USDA United States Department of Agriculture

USDA Forest Service

Green Mountain National Forest

Town Meeting Report

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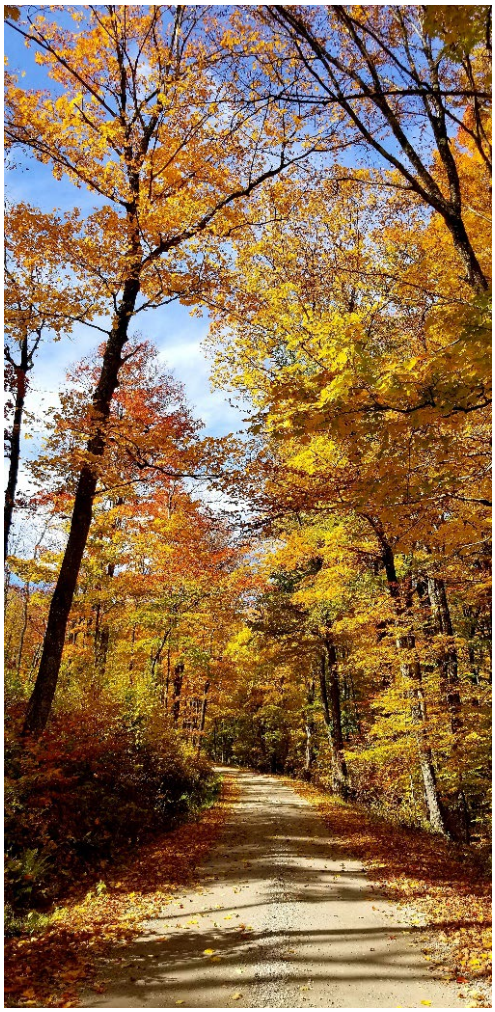

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USDA Forest Service Photo 1 Foliage at the base of Mount Abraham in Lincoln, Vermont.

Green Mountain National Forest

Town Meeting Report

The employees of the Green Mountain National Forest (GMNF) depend heavily on support from many municipalities, volunteers, partners, and contractors. The Forest would like to take this time to thank you and your community for the support and interest that you have shown in helping with the management of the approximately 400,000-acre GMNF. Receiving several million outdoor recreation enthusiast visits annually, these visitors seek enjoyment in a natural setting while providing critical benefit to our local economies. The GMNF is proud to be a part of Vermont and your town. It is truly one of Vermont's treasures and the largest contiguous public land area in the state. Forest staff work hard to achieve quality public land management under a sustainable multiple-use management concept to meet the diverse needs of all people -- people in your town as well as all of the visitors who come to Vermont every year. This has been another exciting year for us, and we have worked hard to support new opportunities on the National Forest that benefit the people and communities that we serve. The following is a brief summary of what happened in your National Forest throughout the past year:

Our New Office

We are excited to report that we now have a new Forest Supervisor's Headquarters located at 4387 U.S. Route 4 East in Mendon, Vermont! Our visitor center will be staffed and open to the public over the winter months on Monday, Wednesday, and Friday from 8:00 AM – 4:30 PM. In the spring, we will be open Monday – Friday from 8:00 AM – 4:30 PM. Our employees have recently transitioned from a full-

time virtual work schedule to working out of the new office and are available should you need to reach them. You can always call our main office number (802) 747-6700 and press 9 to search our employee directory or to make an appointment with a member of our staff. Our permanent mailing address is: USDA Forest Service, Green Mountain & Finger Lakes National Forests, 4387 U.S. Route 4 East, Mendon, Vermont 05701. Please visit the staff directory link here for a current list of our employees: https://www.fs.usda.gov/contactus/gmfl/about-forest/contactus

Land Acquisition

In March of 2023 the GMNF acquired 2,744 acres in the towns of Mendon, Chittenden, and Killington through the Rolston Rest acquisition. Two acquisitions in the towns on Middlebury, Ripton, and Wallingford should close in early to mid-2024. We have been supported by each of the town Select-boards for these parcels. The addition of these public lands would not be possible without the assistance of The Trust for Public Land, The Conservation Fund, and the support of our local communities. We are currently working on new acquisitions located in the towns of Stamford, Pownal, Arlington, Sunderland, and Winhall.

USDA Forest Service Photo 2 Taconic Gateway visit

Also, the Forest is beginning the process of its first Small Tracts Act (STA) case located in Winhall. The STA was enacted to help the Forest Service resolve land disputes and boundary management problems for parcels that generally are small in size. In 2020, the Act was amended to include the authority to sell, exchange, or interchange small parcels of land that are 40 acres or less, and that are physically isolated, inaccessible, or lack National Forest character.

Heritage Program

USDA Forest Service Photo 3 Archaeological Technician, Brandon Emerson (Left) and Engineering Technician, Seth Coffey (Right) conducting measurements of the Civilian Conservation Corps-era culverts on Forest Road 10, Mt. Tabor.

Heritage had another busy year, completing review for fifty-three projects on the forest. We recorded or updated eighty-eight archaeological sites, many of which were located in the towns of Goshen, Rochester, Somerset, and Stratton. In addition, the Heritage program surveyed over 2,000 acres, completed three Determinations of Eligibilities for the National Register of Historic Places (NRHP), and one Memorandum of Agreement.

GMNF Archaeologist, Sarah Skinner, gave a presentation to the Chittenden Historical Society on the History within the Telephone Gap Integrated Resource Project (IRP) area and joined historical society members on a history hike to the Greene Tavern in Chittenden.

In an agreement with Green Mountain Power, the Lake Champlain Maritime Museum divers conducted a condition assessment of two submerged canoes in Leicester. In another partnership with Historicorps, we had the help of six volunteers to conduct restoration work on the NRHP-listed Queen's Castle on the Finger Lakes National Forest in Hector, NY.

The Heritage Program would like to thank the numerous volunteers that have taken the time this year to help protect, preserve, and identify the cultural resources in the Green Mountains!

Road & Facility Construction & Maintenance

In cooperation with federal, state, and local governments, private contractors, and non-profit organizations, the GMNF Engineering staff repaired and maintained many roads, bridges, and other facilities throughout the Forest. Some highlights are as follows:

Forest Facility Improvements & Maintenance

USDA Forest Service Photo 4 New Green Mountain & Finger Lakes National Forests Headquarters.

The GMNF completed construction of their new administrative headquarters facility on US Route 4 in Mendon, Vermont. Employees moved into the new headquarters in early September and hosted an open house for the public on October 17th.

We also replaced the roof of the workshop at the Mt. Tabor Crew Quarters. New garage doors are scheduled to be installed this winter.

Forest Road Cooperative Aid to Towns

The GMNF completed important road improvement and maintenance projects in the town of Goshen. The project included road maintenance and improvements to improve access to the Moosalamoo National Recreation Area.

The construction of the West Hill Road Bridge in Rochester has been completed. The project was completed through a partnership between the town of Rochester, Forest Service, FHWA Eastern Federal Lands Highway Division, and the Vermont Agency of Transportation.

The Towns of Hancock and Stratton in corporation with the GMNF were selected for grants from FHWA Eastern Federal Lands Highway Division through their Federal Lands Access Program (FLAP). These grants will replace a bridge in the Town of Hancock that accesses the Texas Falls recreation area and the grant in the Town of Stratton will make improvements to Grout Pond Road which accesses the Grout Pond Campground and recreation area. Both projects are important to improve access to the GMNF.

Forest Road Improvement & Maintenance Projects

USDA Forest Service Photo 5 Construction of an aquatic organism passage culvert replacement on Forest Road 10. USDA Forest Service photo.

The GMNF improved or maintained over 85 miles of National Forest System roads in the towns of Chittenden, Goshen, Granville, Hancock, Manchester, Mount Tabor, Peru, Readsboro, Ripton, Rochester, Somerset, Stratton, Sunderland, Wallingford, Warren, Weston, Woodford, and Woodstock. Improvement work included the replacement of culverts and gates, stabilization of embankments, repairing storm damage, and the resurfacing of roads. Larger improvement projects included three culvert replacement projects on Forest Road 10 in the Town of Mount Tabor.

Recreation Programs

The GMNF provides a great diversity of outdoor recreation opportunities, connecting people with nature in a variety of settings. Outdoor recreation is valued as both an important part of Vermont's economy and a crucial component of many Vermonters' and visitors' physical and mental well-being. We support communities by creating, investing in, and sustaining opportunities for everyone to access and to cultivate their relationship with nature. The Forest Service recreation program actively seeks to identify and understand people's connections and barriers to the outdoors to ensure the GMNF, has a place for everyone to feel welcome. The Forest Service encourages participation in outdoor recreational activities and asks users to recreate responsibly by packing out all trash you bring in; adhering to site or trail closures; and seeking alternative locations when encountering packed parking lots or sites.

Forest-wide Activity

We have a strong and united constituency among our partners, local communities, and interested publics to support and maintain outdoor recreation opportunities. By joining together federal land-management agencies, state agencies, local communities, nongovernmental organizations, volunteers, and partners, we can address shared issues and align to provide services requested by the public. One example is the successful effort to secure $2 million in Congressionally Directed Spending dollars for accessible upgrades to be completed over the next several years at Grout Pond (Stratton), Hapgood Pond (Peru), Lefferts Pond (Chittenden) and Texas Falls (Hancock).

The "Local Efforts" noted below highlight 2023 Recreation and Trail Program successes in acknowledgement of the outstanding collaborative effort exhibited between Forest Service employees, partner organizations, volunteers, state and local government representatives, and local businesses. Forest-wide efforts include allocating $2.2 million to 41 partner agreements with local community, government, and non-profit organizations. Partner contributions totaled over $440,000 in these agreements, enhancing the Forest Service's capacity to meet our mission and engage new partners. Enhanced amenities, including scan and pay QR codes and an automated fee machine, expanded options for paying entry fees at select sites; over $135,000 in fee collections in 2023 will be used towards future improvements, such as new toilets.

Additionally, the GMNF exceeded the national standards for Wilderness stewardship performance by maintaining Wilderness character on all eight Congressionally designated areas for the second year in a row. Stewardship partnerships were comprised of four Student Conservation Association interns, four Northwoods Conservation Corps members, one Greening Youth Foundation steward, and one Society of Wilderness Stewardship fellow. The Great American Outdoors Act continues to provide opportunities to deliver benefits to the American public through major investments in recreation infrastructure, public lands access, and land and water conservation. These investments will enable communities to Build Back Better by contributing to economic growth and job creation in rural America.

With the help of the many hard-working volunteers and organizations we are able to provide a quality recreation experience in alignment with a strong environmental stewardship ethic. The following highlights capture large program accomplishments but represent only a portion of the annual work that is completed to develop, improve and maintain recreational opportunities on the GMNF.

Local Efforts

Brandon: In cooperation with the Town of Brandon completed the re-graveling of the Leicester Hollow Road.

Chittenden: Worked with GMC on replacement of the Sunrise Shelter and privy. The old Sunrise Shelter and privy were deconstructed, and removal of the materials is near completion. Ridgeline Outdoor Collective de-brushed backcountry areas near Brandon Gap. The Forest Service worked with partner organizations to complete the Chitty Bang Bang accessible trail near Chittenden Brook Campground and sections of Velomont called Perspiration and Swan Dive. Forest Service employees repaired trail bridges on the Chittenden Brook Trail system and performed de-brushing of portions of the trail network.

Goshen / Ripton: Installed a panoramic sign, bench, and new picnic table at the Voter Brook Overlook. Replaced the outhouses at the Moosalamoo Campground and the Silver Lake picnic site. Worked with the Moosalamoo Association to address vandalism issues at Voter Brook Overlook. Moosalamoo Association installed large rocks to deter vehicular traffic from driving offroad at the Voter Brook Overlook. Partner groups began construction of the Moosalamoo to Silver Lake Connector Trail. Worked with Moosalamoo Association to remove decommissioned trail bridges on the decommissioned Goshen Brook Trail. Worked with Moosalamoo Association to begin blazing the Grand Tour route. Worked with Blueberry Hill Outdoor Center to begin project work on relocating a portion of the Hogback Loop Trail.

Hancock: Installed new picnic grills at the Texas Falls picnic area. Refurbished picnic tables and removed tables and grills that were broken beyond repair. Resealed the Texas Falls Observation Site parking lot and resealed the picnic pavilion parking lot. Replaced the Texas Falls Observation Site sign on State Route 125. Installed new interpretive sign at Hancock Overlook.

Killington: Worked with the Killington Mountain Bike Club to complete construction of the Sherburne Trail. Began collaborative effort to address parking and congestion concerns along State Route 100 near Gifford Woods State Park. Worked with VYCC to perform two weeks of trail maintenance on the Deer Leap Trail.

Leicester: Resurfaced the Minnie Baker Trailhead. Installed new picnic grill, tables, and a bench at the Silver Lake picnic site. Installed a new outhouse at the Silver Lake picnic site.

Lincoln: Performed hazard tree management at the Battell Trailhead. Installed new interpretive signs at Lincoln Gap and Emily Proctor / Cooley Glen trailheads.

Middlebury: Completed the construction of the Oak Ridge parking area on Route 125, and then completed the reconstruction of the Oak Ridge parking area following extensive storm damage. Installed new interpretive signs at Oak Ridge parking area.

Pomfret: Resurfaced the AT Route 12 trailhead parking lot.

Pittsfield: Worked with Ridgeline Outdoor Collective to reconstruct portions of the Contest Trail. Worked with VAST partner to complete the following work on the Bloodroot Gap Trail: moved gate closer to Upper Michigan Road, replaced five culverts and completed tread and drainage maintenance.

Ripton: Worked with Addison County Counseling Service volunteers and the Ripton Historical Society to complete vegetation removal at the Calvin Pier barn and tavern cellar holes. Worked with the Addison County Counseling Service to reset a culvert and complete tread repairs to the Wilkinson X/C Ski Trail network. Began project work on the Widow's Clearing Trail relocation near the Wilkinson Trailhead. Relocation of a portion of the Widow's Clearing Trail is scheduled for 2024. Participated in the Calvin Pier Tavern Commemoration ceremony. Installed new interpretive signs at FR 54 winter parking area.

Rochester: Worked with partners to complete small relocations of a portions of the Atlas Trail, and Bean's Bridge to Tunnel Ridge section of the Velomont, and Swan's Mill Trail. Installed new interpretive sign at Liberty Hill Trailhead and repaired the vandalized trailhead kiosk.

Salisbury: Completed site prep for the Falls of Lana parking lot resurfacing project along State Route 53. Reconstruction and repaving of the Falls of Lana parking lot is rescheduled for the summer 2024. Worked with the Sierra Club performing one week of trail maintenance on the Aunt Jenny and Rattlesnake Cliffs Trails.

Warren: Worked with the StewardMRV to maintain Blueberry Lake and Warren Falls Observation Sites. Extended the paved entrance apron, installed new wheel stops, and regraded the Warren Falls Parking Lot. Replaced the picnic tables at Blueberry Lake Observation Site. Installed a new picnic table at the Blueberry Lake Trailhead parking lot.

Wallingford: In partnership with GMC, a caretaker hosted visitors and maintained the Little Rock Pond Shelter privy, tenting area, and surrounding trails.

Weston: In partnership with Andrew Harper, a kiosk and information panel were installed at the beginning of the West River CCC trail off from Route 155.

Peru: In partnership with GMC, a caretaker hosted visitors and maintained the Griffith Lake Tenting Area, Peru Peak Shelter, and surrounding trails.

Stratton: In partnership with GMC, a caretaker provided onsite information and maintained back country facilities and trails at Stratton Pond. Construction of the new Stratton View Shelter was completed at Stratton Pond Recreation Area. The Stratton Mountain Caretaker's Cabin on Stratton Mountain had repairs completed to include foundation work, repairing the floor system, a new metal roof and GMC replaced siding, trim, and painted the structure. At Grout Pond Recreation Area, in partnership with Vermont Huts Association and GMC, two moldering privies were constructed in 2023. Additionally, in

partnership with Catamount Trails Association, sections of the Grout Pond Loop trail and Grout Pond East trail were maintained to re-establish drainage and harden sections of trail tread. In partnership with VAST, a snowmobile bridge was replaced on the Wardsboro Link (710) trail.

USDA Forest Service Photo 6 Glastenbury Observation Tower remains closed to public use due to safety concerns.

Wardsboro: In late 2022, illegal trail improvement work was done on the 710 snowmobile trail on National Forest land. Forest Service staff are working with town officials to improve communication regarding the management and maintenance of this trail and to protect the travel way for future use while reducing impacts to the surrounding area. In partnership with VAST, gates were installed at either end of the 710 trail on National Forest land to protect the trail from unauthorized summer ORV use.

Dover: In partnership with VAST, a snowmobile bridge on the Dover Hills (Corridor 100) snowmobile trail was replaced. This project was funded by the Great American Outdoors Act.

Glastenbury: In partnership with VAST, maintenance was performed on the snowmobile trails on Glastenbury Mountain. In late November of 2022, the Forest Service closed Glastenbury Observation Tower to public use due to safety concerns regarding corrosion of the structure.

Woodford: With support of the Forest Service, VASA received a National Forest Legacy Trails grant to complete important trail maintenance work on Corridor 9 trail. This trail is coincident with the Old Stage Road for a portion of its length. This trail is managed for both summer motorized use and winter snowmobile use.

Stamford: In partnership with the Appalachian Trail Conservancy and GMC, construction was completed on the new Seth Warner Shelter and privy.

Readsboro: In partnership with DHASH additional backcountry ski glades are being managed at Dutch Hill and volunteers are constructing puncheon to mitigate impacts to wet soils and provide a better experience for recreation visitors. In partnership with VAST and specifically the Woodford SnoBusters, trail construction of the Hoosac Ridge trail relocation is complete. This trail provides a protected connection for snowmobilers traveling to and from the Massachusetts snowmobile trail system.

Wilderness

Throughout 2023 increased visitor use has continued in the eight designated Wildernesses on the GMNF. This is the second year in a row all eight designated Wilderness areas on the GMNF have met the National Standard for Wilderness Stewardship Performance (WSP) and preserving Wilderness character since a new monitoring protocol was adopted in 2015. WSP places heightened emphasis on the interdisciplinary responsibilities of wilderness stewardship and the potential linkages with other program areas. It seeks to foster improved integration and communication between program areas, to accurately reflect the collaboration required to steward our wilderness resource.

USDA Forest Service Photo 7 Wilderness partners hauling an abandoned boat out from Bourn Pond in Lye Brook Wilderness, Sunderland, VT.

The Wilderness program is managed with a shared stewardship approach and partnership contributions. GMNF Wilderness staff in 2023 consisted of a Wilderness program manager, a Society of Wilderness Stewardship Fellow, three Student Conservation Association interns, one Greening Youth Foundation Wilderness Steward, and support from our Recreation District staff. A Northwoods Stewardship Center pro trail crew was also hosted on the GMNF for five weeks and conducted trail work in the Breadloaf Wilderness on the Cooley Glen and Emily Proctor trails which both provide access to the Long Trail.

2023 Wilderness Stewardship Performance Scores: (out of a possible 100 points total):

Big Branch Wilderness 68 points located in Dorset, Mount Tabor, and Peru. Visitor encounter monitoring was conducted along the Appalachian Trail / Long Trail and side trails in the Big Branch Wilderness and Peru Peak Wilderness. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Wilderness Rangers conduct campsite monitoring every five years to track trends with recreation use. Trail maintenance and improvements were conducted along the AT / LT and side trails. Invasive plant species were monitored, and hand pulled along trailheads, the trail system, and shelters to prevent spreading. Wilderness boundary monitoring was completed.

Breadloaf Wilderness 66 points located in Granville, Hancock, Lincoln, Ripton, and Warren. Visitor encounter monitoring was conducted to maintain opportunities for solitude. Trail maintenance and improvements were conducted along the Long Trail and side trails. A Northwoods Stewardship Center pro trail crew teamed up with the Student Conservation Association crew to conduct trail work along the Cooley Glen and Emily Proctor trails. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Backcountry skiing activity has been monitored and some illegal tree cutting to improve skiing lines has been observed. Wilderness boundary monitoring was completed.

Bristol Cliffs Wilderness 68 points located in Bristol and Lincoln. Visitor encounter monitoring was conducted to maintain opportunities for solitude. Dispersed recreation sites / campsites were monitored

for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Wilderness boundary monitoring was completed.

George D. Aiken Wilderness 64 points located in Woodford. Visitor encounter monitoring was conducted to maintain opportunities for solitude. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Wilderness boundaries were monitored for encroachments.

Glastenbury Wilderness 72 points located in Bennington, Glastenbury, Shaftsbury, and Woodford. Visitor encounter monitoring was conducted along the Appalachian Trail / Long Trail and side trails in the Glastenbury Wilderness. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Trail maintenance and improvements were conducted along the AT / LT and side trails. Inholdings were monitored for Special Use Permit compliance. Wilderness boundaries were monitored for encroachments.

Joseph Battell Wilderness 70 points located in Chittenden, Goshen, Hancock, Ripton, and Rochester. Visitor encounter monitoring was conducted to maintain opportunities for solitude. Trail maintenance and improvements were conducted along the AT / LT and side trails. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. The Great Cliffs on Mount Horrid were monitored to protect peregrine falcons during the nesting season. Wilderness boundaries were monitored for encroachments.

Lye Brook Wilderness 74 points located in Manchester, Stratton, Sunderland, and Winhall. Visitor encounter monitoring was conducted along the AT / LT and side trails in the Lye Brook Wilderness. Trail maintenance and improvements were conducted along the AT / LT and Lye Brook Falls trail. Invasive plant species were monitored, and hand pulled along trailheads, the trail system, and shelters to prevent spreading. Dispersed recreation sites / campsites were monitored at Bourn Pond for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Eastern brook trout were stocked in Bourn Pond utilizing a helicopter in partnership with the Vermont Department of Fish and Wildlife. Campsite rehabilitation at dispersed sites along Bourn Pond was conducted with our partners from Leave No Trace and the Green Mountain Club. Roughly one acre of riparian buffer was restored around the pond that had been cleared for tenting sites and campfire wood. Wilderness boundaries were monitored for encroachments.

Peru Peak Wilderness 72 points located in Mount Tabor and Peru. Visitor encounter monitoring was conducted along the Appalachian Trail / Long Trail and side trails in the Big Branch Wilderness and Peru Peak Wilderness. Invasive plant species were monitored, and hand pulled along trailheads, the trail system, and shelters to prevent spreading. Trail maintenance and improvements were conducted along the AT / LT and side trails. Dispersed recreation sites / campsites were monitored for impacts to protect natural resources while maintaining opportunities for unconfined recreation. Trout were stocked in Big Mud Pond utilizing a helicopter in partnership with the Vermont Department of Fish and Wildlife. Wilderness boundaries were monitored for encroachments.

Special Uses

Recreation

In 2023 there were 40 active recreation special use permits, including isolated cabins, huts, outfitters and guides, recreation events and ski areas. 24 Outfitters and Guides operated on the Forest this summer, providing recreational experiences to those who may not be comfortable or experienced enough to seek

those experiences on their own, and four endurance running events occurred. Eleven applications were processed to a decision.

95% of the fees collected from permits issued under the Federal Lands Recreation Enhancement Act return to the National Forest on which the use occurs, to be used to improve the Recreation Special Uses Permit program.

Lands

There were 111 active Land Special Use Permits on GMFL, including uses such as private right of ways, power and telephone lines, water systems, communication sites and maple tapping. Seven applications were processed to a decision.

As required by various acts of Congress (Secure Rural Schools Act, Bankhead Jones Act, Act of 1908 Amended) the land use fees paid by special use holders are re-distributed to the States / counties where the special use is authorized to support essential services, such as roads, schools, wildfire protection plans, and emergency services.

Botany Program

Botanical inventory for rare plants and / or non-native invasive plants was completed in support of the following projects:

- Proposed small project sites in Chittenden (17.4 acres), Goshen (2.1 acres), Landgrove (0.09 acres), Mendon (14.2 acres), Middlebury (2.4 acres), Mt. Holly (0.22 acres); Winhall (0.10 acres)
- Rare plant monitoring in Bridgewater (4.40 acres), Bristol (48.8 acres), Landgrove (0.30 acres), Lincoln (1 acre), Middlebury (41.2 acres), Mt. Tabor (2.16 acres), Pomfret (0.32), Pownal (221.18 acres), Ripton (5.6 acres), Salisbury (25.78 acres), Stamford (1.50 acres), Warren (2.4 acres), Winhall (2.42 acres), Woodstock (4.6 acres)
- GMNF wildlife opening surveys: Goshen (2.6 acres), Mt. Holly (26.2 acres), Mt. Tabor (7.7 acres), Stamford (60.48 acres), Weston (2.7 acres), Winhall (19.3 acres), Warren (11.8 acres), Woodford (21.68 acres)

As a result of inventory, new Regional Forester Sensitive Species (RFSS) occurrences were detected for round-leaved orchis (*Platanthera orbiculata*) in Landgrove, and ginseng (*Panax quinquefolius*) and large yellow lady's-slipper (*Cypripedium parviflorum var. pubescens*) in Salisbury. Any time rare plants not currently designated as RFSS are found on the Forest, they are evaluated for future inclusion on the RFSS list.

In addition to botanical inventory, the following rare plants (RFSS or Vermont state-tracked) were monitored: three RFSS in Bridgewater, eight RFSS and four state-tracked species in Bristol, one RFSS in Landgrove, one RFSS in Lincoln, four RFSS in Middlebury, one RFSS in Mt. Tabor, one RFSS in Peru, two RFSS in Pomfret, four RFSS in Pownal, six RFSS and three state-tracked species in Ripton, 15 RFSS and two state-tracked species in Salisbury, two RFSS in Stamford, one RFSS in Warren, three RFSS in Winhall, three RFSS and one state-tracked species in Woodstock.

List of rare plant species (RFSS or state-tracked) monitored in 2023, by town.

Species Scientific Name (state rank provided for non-RFSS)	Species common name	Town
Carex backii	Rocky Mountain Sedge	Bridgewater
Juglans cinerea	Butternut	Bridgewater
Panax quinquefolius	Ginseng	Bridgewater
Alopecurus aequalis (VT-S3)	Short-awn Foxtail	Bristol
Asclepias exaltata	Poke milkweed	Bristol
Brachyelytrum erectum (VT-S2S3)	Shorthusk	Bristol
Cardamine concatenata (VT-S3)	Cutleaf Toothwort	Bristol
Carex hitchcockiana (VT-S3)	Hitchcock's Sedge	Bristol
Collinsonia canadensis	Squaw-root	Bristol
Eutrochium purpureum var. purpureum (VT-S2S3)	Sweet Joe-pye Weed	Bristol
Glyceria septentrionalis	Floating mannagrass	Bristol
Panax quinquefolius	Ginseng	Bristol
Sanicula canadensis var. canadensis	Short-styled snakeroot	Bristol
Sanicula trifoliata	Long-fruited Snakeroot	Bristol
Scrophularia lanceolata (VT-S3)	Hare Figwort	Bristol
Platanthera orbiculata	Round-leaved orchis	Landgrove
Polemonium vanbruntiae	Appalachian Jacob’s ladder	Lincoln
Carex argyrantha	Hay sedge	Middlebury
Carex foenea	Bronze sedge	Middlebury
Panax quinquefolius	Ginseng	Middlebury
Sanicula trifoliata	Long-fruited Snakeroot	Middlebury
Panax quinquefolius	Ginseng	Mt. Tabor
Gentianopsis crinitia	Fringed Gentian	Peru
Dactylorhiza viridis (Coeloglossum viride)	Long-bract Green Orchis	Pomfret
Dryopteris filix-mas (ssp. brittonii)	Male Fern	Pomfret
Isotria verticillata	Large whorled pogonia	Pownal
Juglans cinerea	Butternut	Pownal
Kalmia latifolia	Mountain Laurel	Pownal
Sanicula trifoliata (VT-S3)	Long-fruited Snakeroot	Pownal
Eleocharis intermedia	Matted spikerush	Ripton
Eleocharis olivacea	Capitate spikerush or olive spikerush	Ripton
Eleocharis ovata	Ovate spike-rush	Ripton
Eriophorum gracile (VT-S1)	Slender Cotton-grass	Ripton
Galium trifidum ssp. trifidum (VT-S3)	Small Bedstraw	Ripton
Platanthera macrophylla	Large roundleaf orchid	Ripton
Platanthera orbiculata	Round-leaved orchis	Ripton
Polemonium vanbruntiae	Appalachian Jacob’s ladder	Ripton
Sparganium fluctuans (VT-S3)	Water Bur-reed	Ripton

Species Scientific Name (state rank provided for non-RFSS)	Species common name	Town
Asclepias exaltata	Poke milkweed	Salisbury
Aureolaria pedicularia	Smooth false-foxglove	Salisbury
Botrychium oneidense	Blunt-lobed grapefern	Salisbury
Calamagrostis stricta ssp. inexpansa	New England northern reed grass	Salisbury
Carex argyrantha	Hay sedge	Salisbury
Conopholis americana	Squaw-root	Salisbury
Cypripedium parviflorum var. pubescens	Large yellow lady's-slipper	Salisbury
Desmodium paniculatum	Paniculate tick-trefoil	Salisbury
Desmodium perplexum	Perplexed tick-trefoil	Salisbury
Diplazium pycnocarpon	Glade fern	Salisbury
Eutrochium purpureum var. purpureum (VT-S2S3)	Sweet Joe-pye Weed	Salisbury
Nabalus trifoliolatus (VT-S3)	Three-leaved Rattlesnake-root	Salisbury
Panax quinquefolius	Ginseng	Salisbury
Pinus rigida	Pitch pine	Salisbury
Platanthera orbiculata	Round-leaved orchis	Salisbury
Sanicula trifoliata (VT-S3)	Long-fruited Snakeroot	Salisbury
Solidago simplex ssp randii var monticola	Rand's goldenrod	Salisbury
Carex aquatilis var. substricta	Water sedge	Stamford
Eleocharis ovata	Ovate spike-rush	Stamford
Luzula parviflora (VT-S2S3)	Small-flowered Rush S	Warren
Peltandra virginica	Green arrow-arum	Winhall
Gentianopsis crinitia	Fringed Gentian	Winhall
Salix candida	Hoary willow	Winhall
Botrychium multifidum	Leathery grapefern	Woodstock
Carex backii	Rocky Mountain Sedge	Woodstock
Carex hitchcockiana (VT-S3)	Hitchcock's Sedge	Woodstock
Panax quinquefolius	Ginseng	Woodstock

USDA Forest Service Photo 8 by Marybeth Hanley; RFSS round-leaved orchis.

A 3-week project aimed at treating large-scale non-native invasive plant (NNIP) infestations was achieved in the Upper White River watershed and Robinson Integrated Resource Project timber sale area with partners including the Vermont Youth Conservation Corps (VYCC), CorpsTHAT, and the Upper White River Cooperative Weed Management Association, as follows: In Rochester (27 acres) of wild chervil and wild parsnip infestations were manually removed, and (0.1 acres) of wild chervil was treated with herbicide by staff. In Hancock (25 acres) of wild chervil was manually removed.

In addition to the aforementioned NNIP control projects, many other small infestations were controlled by staff, contractors, volunteers, and partner organizations (including VYCC) throughout the National Forest. While these infestations represent only a fraction of known infestations and many more are unmapped, they were targeted for control because they are in strategic locations or because they are relatively more feasible to control than others. A total of over 40.7 acres of the following species were managed in these towns:

Granville: 0.1 acres of wild chervil treated with herbicide by staff.

Hartford: six acres of autumn olive, honeysuckle, common barberry treated with herbicide by staff.

Manchester: 0.1 acres of garlic mustard and wild chervil manually removed by staff.

Mendon: 0.1 acre of Japanese knotweed treated with herbicide by staff.

Mount Holly: 2.7 acres of garlic mustard, goutweed, Japanese knotweed, wild chervil, and wall-lettuce manually removed from the West River Early Successional Habitat (ESH) timber sale area by staff and the VYCC. Later in Fall, 0.6 acres of these infestations were treated with herbicide by staff.

Mount Tabor: 0.1 acre of Japanese barberry treated via flame torch by Forest Service Fire staff.

Pittsfield: five acres of wild chervil treated with herbicide by staff.

Stockbridge: six acres of Japanese knotweed treated with herbicide by staff.

Woodstock: 20 acres of wild chervil treated with herbicide by staff.

Town of Warren Japanese Knotweed Project: In July, a partnership designed to manage Japanese knotweed infestations on Forest Service lands within the Town of Warren (and on adjacent lands in the Granville Gulf at the tops of the Mad River watershed), was initiated. The partnership, made up of the Forest Service, the Warren Conservation Commission, and the University of Vermont Internship program (within the Rubenstein School of Environment and Natural Resources), collectively removed knotweed from 32 sites in Warren (0.2 acres).

Education and volunteer events took place as follows:

A new **Pollinator Pathways** initiative was developed to facilitate local dialogue about the global pollinator crisis. Presentations that explained the crisis, its ecological ramifications, and the concept of creating "pollinator pathways", were delivered in nine towns within GMNF. Towns included Bennington, North Bennington, Brandon, Chittenden, Danby, Randolph, Rochester, Manchester and Salisbury. Resources about pollinator decline and native plant lists for creating pollinator gardens were offered and posted online for public use.

Richville Road Riparian Restoration Project: A multi-partner project to restore a portion of the Batten Kill River floodplain infested with non-native invasive plants (NNIP) took place in Manchester in October. Native trees and shrubs propagated by Hildene were planted on the floodplain by Forest Service and Hildene staff, Burr & Burton Academy students, and representatives from the Batten Kill Watershed CISMA (Cooperative Invasive Species Management Association). By introducing native species, the desired outcome is to prevent the spread of NNIP, restore the natural floodplain forest community, and maintain habitat for rare plants and animals.

Rochester: 0.2 acres of Japanese barberry were manually removed from the popular Sap Boiler Trail by staff and a group of Castleton University students studying biology and environmental conservation. Staff and students engaged in discussion about how land management, wildlife and conservation issues can be impacted by invasive species.

Forest Vegetation Management

Below is a list of accomplishments for calendar year 2023.

- Awarded timber sale contracts in Hancock, Glastonbury, Goshen, Pittsfield, Sunderland, and Weston, totaling approximately 9.2 million board feet of sawtimber and pulpwood.

- Prepared timber sales in Glastenbury, Goshen, Mount Holly, Pittsfield, Readsboro, Rochester, Stratton, and Weston, to be offered in 2024-25. These sales are associated with the Early Successional Habitat Project, the South of Route 9 Integrated Resource Project, the Robinson Integrated Resource Project, and the Somerset Integrated Resource Project.

- Prepared sites for forest regeneration by removing damaged or diseased trees on 416 acres in the Towns of Chittenden, Hancock, Rochester, and Wallingford.

- Planted approximately 6,000 trees on 45 acres to restore riparian areas and to reforest plantations of non-native tree species following harvest. Tree planting was accomplished in the Towns of Hancock, Sunderland, Rochester, and Wallingford.

- Provided maple tapping opportunities to six permit and contract holders for almost 9,000 taps in the towns of Lincoln, Stockbridge, Pomfret, Wilmington, and Mount Tabor.

- Awarded one timber sale contract and prepared two additional sales as part of the Robinson Integrated Resource Project. This project includes restoration activities and timber harvest on nearly 10,000 acres in Rochester, Hancock, Goshen, Pittsfield and Chittenden.

- Awarded two timber sale contracts and worked on preparation of one additional sale for the Early Successional Habitat Creation Project. This project includes habitat creation and timber

harvest on approximately 1,000 acres per year over the course of 15 years for an estimated 15,000 acres in total across Arlington, Dover, Glastenbury, Jamaica, Landgrove, Manchester, Mount Holly, Mount Tabor, Peru, Pownal, Readsboro, Searsburg, Shaftsbury, Stamford, Stratton, Sunderland, Wallingford, Wardsboro, Weston, Wilmington, and Woodford.

- Awarded one timber sale contract for the Somerset Integrated Resource Project. This project includes restoration activities and timber harvest on over 8,000 acres in the towns of Dover, Glastenbury, Stratton, Somerset, Searsburg, Wilmington, and Woodford.

- Analyzed potential vegetation management activities in support of the planned Telephone Gap Integrated Resource Project in the towns of Chittenden, Mendon, Killington, Stockbridge, Pittsfield, Goshen, Brandon, and Pittsford.

- Collected forest inventory data in support of vegetation management for the Early Successional Habitat Creation Project in Wardsboro.

- Sold permits for the collection of approximately 237 cords of firewood, 3,360 pounds of wild apples, and 600 lbs. of fungi.

- Treated ash trees at 24 different locations across the Forest to make those trees more resilient to emerald ash borer infestation. Trees were treated in Chittenden, Hartford, Mt. Holly, Mt. Tabor, Peru, Pittsfield, Pomfret, Pownal, Stamford, Wallingford, and Woodford. The survival of treated trees will conserve genetic diversity of local populations, contribute to genetic diversity across the landscape, and provide a seed source for future restoration efforts. This project was done in coordination with other land managers and partners including the New Hampshire Division of Forests and Lands, Vermont Department of Forests, Parks, and Recreation, Vermont Land Trust, the Appalachian Trail Conservancy, the University of Vermont, and the White Mountain National Forest.

- Continued work in restoring native trees (including butternut, American chestnut and beech) with research partners. A white oak planting was established in the town of Dorset to support white oak genetics research to better understand climate adaptation within the species. This planting will begin as a scientific study through partnership with the University of Kentucky and will transition to a seed orchard over time.

- Cooperated with the Vermont Department of Forests, Parks, and Recreation and Middlebury College in the maintenance of Butternut Seed Orchards in Brandon and Middlebury. Seedlings were cultured from disease resistant trees found on state, private, and National Forest locations and were cross pollinated to further research and efforts to develop disease resistance.

Environmental Planning

In calendar year 2023, Forest staff completed 21 site-specific National Environmental Policy Act (NEPA) decision and analysis documents for multiple resource projects designed to implement the Green Mountain National Forest Land and Resource Management Plan (Forest Plan).

Although not a completed decision, a major highlight to note includes the near completion of the preliminary environmental assessment for Telephone Gap Integrated Resource Project located in the towns of Chittenden, Mendon, Killington, Stockbridge, Pittsfield, Goshen, Brandon, Rutland Town, and Pittsford. First initiated in 2019 with field surveys and public input, the proposed action is designed to

change the existing conditions within the project area to meet Forest Plan goals, objectives, desired future conditions of forest resources. Invitation for public comments to the proposal in January resulted in over 1,600 individual responses. The preliminary environmental assessment addresses public concerns and is anticipated to be released for public review and additional comments in early to mid-2024.

Other highlights include:

- Maple Tapping Permit Project -- the issuance of special use permits to allow maple tapping on 328 acres in Lincoln.
- Ash Treatment – Emerald Ash Borer Project -- control of emerald ash borer with the use of insecticide (*emamectin benzoate*) in ash trees at 14 separate sites across 36 separate stands to make those trees more resilient to infestation, conserve genetic diversity and maintain a seed source for future ash regeneration. The sites are located across the Forest within multiple towns totaling 1,361 acres.
- Richville Road Riparian Restoration Project -- plant native seedlings and saplings in a riparian area along the Batten Kill located in Manchester in the continuing effort to restore the natural floodplain forest community, maintain habitat for rare plant and animal species, and exclude or control non-native Invasive Plants.
- Wardsboro Link #3 Trail Bridge Replacement Project -- replacement and repair of the Wardsboro Link #3 snowmobile trail bridge along Forest Trail 367 located in Stratton.
- Hogback Loop Trail Realignment Project -- realignment of a portion of the Hogback Loop Trail in Goshen connecting the Blueberry Hill Inn property to the Hogback Loop on National Forest System lands.
- Moosalamoo to Silver Lake Connector Trail Project -- construction and maintenance of a non-motorized recreation trail in Goshen, Salisbury, and Leicester connecting Moosalamoo Campground to the Silver Lake Campground.
- Silver Lake Recreation Site Improvements Project -- installation of shoreline access steps and stairways in Leicester to address erosion and sedimentation issues around the Silver Lake Campground and Silver Lake picnic area.
- Widow's Clearing Trail Realignment Project -- construction and realignment of a portion of the Widow's Clearing Trail in Ripton including the change of managed uses to include skiing, biking, pedestrian uses, and equestrian use.
- Bear Brook Winter Parking Lot Construction Project -- renovation of the former Bear Brook Picnic Ground parking area in Rochester to provide parking for users of the Brandon Gap Backcountry Ski Zones and to address safety concerns with existing parking areas along VT Route 73.
- Lincoln Gap Parking Lot Renovation Project -- renovation of the parking areas at Lincoln Gap in Lincoln to provide safe parking for up to 50 vehicles.
- Texas Falls Observation Site Renovation Project -- renovations at the Texas Falls Observation Site in Hancock including observation platforms, fully accessible trails, a bridge, and benches.
- Mountain Top Trail Improvement Project -- improve the trail surfaces and safety on the Hewitt Brook Run, Deer Run, and Boondocks trails in Chittenden within the Mountain Top Resort special use permit area, totaling about two miles of trail.

- Multiple special use permits issued for use of National Forest System lands primarily for various recreation events and outfitter guide operations across the Forest.

Fisheries Improvement

Forest staff monitored fish populations throughout the GMNF in 2023. This monitoring is part of a long-term data collection effort to understand fish population trends on the Forest. Additional sites were sampled to support the Vermont Department of Environmental Conservation. Streams in the following towns were sampled during the 2023 field season: Rochester, Mount Tabor, Winhall, Landgrove, Arlington, Somerset, Sunderland, Stamford and Peru. The Forest also maintains a network of water temperature monitoring sites across both the Rochester / Middlebury and Manchester Ranger Districts.

USDA Forest Service Photo 9 Trophy trout stocking

The Forest Service continued to work with partners on identifying and eliminating barriers to aquatic organism passage in 2023. Three barriers to native fish were removed in the Town of Fayston, Dorset, and Peru. These structures no longer prevent the free movement of fish between downstream areas into stream segments managed by the Forest Service. These projects restore connectivity to important aquatic habitat and provide infrastructure resilience to flooding. Project partners include Friends of the Mad River, the White River Partnership, USFWS, the State of Vermont, Trout Unlimited, Vermont Natural Resource Council, and the Poultney Mettowee Natural Resources Conservation District.

Stream restoration by reintroducing large wood material occurred, enhancing aquatic habitat along approximately 4.5 miles of forested streams. Adding large wood material improves habitat conditions for aquatic organisms and restores stream processes. These activities took place in Stratton, Glastenbury, and Somerset. This work was completed by a combination of Forest Service staff and via agreement with Trout Unlimited.

Riparian planting occurred at multiple sites on the GMNF to help restore aquatic habitat. The Forest assisted the White River Partnership, and CorpThat, at sites in Rochester, and Stockbridge. Forest Staff planted trees along the Battenkill River in Manchester.

The GMNF, in cooperation with the Vermont Department of Fish and Wildlife, continued the aerial stocking of brook trout to high elevation ponds at Griffith Lake and Big Mud Pond in Peru and Mount Tabor, Stratton Pond in Stratton, Little Rock Pond in Wallingford, and Branch, Bourn and Beebe Ponds in Sunderland. This stocking provides a unique fishing opportunity. Additionally, brook trout were stocked in Hapgood Pond in Peru to support our annual fishing derby.

Wildlife Habitat Improvement & Monitoring

Wildlife habitat was improved and maintained through maintenance of openings on the Forest, both permanent and temporary. Approximately 300 acres of upland openings were maintained by mowing, or

mastication in the towns of East Dorset, Granville, Hancock, Hartford, Manchester, Mount Holly, Mount Tabor, Pomfret, Rochester, Stockbridge, Barnard, Salisbury, Readsboro, Weston, Stratton, Woodford, and Winhall. In addition, apple trees, which provide high-value wildlife food, were "released" by cutting competing vegetation in old orchards in Rochester, Dorset, Pittsfield, Mount Holly, Mount Tabor, Peru, Somerset, Stratton, Weston, Wallingford, and Stamford.

USDA Forest Service Photo 10

Songbird surveys were conducted in the Lye Brook Wilderness in Manchester in partnership with the Vermont Center for EcoStudies. This is a long-term project monitoring changes in forest bird communities. Songbird surveys using new recording technology were conducted in wetlands associated with future chop-and-drop treatments and paired uplands. The objective is to monitor the songbird communities before and after chop-and-drop treatments are conducted. This summer was the initial pre-treatment survey season in Dover, Jamaica, Mount Tabor, Searsburg, Stamford, Sunderland, Weston, Wilmington, and Woodford. Peregrine falcon nest sites on or near the GMNF in Rochester, Salisbury, Stockbridge, and Wallingford continue to be monitored, and closures to protect sensitive nesting habitat continue seasonally from March 15th to August 1st each year at all sites except Wallingford. The peregrine falcon was removed from the federal list of endangered and threatened species in 1999 and the Vermont State list of endangered species in the spring of 2005; however, the species remains on the Regional Forester Sensitive Species list.

In partnership with the GMNF and Vermont Fish & Wildlife Department, Alexej Sirén, PhD, Postdoctoral Researcher with the USGS Vermont Cooperative Fish and Wildlife Research Unit at UVM's Rubenstein School of Environment and Natural Resources, developed a study on the effects of habitat, density, and climate on moose and winter tick ecology in the northeastern U.S. The primary objectives of this 2-year project are to develop and assess approaches for monitoring moose and winter ticks in the northeastern U.S. Secondary objectives will focus on 1) improving data management and workflow, 2) further refining the camera method to collect climate and ecological data, and 3) identifying the extent to which climate, habitat availability, and density-dependence influence moose-tick dynamics. Cameras and snow stakes were placed across the Forest which ties to a greater camera array stretching from New York to Maine under the auspices of NEWMN (Northeast Wildlife Monitoring Network).

Additionally, the Vermont based NEWMN group along with the Ruffed Grouse Society received a grant from the FEMC (Forest Ecosystem Monitoring Cooperative) to expand on the original moose study by deploying ARU's (Autonomous Recording Units) to understand multi-species response to forest change, and to support long term comprehensive multi-species monitoring needs.

Soil / Water Monitoring

For much of 2023, the Green Mountain and Finger Lakes National Forests have been without a permanent soil scientist. A temporary promotion was filled for the summer months by a soil scientist whose home unit is in Colorado. This specialist assisted with moving the Telephone Gap environmental analysis forward, assisted other programs with soil condition verification, and worked collaboratively with a researcher from Drexel University to better quantify long-term impacts to soils from timber harvest activities on the Green Mountain National Forest. Our Soil Program also hired two college students, both of whom live or attend school in New England, via the Pathways Internship Program. They will be invited back to complete their internship during their summers and after graduation. Upon completion of the internship requirements, they will have the opportunity to be converted to permanent seasonal soil technicians. Looking forward, a selection committee reviewed applicants for the permanent soil scientist position in mid-November and it is hoped that a new soil scientist will be onboard in the first few months of 2024. The interns benefitted from opportunities to learn more about the work the Forest Service does by spending time in the field with our silviculture, heritage, engineering, and other programs.

USDA Forest Service Photo 11 The Green Mountain and Finger Lakes National Forest also hosted a Sub-Regional Soil, Water, Air, and Fisheries Conference for the USFS Eastern Region. Specialists from the White Mountain National Forest; the Allegheny National Forest; the Monongahela National Forest; State, Private, and Tribal Forestry; the USFS Region 9 Regional Office, and the USFS Washington Office joined together at the Hub CoWorks in Rutland City to share highlights of their Forests' work, and learn from researchers. The conference also included a tour of soil and water related projects in the Rochester-Middlebury District.

An agreement was funded and renewed with the Vermont Agency of Natural Resources, Department of Environmental Conservation to partner in monitoring water quality around the Forest to track long term trends as well as potential impacts from permitted forest uses. Under this agreement, the State monitored physical and chemical parameters (e.g., temperature, pH, metals, etc.) as well biological parameters (e.g., macroinvertebrates) at sites in the towns of Rochester (Bingo Brook and Smith Brook), Shaftsbury (Little White Creek), Stamford (Roaring Brook), and Winhall (Winhall Brook). The Forest provided additional monitoring at these sites by conducting fish population monitoring at these sites as well. Once these water quality data are approved by the state, they are added to the Vermont Integrated Watershed Information System, an online database that allows for public review of water quality data around the state.

Research & Inventory Activities

USDA Forest Service Photo 12 From left to right: Cabbage white butterfly, vernal pool, assessing forest composition, Spotted salamander egg mass.

The following research and inventory were approved and conducted on the GMNF during 2023:

- A team from USGS Patuxent Wildlife Research Center led by Dr. Evan Grant and Jill Fleming conducted stream-transect dipnet surveys in a study of stream salamanders at eights sites in East Wallingford, Lincoln, Manchester, Peru, Pomfret and Weston. Species found include Eastern newt, Northern dusky salamander, Northern two-lined salamander, Red-backed salamander, and Spring salamander. Data will be used to develop Dynamic Probabilistic Species Distribution Maps.

- Dr. Jessamine Finch and Native Plant Trust conducted surveys on five species of rare plant throughout the forest. Towns include Granby, Sunderland, Warren, and Woodford.

- University of Vermont student, Valentin Kostelnik, conducted surveys on The Dome in Pownal to examine the influence of prescribed fire on nematode feeding groups. Surveys were conducted in October, 2023 and involved taking soil samples for lab analysis. Initial results indicate a positive correlation between plant-eating nematodes and burned sites, and a positive correlation between fungi-eating nematodes and non-burned sites.

- Dr. Joseph Spraker and a team of researchers with Hexagon Bio, Inc. continued research on biodiversity of fungi across the Green Mountain and Finger Lakes National Forests. They collected soil samples to study genetic diversity of the fungal communities on sites throughout the Green Mountain National Forest.

- The Green Mountain National Forest wildlife team is collaborating with Vermont Center for EcoStudies on the Second Vermont Butterfly Atlas (VBA2), a five-year survey of Vermont's butterfly communities. GMNF adopted several survey blocks and hosted a staff training on VBA2 protocol. Butterfly Surveys were conducted in Hancock, Rochester, Stratton, and Sunderland.

- Sophia Larson, graduate student at Drexel University, conducted soil surveys at the Bulley Brook timber sale in Wallingford and Little Mad Tom timber sale in Peru and Dorset. The soil surveys will correlate bulk density, soil porosity, and soil carbon to different Forest Soil Disturbance Monitoring Protocol soil disturbances.

- Maura Connelly, a Middlebury Union High School student, conducted vegetation surveys to study plant diversity zonation on Mt. Abraham in Lincoln. There was no correlation found between zonation and plant abundance, however the data collected in this study can be used to support long-term monitoring of alpine plants and the effects of climate change in Vermont.

- Dr. Paul Shaberg and his team from the Northern Research Station is studying the effects of climate and pollution on ash growth in Vermont. The team collected tree cores from ash trees in Goshen to establish historical climate-growth relations.

- A Green Mountain National Forest interdisciplinary team, led by Suzanne Gifford and Lindsay Silvia, conducted fire history investigations in Middlebury and Salisbury. The team is collaborating with Mike Stambaugh of University of Missouri, Katherine Glover of Stanford University, John Neely of White Mountain National Forest, Christ Guitermann of NOAA, and April Chiriboga of Colby College. Field work documented fire scars, fire-adapted natural communities, potential sites for paleo-ecology charcoal coring, and sample extraction for later tree ring analysis.

- Dr. Desiree Narango and her team from Vermont Center for EcoStudies conducted an inventory of insects at the candidate Research Natural Area of Blue Ridge Fen in the town of Chittenden. The team surveyed moth communities and ground beetles to contribute to our understanding of this unique natural community. The team recorded 169 unique taxa, including 77 invertebrates, 22 birds, 62 plants, three herpetofauna, three mammals, and two other organisms.

- Scott Smyers of Oxbow Associates, in collaboration with Luke Groff of the Vermont Department of Fish & Wildlife, conducted visual and audio amphibian surveys at Crystal Pond and Haystack Pond in Wilmington. The surveys confirmed breeding populations of wood frogs, spotted salamanders, green frogs, spring peeper, and eastern newts.

- Dr. Ryan Rebozo, Vermont Center for EcoStudies, led monitoring of The Dome in the town of Pownal. They assessed deer density, bird species richness, and vascular plant diversity on areas previously burned using prescribed fire and on reference areas that have not seen fire in decades. Their monitoring efforts began in 2022 and will continue into 2024 in collaboration with Raritan Community College.

Wildfire & Prescribed Fire Activities

Prescribed Fire

USDA Forest Service Photo 13 Prescribed burn on the Forest.

Fire management personnel on the GMNF, assisted by multiple internal and external partners, had a very successful and active prescribed fire season. Assisting partners traveled from as far away as Mt. Hood National Forest in Oregon. The Green Mountain National Forest Fire program also collaborated with Job Corp Students to provide valuable training opportunities and accomplish GMNF prescribed fire objectives. Resources were able to complete 36 prescribed fires here on the Green Mountain National Forest, covering 440 acres. Prescribed fire treatment objectives were focused on hazardous fuel reduction in the Forest, improving wildlife habitat, stimulating oak regeneration, and reinvigorating blueberry patches. The following are the prescribed burns that were implemented in 2023:

Prescribed Fire Table:

Date	Project Name	Acres	Ownership	Nearest Town
4/21/2023	Lewis Place (3 stands on Fassett Hill)	49.5	FS	Hancock, VT
4/21/2023	AT Donaldson field	9.4	NPS	Pomfret, VT
4/21/2023	AT Arms Hill	5.3	NPS	Pomfret, VT
4/20/2023	Widows Clearing	4	FS	Ripton, VT
4/20/2023	Widows Clearing (large)	11.6	FS	Ripton, VT
4/14/2023	Robert Frost Blueberries	7.1	FS	Ripton, VT
4/20/2023	Lyons Bridge Meadow	21.3	FS	Rochester, VT
4/21/2023	Rob Ford Meadows (Upper)	25.4	FS	Granville, VT
4/21/2023	Rob Ford Meadows (Middle)	22.8	FS	Granville, VT
4/28/2023	Apple Orchard A	4.6	FS	Winhall, VT
4/28/2023	Apple Orchard B	9.4	FS	Winhall, VT
4/28/2023	Apple Orchard C	9.4	FS	Winhall, VT
4/28/2023	Cone Brook West A	0.8	FS	Winhall, VT
4/28/2023	Cone Brook West B	5.9	FS	Winhall, VT
4/28/2023	Cone Brook West C	3.7	FS	Winhall, VT
4/28/2023	Cone Brook West E	5.5	FS	Winhall, VT
6/1/2023	Cone Brook West F	5.5	FS	Winhall, VT
5/26/2023	Wardsboro Brook A, B	12.6	FS	Stratton, VT
5/10/2023	Mad Tom EQX	10.6	FS	Peru, VT
5/9/2023	Mad Tom Peru	18.9	FS	Peru, VT
5/9/2023	Mad Tom Tom's Brook	10.8	FS	Peru, VT
4/8/2023	Bowen Hill	19	FS	Dorset, VT
4/28/2023	Pumphouse	6.8	FS	Peru, VT

Date	Project Name	Acres	Ownership	Nearest Town
4/28/2023	Snow Valley B	6.3	FS	Winhall, VT
5/7/2023	Tarbellville	24.9	FS	Mount Holly, VT
5/7/2023	Ragged Window	9.9	FS	Mount Tabor, VT
5/7/2023	3P	38.5	FS	Mount Tabor, VT
5/8/2023	Branch Pond C	9	FS	Sunderland, VT
4/28/2023	Rock Bottom A	5.5	FS	Peru, VT
4/28/2023	Rock Bottom C	11	FS	Peru, VT
4/8/2023	Mt Tabor Work Center	7.7	FS	Mount Tabor, VT
4/28/2023	Old Cemetery C	7.5	FS	Winhall, VT
4/28/2023	Old Cemetery B	6.3	FS	Winhall, VT
4/9/2023	Richville Road	28.6	FS	Manchester, VT
4/8/2023	South End East	2.7	FS	Mount Tabor, VT
4/15/2023	Crosby B	2.3	FS	Mount Tabor, VT
	TOTAL	**440.1**		

Local Wildfire Response

Green Mountain National Forest Resources also responded to four active local wildfires, totaling 4.9 acres. Resources also extinguished several abandoned campfires throughout the summer. All incidents were human caused and were fully suppressed with minimal impacts to natural resources and values-at-risk.

USDA Forest Service Photo 14 Fire on the forest.

Wildfire Table:

County	Activity	Name	Acres
Bennington	Wildfire	Bromley	0.5
Bennington	Wildfire	North Branch	1.5
Bennington	Wildfire	Kelly Stand	2.8
Addison	Wildfire	101	.1

Additional Program Highlights

USDA Forest Service Photo 15 Fire on the Forest.

In addition to prescribed fires that were completed in Vermont, fire resources also conducted 10 prescribed burns on the Finger Lakes National Forest in New York State for 397 acres. The majority of all the prescribed burns in NY were performed in the wildland urban interface. After our local season slowed down, red carded fire personnel from the Green Mountain and Finger Lakes National Forests supported Regional and National Wildfire Incidents throughout the western United States, and also provided resources to assist our Canadian neighbors in QC during their record setting fire season.

The fire management staff would like to thank the dedicated firefighters from the local fire departments that responded to and assisted in the suppression of the wildfires that occurred this past year on the GMNF.

Public Outreach / Conservation Education

USDA Forest Service Photo 16 Staff visited our friends at Boston Children's Hospital for a game of forest Bingo.

Employees of the GMNF typically spend a significant amount of time each year at local and state-wide fairs. This is a fun and refreshing way for our staff to be out and about with members of the community in full force. This past spring, summer and fall our staff again attended several community events, fairs and job fairs that were held in Vermont. Each of these venues are wonderful opportunities for us to discuss GMNF related issues with our partners and gather information from the thousands of people that we interact with.

In August, GMNF staff and the Urban Connections program worked to maintain our relationship with the patients and staff at Boston Children's Hospital by hosting our annual Forest Service Bingo game with Smokey Bear. Kids played along in person and remotely from their hospital rooms in Boston while our staff led the event. Forest Service employees provided clues for things that you might find in the forest, and players marked them on their bingo cards. Winners were treated to their choice of Smokey Bear items. In addition, we were able to offer our in person and remote Skins & Skulls interpretive program which has been a big hit with the patients at the hospital. These special events were made possible by Seacrest Studios, which broadcasts a weekly bingo game at Boston Children's. We always look forward to this event and working to grow our partnership with Boston Children's.

We are always open to working with local towns and other organizations that may be holding events that Smokey Bear or Woodsy Owl and our staff can be a part of. This fall we were able to launch our "Fire in Our Forests" program, introducing over 200 school age kids to northeast fire ecology and differentiating between harmful wildfires and helpful prescribed fires. The "Fire in Our Forests" team intends to be back in classrooms every October, and they've already started brainstorming changes for next year. Teachers can reach out to their local Ranger District to be added to the fun.

In 2024 the GMNF again partnered with Shelburne Farms to support the Forest for Every Classroom (FFEC) program which works to educate New England-based teachers about forest stewardship issues, provide tools to develop place-based service-learning curricula that meet current educational standards, and use local landscapes, resources, and community to connect classroom learning to real world application. Another critical program that we are proud to support is the Vermont Envirothon. The Vermont Envirothon helps students focus on Vermont's environmental issues related to forestry, wildlife, soils, and water resources through real-world learning in a teamwork environment. We would like to thank the Vermont Association of Conservation Districts for coordinating this important program and the many agencies and natural resource and conservation partner organizations that work hard to make the Vermont Envirothon possible. The program provides an opportunity for hands-on field experiences and activities with professionals in the field and serves as a way for high school-aged students to actively learn more about the natural world around them. We have also been working with the Vermont Department of Forest Parks and Recreation to bolster interpretive services throughout Vermont through a State and Federal partnership that offers interpretive programming on both State and

Federal land in Addison County. While this program was just recently launched, we hope to again offer new and exciting educational opportunities and guided hikes this year at Branbury State Park and in the Moosalamoo National Recreation Area.

Again, thank you for your support of your National Forest. Together, we will continue to maintain and improve this valuable treasure for generations to come. Please reach out to any of our offices to make an appointment for in-person services. You can also visit us and learn more about the GMNF at our website online: https://www.fs.usda.gov/gmfl.

Like us on Facebook: https://www.facebook.com/GreenMountainFingerLakesNF/ and follow us on X: https://twitter.com/gmfl_nfs

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/s/ John A. Sinclair; January 8, 2024

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