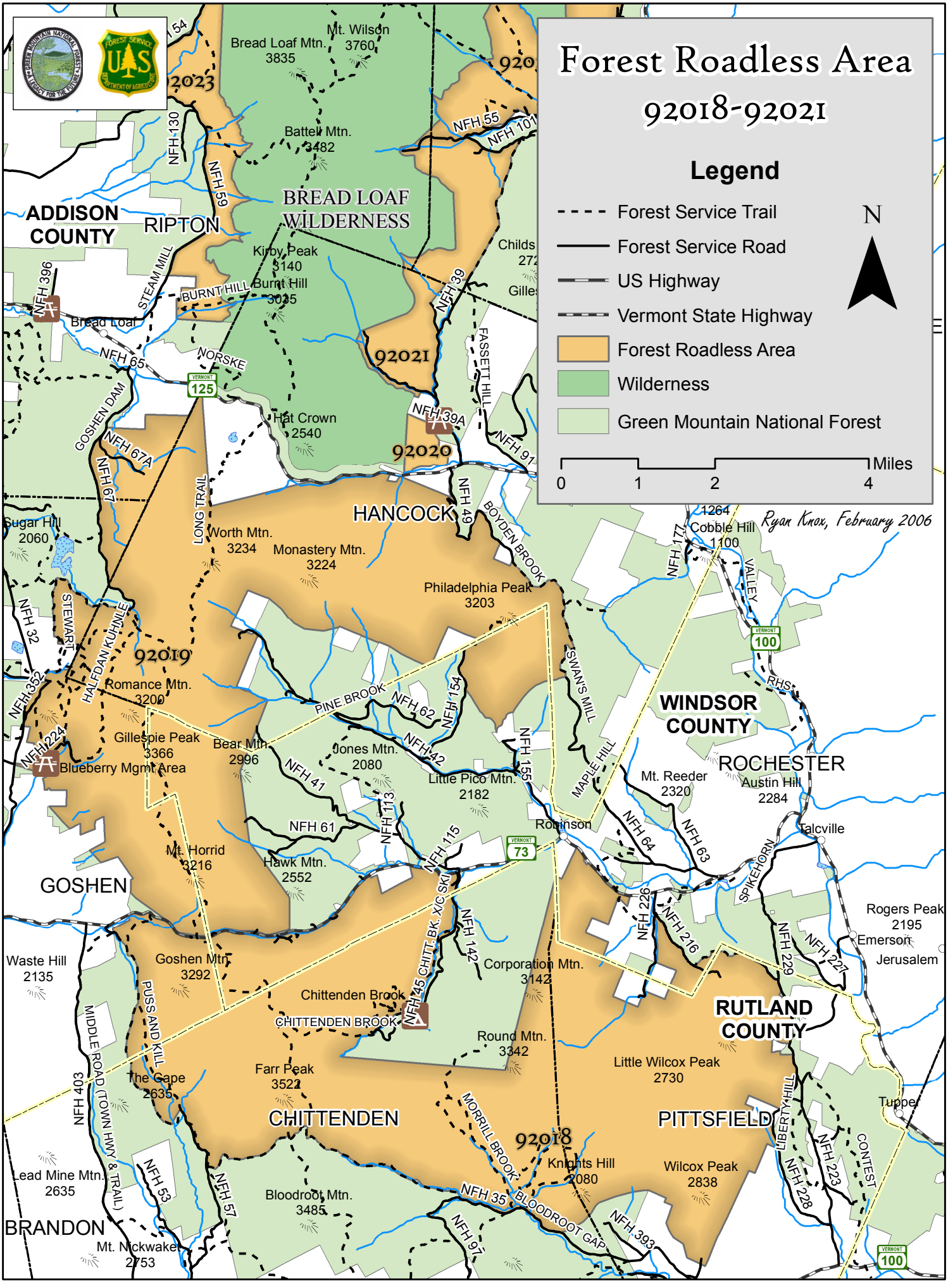
U.S. DEPARTMENT OF AGRICULTURE
GREEN MOUNTAIN
National Forest

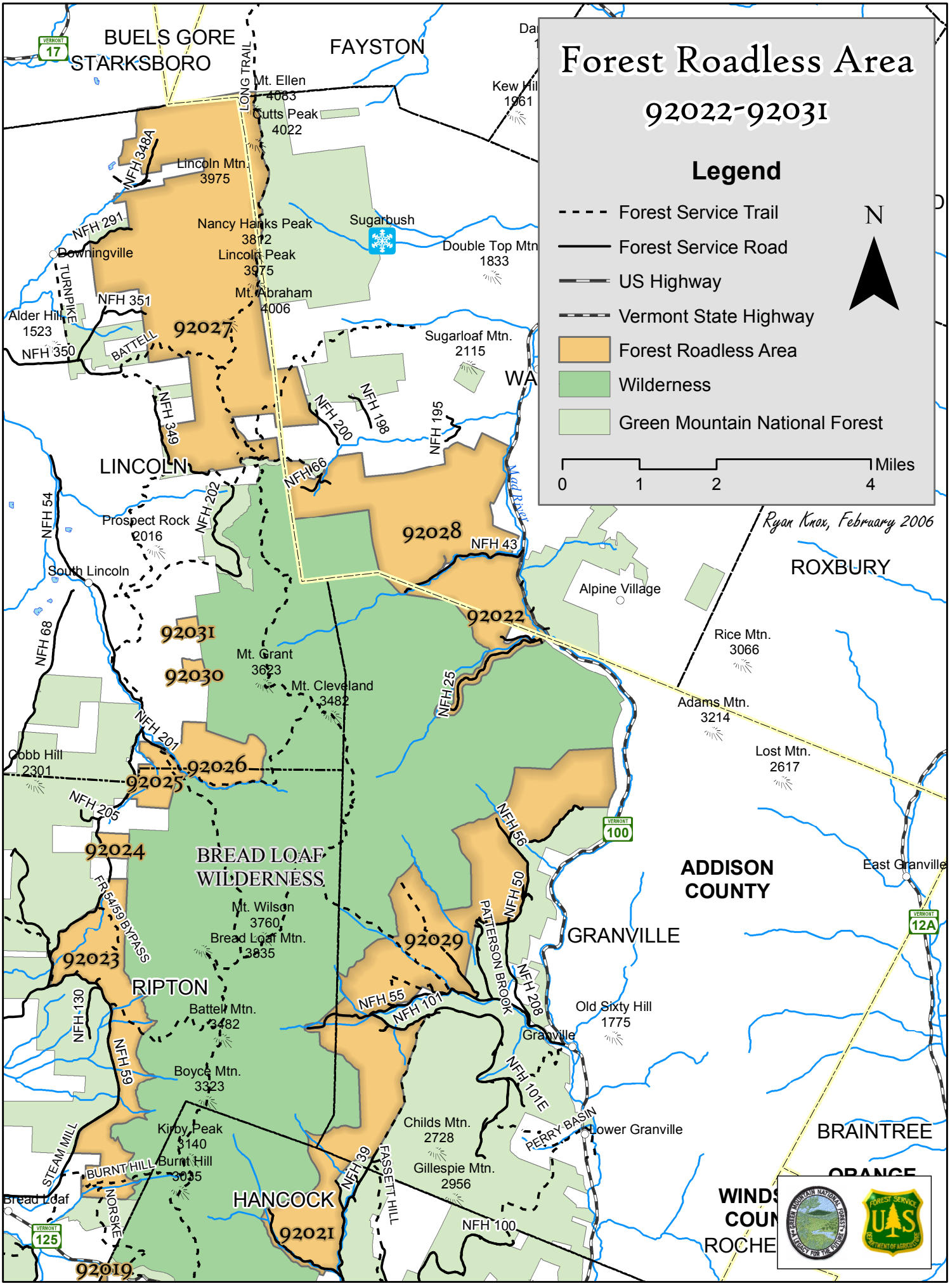

Forest Roadless Area
92001-92002
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
0
1
2
4
Miles
NFH 375
NFH 339
NFH 325
NFH 373
NFH 372
NFH 371
CASTLE BROOK
NFH 7.1
NFH 83
NFH 368
NFH 84
SOMERSET
NFH 324
WINDHAM COUNTY
GLASTENBURY
EAST BRANCH
NFH 376
NFH 326
Deerfield River
PINE VALLEY
2760
APPALACHIAN TRA
NFH 275
NFH 272
Red Mill Brook
NFH 72
NFH 328
SEARSBURG
Searsburg
NFH 268
Maple Hill
2690
City Stream
NFH 280
NFH 274
BENNINGTON
BENNINGTON COUNTY
VERMONT 9
WOODFORD
Woodford
Prospect Mtn.
2767
NFH 74
CORRIDOR 7
Harmon Hill
2320
NFH 273
92001
NFH 75
GEORGE D. AIKEN WILDERNESS
VERMONT 8
NFH 363
92002
Stamford Stream
NFH 73
NFH 266
CORRIDOR 9
Heartwellville
STAMFORD POND TRAIL
Spruce Hill
2836
Houghton Mtn.
3095
DOME
Dutch Hill
2657
Scrub Hill
2916
NFH 263
Readsboro Falls
NFH 255
North Hill
2165
VERMONT 100
POWNAL
STAMFORD
NFH 264
READSBORO
Ryan Knox, February 2006

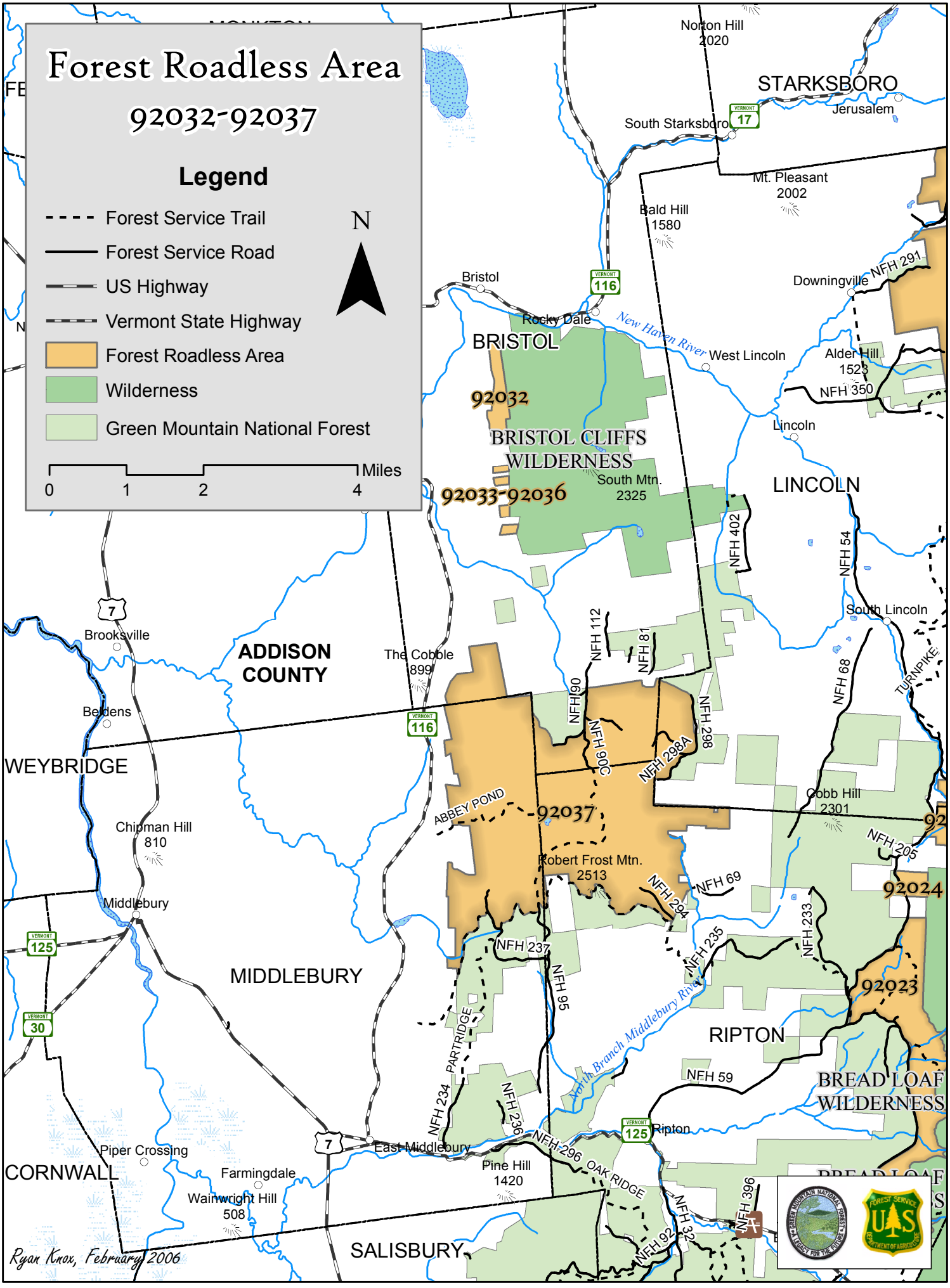

92004
LYE BROOK WILDERNESS
92005
East Kansas
SUNDERLAND
ARLINGTON
STRATTON
Grout Pond
GROUT POND EAST
NFH 341
NFH 383
NFH 262
NFH 260
NFH 85
MCINTYRE
Roaring Branch
SOUTH MOUNTAIN
NFH 71
NFH 86
MacIntyre
WINDHAM COUNTY
NFH 307
NFH 313
Fayville
NFH 375
NFH 325
DEERFIELD RIVER
Maple Hill 1720
7
NFH 339
FAYVILLE
NFH 373
CASTLE BROOK
NFH 372
NFH 371
NFH 83
CORRIDOR 7
NFH 368
Glastenbury Mtn. 3748
GLASTENBURY
92003
SOMERSET
NFH 84
Harrington Cobble 1425
WEST RIDGE
GLASTENBURY
NFH 324
Somerset
NFH 278
NFH 376
EAST BRANCH
BENNINGTON COUNTY
NFH 288
NFH 326
Deerfield River
Bald Mtn. 2857
Ryan Knox, February 2006
LITTLE POND
APPALACHIAN TRAIL/LONG TRAIL
Hagar Hill 2760
PINE VALLEY
BEAR WALLOW
Bolles Brook
NFH 275
NFH 272
Maple Hill 2690
NFH 280
City Stream
BENNINGTON
NFH 274
VERMONT 9
Woodford
Prospect Mtn. 2767
Harmon Hill 2320
WOODFORD
92001
NFH 273
NFH 75
GEORGE D. AI
WILDERNES
NFH 363
Stamford Stream
CORRIDOR 9
NFH
POWNAL
STAMFORD
Heartwellville
Forest Roadless Area
92003
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
Miles
0
1
2
4


Forest Roadless Area
92004-6 & 92017
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
0
1
2
4
Miles
Burnt Hill
Aeolus
East Dorset
NFH 259
NFH 284
NFH 21
NFH 285
Bromley Mtn.
3281
PERU
Bromley
BROMLEY BROOK
NFH 314
NFH 306
Barnumville
Spruce Peak
1988
Manchester Depot
CORRIDOR
NFH 319
ROOTVILLE
NFH 317
NFH 338
JENKS
WINHALL
92006
Prospect Rock
2079
NFH 320
Winhall River
DEAD HORSE HILL
Batten Kill
Lye Brook
Bourn Brook
BENNINGTON
COUNTY
Pendock Hill
2320
Sunderland
BRANCH POND
LYE BROOK
NFH 346
LYE BROOK
WILDERNESS
Stratton Mtn.
3940
NFH 254
92017
92005
NFH 341
Arlington
Chiselville
Roaring Branch
NFH 261
COLE BROOK
APPALACHIAN TRAIL/LONG TRAIL
WINHALL RIVER
NFH 344
NFH 70
FR 70
92004
NFH 327
KELLEY STAND ROAD
Kansas
SUNDERLAND
East Kansas
STRATTON
GROUT POND EAST
NFH 383
NFH 262
WINDHAM
COUNTY
MCINTYRE
NFH 260
NFH 85
SOUTH MOUNTAIN
Grout Pond
NFH 71
NFH 86
DEERFIELD RIVER
MacIntyre
92003
FAYVILLE
NFH 307
NFH 325
GLASTENBURY
SOMER
Ryan Knox, February 2006


Ryan Knox, February 2006
Green Hill
1220
White Rocks
NFH 52
VERMONT 140
Roger Hill
1634
VERMONT 155
Bowlsville
Mount Holly
VERMONT 103
East Wallingford
Mt. Holly
2041
WALLINGFORD
NFH 20
NFH15
White Rocks
2680
MOUNT HOLLY
South Wallingford
NFH 247
WALLINGFORD POND
FR 60
FIFIELD
MEADOW BROOK
NFH 76
Belmont
Hedgehog Hill
2306
Tarbellville
NFH 248
Green Mtn.
2500
Wilder Mtn.
2784
92012
7
Scottsville
Homer Stone Mtn.
2503
NFH 60
Willard Mtn.
2782
NFH 244
NFH 245
Otter Creek
WHITE ROCKS
NATIONAL
REC AREA
GREEN MOUNTAIN
TEN KILNS
RUTLAND
COUNTY
Big Branch
NFH 10
NFH 31
Big Branch
West Branch
JENNY COOLIDGE
GREENDALE
Greendale
DANBY
Danby
NFH 48
92009
MOUNT TABOR
Buckball Peak
2864
NFH 30
BEAVER MEADOWS
ROOTBEER RIDGE
NFH 48A
92008
NFH 17
NFH 18
NFH 19
South Buckball Peak
2839
CORRIDOR 7
92013
FR 10
WINDSOR
COUNTY
BIG BRANCH
WILDERNESS
Pete Parent Peak
2963
92011
South End
LAKE
PERU PEAK
WILDERNESS
92010
92014
Peru Peak
3429
Mt. Tabor
3043
NFH 259
NFH 58
JONES BROOK
Styles Peak
3394
92015
NFH22
MAD TOM
DORSET
92007
PERU
92016
NFH 51
NFH 21
FR 21
NFH 46
BENNINGTON
COUNTY
Hapgood Pond Day Use Area
Hapgood Pond
NFH 284
East Dorset
Bromley Mtn.
3281
Peru
Forest Roadless Area
92007-92016
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
Miles
0
1
2
4


Forest Roadless Area
92018-92021
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
0
1
2
4
Miles
Ryan Knox, February 2006
ADDISON COUNTY
RIPTON
BREAD LOAF WILDERNESS
HANCOCK
WINDSOR COUNTY
ROCHESTER
GOSHEN
CHITTENDEN
RUTLAND COUNTY
PITTSFIELD
BRANDON
92021
92020
92019
92018
Bread Loaf Mtn. 3835
Mt. Wilson 3760
Battell Mtn. 3482
Kirby Peak 3140
Burnt Hill 3035
Hat Crown 2540
Sugar Hill 2060
Worth Mtn. 3234
Monastery Mtn. 3224
Philadelphia Peak 3203
Romance Mtn. 3200
Gillespie Peak 3366
Bear Mtn. 2996
Jones Mtn. 2080
Little Pico Mtn. 2182
Mt. Horrid 3216
Hawk Mtn. 2552
Goshen Mtn. 3292
Waste Hill 2135
Lead Mine Mtn. 2635
Mt. Nickwaket 2753
Bloodroot Mtn. 3485
Farr Peak 3521
The Gape 2635
Chittenden Brook
Corporation Mtn. 3142
Round Mtn. 3342
Knights Hill 2080
Wilcox Peak 2838
Little Wilcox Peak 2730
Cobble Hill 1100
Mt. Reeder 2320
Austin Hill 2284
Falcville
Robinson
Rogers Peak 2195
Emerson
Jerusalem
Tupper
Blueberry Mgmt Area
Bread Loaf
Childs
Gilles
NFH 130
NFH 59
NFH 55
NFH 101
NFH 396
NFH 65
NFH 67A
NFH 67
NFH 39
NFH 39A
NFH 91
NFH 49
NFH 32
NFH 352
NFH 224
NFH 62
NFH 154
NFH 42
NFH 41
NFH 155
NFH 113
NFH 61
NFH 115
NFH 142
NFH 45
NFH 403
NFH 53
NFH 57
NFH 97
NFH 35
NFH 393
NFH 177
NFH 64
NFH 63
NFH 226
NFH 216
NFH 229
NFH 221
NFH 223
NFH 228
STEAM MILL
BURNT HILL
NORSKE
GOSHEN DAM
LONG TRAIL
STEWART
HALFDAN KUHNLE
PINE BROOK
BOYDEN BROOK
SWANS MILL
MAPLE HILL
VALLEY
RHS
SPIKEHORN
CHITT. BK. X/C SKI
CHITTENDEN BROOK
MORRILL BROOK
BLOODROOT GAP
PUSS AND KILL
MIDDLE ROAD (TOWN HWY & TRAIL)
LIBERTY HILL
CONTEST
FASSETT HILL
VERMONT 125
VERMONT 73
VERMONT 100
VERMONT 100


Forest Roadless Area
92022-92031
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
0
1
2
4
Miles
Ryan Knox, February 2006
BUELS GORE
STARKSBORO
FAYSTON
LINCOLN
ROXBURY
RIPTON
GRANVILLE
HANCOCK
BRAINTREE
ADDISON COUNTY
BREAD LOAF WILDERNESS
92019
92021
92022
92023
92024
92025
92026
92027
92028
92029
92030
92031
Mt. Ellen 4083
Cutts Peak 4022
Lincoln Mtn. 3975
Nancy Hanks Peak 3812
Lincoln Peak 3975
Mt. Abraham 4006
Sugarbush
Double Top Mtn 1833
Sugarloaf Mtn. 2115
Alder Hill 1523
Downingville
Prospect Rock 2016
South Lincoln
Alpine Village
Rice Mtn. 3066
Adams Mtn. 3214
Lost Mtn. 2617
Mt. Grant 3623
Mt. Cleveland 3482
Cobb Hill 2301
Mt. Wilson 3760
Bread Loaf Mtn. 3835
Battell Mtn. 3482
Boyce Mtn. 3323
Kirby Peak 3140
Burnt Hill 3035
Childs Mtn. 2728
Gillespie Mtn. 2956
Old Sixty Hill 1775
Granville
Lower Granville
East Granville
Bread Loaf
NFH 348A
NFH 291
NFH 351
NFH 350
NFH 349
NFH 200
NFH 198
NFH 195
NFH66
NFH 43
NFH 54
NFH 202
NFH 68
NFH 201
NFH 205
NFH 25
NFH56
NFH 50
NFH 208
NFH 101E
NFH 55
NFH 101
NFH 130
NFH 59
NFH 39
NFH 100
FR54/59 BYPASS
PATTERSON BROOK
PERRY BASIN
FASSETT HILL
STEAM MILL
BURNT HILL
NORSKE
LONG TRAIL
TURNPIKE
BATTELL
Mad River
VERMONT 17
VERMONT 100
VERMONT 12A
VERMONT 125


Forest Roadless Area
92032-92037
Legend
Forest Service Trail
Forest Service Road
US Highway
Vermont State Highway
Forest Roadless Area
Wilderness
Green Mountain National Forest
N
0
1
2
4
Miles
Norton Hill
2020
STARKSBORO
Jerusalem
South Starksboro
VERMONT
17
Mt. Pleasant
2002
Bald Hill
1580
Bristol
VERMONT
116
Rocky Dale
New Haven River
BRISTOL
92032
BRISTOL CLIFFS
WILDERNESS
92033-92036
South Mtn.
2325
West Lincoln
Downingville
NFH 291
Alder Hill
1523
NFH 350
Lincoln
LINCOLN
NFH 402
NFH 54
South Lincoln
TURNPIKE
NFH 68
7
Brooksville
ADDISON
COUNTY
The Cobble
899
Beldens
VERMONT
116
NFH 112
NFH 81
NFH 60
NFH 306
NFH 298
NFH 298A
WEYBRIDGE
ABBEY POND
92037
Cobb Hill
2301
92
Chipman Hill
810
Robert Frost Mtn.
2513
NFH 205
92024
NFH 69
NFH 294
Middlebury
VERMONT
125
NFH 237
NFH 235
NFH 233
MIDDLEBURY
NFH 95
92023
VERMONT
30
PARTRIDGE
North Branch Middlebury River
RIPTON
NFH 59
BREAD LOAF
WILDERNESS
NFH 234
NFH 236
VERMONT
125
Ripton
7
East Middlebury
Piper Crossing
NFH 296
OAK RIDGE
CORNWALL
Farmingdale
Pine Hill
1420
Wainwright Hill
508
NFH 396
NFH 32
NFH 92
SALISBURY
Ryan Knox, February 2006