

Mt. Abraham and fall colors on display in Lincoln, Vermont – Green Mountain National Forest

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 support the Forest receives helps to accomplish an extremely robust program of work. 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 the 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 the people -- people in your town as well as all of the visitors who come to Vermont every year. Below is a brief summary of what happened in your National Forest throughout the past year:

Land Acquisition

The Forest grew by 378.84 acres through the acquisition of lands in the Towns of Stamford and Pownal. Through this acquisition an additional mile of the Appalachian National Scenic Trail (AT) and Long National Recreational Trail (LT) was protected. The property is also significant to hikers because it contains a portion of Broad Brook, the water source used by those staying at an adjoining shelter called the Seth Warner shelter.

Heritage Program

The Heritage Resources program was presented with a challenge last year when the Forest Archeologist, Tim Watkins, left the Forest to move with his family back to Arizona. The Forest then brought in Andrew Triplett from the Nantahala National Forest in North Carolina to assume the Forest Archeologist duties on a 90-day detail, from mid-May until mid-August. As of November 13, 2017, Andrew has returned to the GMNF to permanently assume the duties of Forest Archeologist.

Ongoing partner projects included artifact analysis conducted by the University of Vermont (UVM) Consulting Archaeology Program, the Vermont Archaeological Society (VAS), and the Forest. This multi-year collaboration again involved the analysis of thousands of artifacts collected at the Homerstone Quartzite Quarry Project near Little Rock Pond.

Other highlights include:

- Heritage Program staff worked with local volunteers to discuss and visit heritage sites within the South of Route 9 Integrated Resource Project (IRP) and Robinson IRP project areas. The results of these conversations and field trips was the recording and protection of sites that were in the vicinity of project areas within the IRPs.
- Retired Forest Service personnel and volunteers visited a number of cemeteries within the Forest Proclamation Boundary to maintain and preserve them.
- The Forest Archeologist has been working with line officers and Vermont Division for Historic Preservation staff to develop a Programmatic Agreement (PA) that would create alternative procedures for addressing the workload involved with Section 106 of the National Historic Preservation Act. Final reviews of the document are underway, and it is anticipated that the PA will soon be implemented as a result of these efforts.

Road, Dam, & 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, trails, and other facilities throughout the Forest. Some highlights are as follows:

Middlebury Office Complex: Officials announced in September that after 51 years of operations the Middlebury Ranger District Office would officially close its doors for business on Friday, September 29, 2017. While the office located across from Rosie's Restaurant along Vermont Route 7 is now closed, services provided by employees that had worked out of the facility are still available. The agency has worked to develop a partnership with the Addison County Chamber of Commerce (located at 93 Court Street in Middlebury) so that Forest Service staff can continue to have a presence with available services to the public in the Middlebury area.

Forest Facility Improvements & Maintenance: Completed on-going routine maintenance and repairs of Forest buildings and other infrastructure as well as out-year planning, design, and preparation for facility improvements. Completed the second phase of the energy retrofit for the Manchester Ranger District Office and completed an expansion of the Rochester Ranger District Office workshop.

Forest Road Cooperative Aid to Towns: Completed important road improvement and maintenance projects in the Towns of Goshen, Granville, Hancock, Rochester, and Dorset.

Forest Road Improvement Projects: Improved 5.8 miles of National Forest System roads in the Towns of Chittenden, Granville, Hancock, Lincoln, Peru, Ripton, Rochester, Stamford, Stratton and Woodford. This work included the replacement of culverts, stabilization of embankments, pavement sealing of parking lots, repairing storm damage, and resurfacing of roads.

Forest Road Maintenance: Maintained 82.5 miles of National Forest System roads in the Towns of Ripton, Rochester, Chittenden, Goshen, Lincoln, Hancock, Mount Tabor, Peru, Somerset, Sunderland, Woodford, Winhall, Stamford, Wallingford, and Readsboro. This work included grading, ditching, culvert cleaning, mowing and brushing.

Road-Stream Crossing Improvements: Completed an Aquatic Organism Passage project in the Town of Chittenden on Forest Road 97.

Recreation Programs

The following accomplishments highlight 2017 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. The Forest Service relies on a community of collaboration and wishes to thank all of our partners, such as: Vermont Association of Snow Travelers (VAST), Vermont Youth Conservation Corps (VYCC), Rochester / Randolph Area Sports Trail Alliance (RASTA), Vermont Mountain Bike Association (VMBA), Green Mountain Club (GMC), Appalachian Trail Conservancy, Town of Killington, Vermont Huts Association, Catamount Trail Association (CTA), Counseling Service of Addison County, Middlebury High School Diversified Occupations Program, Moosalamoo Association, Vermont Trail Trotters (VTT), Vermont Horse Council, and many more – including our campground hosts!

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:

Forest-wide:

- Working in partnership with numerous organizations, funding for projects on the Rochester and Middlebury Ranger Districts totaled \$103,000 in grant dollars to increase and / or improve recreation opportunities. Funded projects included: Sherburne Trail Network in Killington; Rochester Valley Trails hike / bike trail network; and Blueberry Lake Trail network in Warren. Thank you to the State of Vermont Recreational Trails Program!
- Funding received to improve forest-wide trail and bridge infrastructure resulted in bridge replacements and trail projects on the VAST and CTA trail networks. Local small businesses as well as multiple CTA trail chiefs and the Chittenden Dammers, Tweed Valley Travelers, Route 100 Snow Travelers, Foote of the Mountain, Shaftsbury SnowPilots and Green Mountain Climbers VAST clubs participated in the projects.
- A partnership with the Lexington School for the Deaf introduced students to the State of Vermont and careers with the U.S. Forest Service. Local businesses, including Liberty Hill Farm in Rochester and Baird Farm in Chittenden, exposed the Queens, New York residents to rural Vermont life.

Local Efforts:

Hancock: VYCC crews completed improvements to the Texas Falls Nature Loop trail, replacing steps and improving the trail tread. A grant-funded interpretive sign will be installed in the summer of 2018.

Killington: Funding for the Sherburne Trail Network, a multiple-use trail system designed for hiking and mountain biking was secured through the Town of Killington, public and private donations, Forest Service funding, a State of Vermont grant and Killington Mountain Bike Chapter fundraising efforts. The first 3.6 trail miles and a trailhead parking lot have been constructed.

Leicester: Improvements at the Silver Lake Campground included the designation of an equestrian site with new infrastructure installed with the support of the Vermont Horse Council. A local host family worked diligently to maintain the campground and assist visitors.

Middlebury: Students and youth from the Counseling Service of Addison County and Middlebury High School Diversified Occupations Program continued to make tread improvements to multiple trail networks, including trails in the Moosalamoo National Recreation Area.

Rochester, Chittenden and Goshen: Implementation of the Brandon Gap Backcountry Recreation Area has been completed with the support of dedicated volunteers donating over 1,300 hours of labor. This Recreation Area was created to address the lack of managed opportunities for alpine-oriented backcountry skiing and riding while aiding in the restoration of Natural Forest conditions and attempting to reduce incidents of unregulated cutting. The collaborative effort involves Forest Service employees, Dartmouth College staff and students, State of Vermont representatives, New York public land managers, Killington Search and Rescue, and the backcountry ski community, including partners: RASTA, CTA, and VTBC.

Ripton: VYCC crews completed minor improvements to the Robert Frost Interpretive Trail. The Forest Service continues to seek funding to replace the boardwalk infrastructure on this accessible trail.

Rochester: A trail network directly connected to the Rochester Ranger District Office is under construction with the support of RASTA volunteers and grant funding. Phase I was completed in the summer of 2017 with funding being sought for the implementation of Phases II and III.

Salisbury: Improvements are underway at the Moosalamoo Campground, including renovations to picnic tables and construction of a mountain bike flow trail. VYCC crews completed a relocation of the Rattlesnake Cliffs Trail, improving the trail experience.

Warren: Kicking off the summer season, Blueberry Lake was host to the VMBA's annual festival with support of the Mad River Riders and local businesses. Improvements to the Blueberry Lake Recreation Area have received grant funding with plans to construct a new trail loop in the summer of 2018. A volunteer agreement with the Warren Conservation Commission continues to improve the berry picking experience.

Wallingford: General Electric (GE) of Rutland assisted with the maintenance and pre-season clean-up at White Rocks Picnic Area for the 26th consecutive year! Work this year included installation of a new semi-permanent kiosk information panel which includes an area map and trail descriptions as well as a tribute to the local partnership between the Forest Service and GE at this site. A new 38' snowmobile bridge was constructed on the Homerstone Meadow trail to replace an older bridge which was set to be closed due to safety concerns. In partnership with GMC, a caretaker hosted visitors and maintained the Little Rock Pond Shelter and tenting area and maintained surrounding trails.

Mt Tabor: A new semi-permanent trailhead information panel was installed on the kiosk at the Little Rock Pond trailhead. This panel includes a map, area trail descriptions as well as a tribute to the partnership between the Forest Service and GMC in maintaining the Appalachian / Long Trail. A temporary snowmobile bridge was built on the Ten Kilns trail at the fourth bridge site in order to keep the trail open after the former bridge was found collapsed in November of 2016. Plans are underway to replace this temporary bridge with a designed structure in 2018.

Peru: Northshire Area Trails (NATS), a chapter of VMBA, worked along with a VYCC crew to maintain and harden sections of the Uteley Brook trail in order to provide additional biking opportunities in the area. In cooperation with GMC and VYCC, the East Dorset trail was completed providing another hiking opportunity from the Appalachian / Long trail and providing connectivity to East Dorset along the scenic Mad Tom Brook.

Dorset: The East Dorset trail was completed in partnership with GMC and VYCC and a National Trails Day Celebration was held in June in order to provide visitors an opportunity to experience the trail. This 3 mile trail provides connectivity from East Dorset to the Appalachian / Long Trail via a short walk on Forest Road 21. A total of 2.4 miles of trail has been constructed on the new Dorset Hollow trail off from Grouse Lane.

NATS and VYCC worked hard to construct over a mile of trail using only hand tools in 2017. NATS volunteered nearly 300 hours on this ongoing project this past year alone.

Manchester: Celebrating Manchester's official Appalachian Trail Community designation, Smokey Bear made an appearance at the 1st ever Vermont Trails Fest.

Winhall: New signs were installed at the Appalachian / Long Trail trailhead on Route 11/30. This high-use site will now be easier to find for those wishing to hike this historic trail! Volunteers from the Brattleboro section of GMC replaced puncheon north of William Douglas Shelter making the trail safe and enjoyable once again. GMC's Volunteer Long Trail Patrol relocated over ½ mile of the Branch Pond trail away from Bourn Brook putting the trail in a sustainable location and minimizing impacts to the local watershed.

Sunderland: In partnership with VAST, extensive trail restoration work was done on the South Mountain snowmobile trail. GMC's Volunteer Long Trail Patrol replaced over 100' of puncheon on the Branch Pond trail.

Stratton: GMC volunteers replaced puncheon on one of the GMNF's most heavily used trail between Stratton Mountain Resort and Stratton Mountain Observation tower. According to GMC's long-time caretakers at Stratton tower, nearly 10,000 people visited or passed through this site from late May – Columbus Day. Additionally, a caretaker hosted over 1,000 overnight visitors at Stratton Pond Shelter and tenting area this past summer. This caretaker also maintained the privies and surrounding trails in the area. At Grout Pond Recreation Area, VYCC crews as well as volunteers from Catamount Trail Association and Dutch Hill Alliance of Skiers and Hikers (DHASH) maintained trails for use by both hikers and skiers. Tent pads and picnic tables also underwent repairs. New trailhead information panels were installed at Stratton Pond and the AT / LT trailheads along the Kelley Stand Road.

Glastenbury: Repairs were done to the Glastenbury Cross-Over Bridge and a new 34' Glastenbury Bridge was built on the Up snowmobile trail providing continued connectivity to Glastenbury tower for snowmobiles.

Woodford: A Student Conservation Association (SCA) crew maintained and improved trail drainage and signs on the Little Pond hiking trail as well as the Bear Wallow / Bald Mountain trail.

Readsboro: Dutch Hill Alliance of Skiers and Hikers (DHASH) worked diligently to organize and become a back country chapter of the CTA and to re-establish recreation uses at the former Dutch Hill Ski Area including opening up areas on the hill for skiing and hiking.

Stamford: Volunteers from GMC along with assistance from Vermont ATV Sportman's Association (VASA) hauled in lumber and replaced significant sections of rotten puncheon along the Appalachian / Long Trail in Stamford Meadows.

Agreements:

The Forest Service continued working with partners in FY 17 through numerous agreements. Through challenge cost share agreements VAST reconstructed bridges on the Glastenbury Up and Down trail, and the Homerstone Meadows trail in Wallingford; and maintained and repaired a number of other trails and bridges. The GMC completed work on the East Dorset Trail, replaced puncheon at Stamford Stream and on the Branch Pond trail, reclaimed open areas on the AT corridor, maintained privies, provided caretakers for five shelter areas, and provided two Wilderness interns. The VYCC maintained day use areas and trails, removed vegetation in the Brandon Gap backcountry skiing area, removed non-native invasive plants, constructed sections of the Dorset Hollow and East Dorset Trails, and installed kiosks. The Lexington School for the Deaf and the VYCC American Sign Language crew provided a crew of hearing and deaf youth who worked on non-native plant removal and trail maintenance. An agreement with the Lexington School for the Deaf

provided opportunities for students to learn about public land management through hands on learning. The VMBA constructed a mountain bike flow trail and pump track at the Moosalamoo Campground and continued work on the Dorset Hollow trail. The Student Conservation Association (SCA) provided a crew to work in the Bolles Brook watershed in the Glastenbury Wilderness to address erosion issues on the Bald Mountain and Bear Wallow trails and to block unauthorized motor vehicle trails going into the Wilderness. The CTA and RASTA continued to clear lines for back country skiing at Brandon Gap; and the CTA alone with the DHASH began reopening ski lines on the Old Dutch Hill Ski Area for backcountry skiing and hiking.

Wilderness:

The GMNF continued to implement the national Wilderness Stewardship Performance (WSP) measures. Wilderness interns hired through the GMC monitored the following: solitude, user created campsites, and outfitters and guides. The interns also inventoried and removed non-native invasive plants, removed blowdowns on trails, removed abandoned flagging in the Bristol Cliffs Wilderness, and removed large unneeded objects in Breadloaf Wilderness. The Student Conservation Association (SCA) continued work on the Bolles Brook watershed in the Glastenbury Wilderness addressing erosion issues on the Bald Mountain and Bear Wallow trails and blocking unauthorized motor vehicle trails going into the Wilderness. The last two culverts identified for removal in the Battell Wilderness were removed by a VYCC crew and GMNF staff. Trampling of rare plants in the Mount Horrid area of the Battell Wilderness was identified as an issue, and an information and education approach of one to one direct contacts of known users and protection signing has been developed.

Special Uses:

The GMNF administered 101 Land Special Use Permits to standard along with 12 proposals and applications processed to a decision. The Permit authorizing operation of the Deerfield Wind Project in Searsburg and Readsboro was issued. 36 Recreation Special Use Permits were administered to standard, with 13 proposals and applications processed to a decision.

Botany Program

Staff and volunteers monitored 90 populations of 36 species of rare plants Forest-wide, including some populations just off National Forest lands.

As part of the Robinson Integrated Resource Project, staff inventoried approximately 203 acres in the towns of Rochester, Hancock, Chittenden, Stockbridge, and Pittsfield. Nine new rare plant populations were found in these inventories.

In preparation for implementation of the Somerset IRP, 1,115 acres were inventoried in the towns of Stratton, Somerset, Wilmington, Searsburg, and Woodford. Four new rare plant populations were found, and five previously documented populations were relocated.

One wildflower walk was provided for the GMC at Little Rock Pond in Wallingford. Presentations were also offered on botany and pollinators to the Stockbridge School, and to students from the Horace Mann School for the Deaf, hosted in Rochester.

As a result of grant funds received by the Upper White River Cooperative Weed Management Association, of which the GMNF is a founding member, the following activities pertaining to non-native invasive plants occurred in the towns of Granville, Hancock, Rochester, Stockbridge, and Pittsfield:

- A coordinator was hired, who wrote 12 educational articles for the Herald of Randolph, which serves all the towns of the White River Valley.

- The coordinator monitored 34 small infestations of non-native invasive plants and hand-pulled 16 of those along town and state roads as part of an “Early Detection Rapid Response” effort in these same towns; species pulled were primarily wild chervil and garlic mustard, totaling 14.6 acres.
- One garlic mustard plant pulling event was held with 20 middle school science students in Rochester.

Many small infestations were controlled by staff, contractors, and partner organizations, including Wilderness interns from the GMC, VYCC and Appalachian Trail Conference. While these infestations represent only a fraction of known infestations and many more are unmapped, they were chosen because they are in strategic locations or because they are relatively more feasible to control than others. A total of over 200 acres of the following species were controlled in these towns:

- Dorset: Garlic mustard and invasive shrubs on FR 285 (2.9 acres total)
- Goshen: Wild chervil on the road to Silver Lake and the Goshen Dam Trail (9.0 acres total)
- Granville: Wild chervil on FR 50, 55, and 101, Japanese knotweed at Rob Ford Meadows (52.1 acres total)
- Hancock: Wild chervil on FR 39, Texas Falls (6.4 acres total)
- Leicester: Wild chervil on the FR27, the road to Silver Lake (2.5 acres total)
- Manchester: Morrow honeysuckle on the Lye Brook Trail, heading into Lye Brook Wilderness (1.5 acres)
- Pomfret: Spotted knapweed at the Arms Hill access, and shrubby invasive plants at Dupuis Hill (5.9 acres total)
- Pownal: Garlic mustard, Japanese barberry, multiflora rose, Morrow honeysuckle, and common buckthorn at The Dome (50 acres total)
- Readsboro: Morrow honeysuckle at the FR73 parking lot and FT 391 Trail head, purple loosestrife (by volunteers) at Dutch Hill (3.0 acres total)
- Ripton / Lincoln: Wild chervil at Steam Mill Clearing, FR233, and FR 54 (50.6 acres total)
- Rochester: Wild chervil surrounding the Rochester District Ranger Station (2.7 acres total)
- Rutland: Garlic mustard in the parking lot of our rented facilities (0.04 acres total)
- Shrewsbury: Multiflora rose and other woody invasive plants were masticated where the AT passes through a pasture (1.8 acres).
- Stamford: Several species along roads in the Maltese timber sale area (1.1 acres total)
- Winhall: Morrow honeysuckle along the AT, and glossy buckthorn on the Rootville Trail, heading into Lye Brook Wilderness (0.8 acres total)
- Woodford: Morrow honeysuckle along FR73, and Japanese knotweed at the Rose Barn parking area (10.2 acres total)

As a result of a grant received by the newly formed Batten Kill Cooperative Invasive Species Management Association, of which GMNF is a founding member, a coordinator was hired through the AmeriCorps to plan and implement a variety of inventory, control and outreach / education events in 2017 and 2018. The CISMA incorporates parts of Rupert, Sandgate, Arlington, Shaftsbury, Dorset, Manchester, Sunderland, Glastenbury, Peru, Stratton, and Winhall.

Partnerships to produce native plant materials were developed with River Berry Farm in Fairfax, the Farm Between in Jeffersonville, and the Intervale Conservation Nursery in Burlington.

Educational articles on how to start a pollinator garden were sent to local newspapers that reached readers in many towns in Vermont.

Forest Vegetation Management

Below is a list of accomplishments for calendar year 2017:

- Approximately 11,181 CCF of sawtimber and pulpwood volume were sold in support of Vermont's forest products industry and associated employment. This volume was sold in contracts and permits, roughly equal to about 6 million board feet. Approximately 15% more timber volume was sold in 2017 than the previous year. Annual timber volume sold has increased approximately 60% over the last five years.
- The Forest awarded four timber contracts in Dover, Dorset, Peru and Readsboro in order to meet goals related to forest health, wildlife habitat, and timber production.
- Timber sales and stewardship contracts were prepared in Readsboro and Stamford associated with the South of Route 9 IRP.
- Retained receipts (timber revenue) from stewardship contracts funded non-native invasive plant control and erosion control in Granville, Dorset, and Peru.
- The Forest awarded contracts to remove damaged or diseased trees to prepare sites for reforestation on 392 acres in the towns of Granville, Hancock, Peru and Pownal.
- The Forest awarded contracts for timber stand improvement and crop tree release work on 101 acres of young forest in the towns of Granville, Ripton and Stockbridge.
- The Forest awarded contracts for planting of approximately 18,000 white pine trees on 20 acres in Hancock.
- Site preparation activities to promote oak regeneration were conducted on approximately 105 acres in Pownal. These activities include cutting competing vegetation and field trials for herbicide treatment of diseased beech.
- Our staff cooperated with 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.
- The Forest provided maple tapping opportunities to six permit and contract holders for 8,732 taps in the towns of Lincoln, Stockbridge, Pomfret, Wilmington and Mount Tabor.
- Staff developed proposed vegetation management activities for the Robinson IRP. This IRP will include restoration activities and timber harvest on nearly 10,000 acres in Rochester, Hancock, Goshen, Pittsfield and Chittenden.
- Staff began collecting forest inventory data and conducting landscape assessment in support of vegetation management under the Somerset IRP in Dover, Glastenbury, Stratton, Somerset, Searsburg, Wilmington, and Woodford.
- Permits were sold for approximately 242 cords of firewood, 552 Christmas trees, 840 lbs. of wild apples, and 600 pounds of wild mushrooms.
- Staff continued work in restoring native trees (including butternut, American chestnut and beech) with research partners. GMNF employees located "challenged" beech trees that appeared to be resistant to beech scale insect in order to test their resistance.

Environmental Planning

In calendar year 2017, Forest staff completed 26 site-specific National Environmental Policy Act (NEPA) decisions and analysis documents for multiple resource projects designed to implement the GMNF Land and Resource Management Plan (Forest Plan). Highlights to note include the decisions to relocate the Branch Pond Trail within the Lye Brook Wilderness in the towns of Sunderland and Winhall; replacement of the Village Chairlift at Sugarbush Ski Resort in the town of Warren; and release of apple trees across the Manchester Ranger District in the towns of Somerset, Searsburg, Readsboro, and Wilmington. The majority of decisions in 2017 provided permitted authority to use National Forest System lands for Recreation and Lands Special Uses such as private land access, outfitter and guide activities, maple tapping, and powerline utilities.

We continued work on the Robinson IRP located primarily in the towns of Hancock, Rochester, Stockbridge, Pittsfield, and Chittenden. The project proposed action was distributed for public review and comments in April 2017. Forest staff have been analyzing potential resource effects to be documented in an environmental assessment (EA) scheduled for public review in January 2018. A final decision for what management activities to implement is anticipated for late spring or early summer 2018.

The Somerset IRP located primarily in the towns of Dover, Glastenbury, Stratton, Somerset, Searsburg, Wilmington, and Woodford was initiated in February 2017 as Forest staff collected inventory and data to be used to develop potential multi-resource management activities. Additional inventory and initiation of public engagement for project feedback are planned for 2018 with an environmental analysis and decision scheduled for 2019.

Although the preparation and public release of the first GMNF biennial monitoring and evaluation report under the 2012 Forest Service Land Management Planning Rule (36 CFR 219) was anticipated by September 2017, it was delayed due to other Forest management priorities. The report covering monitoring of our management activities conducted from 2014-2016 is now scheduled for completion by September 2018.

Watershed Improvement

Biologists and Technicians monitored fish populations throughout the GMNF in 2017. This monitoring is part of a long term data collection effort to understand Forest fish populations. Additional sites were sampled to support the Vermont Department of Environmental Conservation. Streams in the following towns were sampled during the 2017 field season: Glastonbury, Somerset, Sunderland, Landgrove, Weston, Peru, Pawlet, West Pawlet, Rochester, Chittenden, and Granville.

The Forest Service and partners completed four Aquatic Organism Passage (AOP) projects in 2017. On the southern half of the Forest, utilizing Joint Chiefs Project funds, two AOP structures were constructed on the Mettawee River in partnership with the Natural Resource Conservation Service (NRCS), Trout Unlimited (TU), Poultney-Mettawee Conservation District, town of Dorset, U.S. Fish & Wildlife Service, and private landowners. The first of these projects occurred at the Tower Road crossing on the Mettawee River, and provided access to 4.1 miles of high quality upstream habitat. The second project occurred at the Pastures Lane crossing on the Mettawee River. This project provided 9.4 km of valuable upstream habitat. On the North Half of the Forest in the town of Pittsfield the 4th of 5 AOP projects in the Michigan Brook watershed was completed bringing this water shed closer to 100% aquatic habitat connectivity in this wild trout headwater stream. The final project was the 2nd of 3 culvert replacements on Wing Farm Brook in Rochester and was completed with the help of the White River Partnership. This project will help to enhance the restoration work already completed on the West Branch of the White River in Rochester.

In the town of Rochester the GMNF piloted the NatureWatch Freshwater Snorkeling program at the Forest Service CCC Camp, located on Route 73. Over a two week period in June, approximately 240 students spent a full day exploring aquatic insects on land and viewing native fish underwater. Reviews from teachers were stellar thanks to the crew from Southern Research Station's Center for Aquatic Technology Transfer (CATT) in Blacksburg, VA and their partner NorthBay Adventure Center. 380 students from the following towns participated in this program; Rochester, Stockbridge, Bethel, Newton, South Royalton, Randolph, Braintree, and Pomfret (Prosper Valley). The students developed a sense of connection to their National Forest, the importance of watershed health and the importance of habitat diversity for aquatic life.

Fish Stocking to support recreational fisheries occurred in the following area ponds: Griffith and Big Mud in Mount Tabor; Stratton in Stratton; Little Rock in Wallingford; Hapgood Pond in Peru, and Branch, Bourn and Beebe Ponds in Sunderland as well as King's Pond in Rochester. The Stocking at Hapgood and Kings Ponds benefitted two annual fishing derbies in Peru and Rochester respectively. The GMNF in cooperation with Vermont Department of Fish and Wildlife continued the aerial stocking of native eastern brook-trout in

high mountain wilderness ponds in the towns of Wallingford, Mt Tabor, Stratton, and Sunderland. High elevation ponds are desirable as a brook trout recreational fishery, provide a unique experience in remote wilderness areas, and could help in establishing viable fish populations.

Riparian Planting occurred at multiple sites within the White River watershed to help restore aquatic habitat. The GMNF assisted the White River Partnership and VYCC at sites in Bethel, Pittsfield, Granville, and Rochester. The combined plantings helped protect two kilometers of stream bank.

Wildlife Habitat Improvement

Wildlife habitat was improved and maintained through the creation and maintenance of early successional habitat important to many species. Nearly 400 acres of permanent upland openings were maintained by prescribed fire, mowing, or mastication in the towns of Bridgewater, East Dorset, Goshen, Granville, Hancock, Hartford, Lincoln, Manchester, Middlebury, Mount Holly, Mount Tabor, Pittsfield, Pomfret, Ripton, Rochester, Weston, Winhall, Shrewsbury, and Woodstock. Nearly 50 acres of new upland openings were created as part of timber harvests in Peru. Work to regenerate 70 acres of aspen began in Lincoln and Bristol. In addition, apple trees, which are a high-value wildlife food, were "released" by cutting competing vegetation from around old orchards in Dorset, Hancock, Granville, Mount Holly, Mount Tabor, Peru, Readsboro, Somerset, Stratton, Weston, and Winhall.

Wildlife Biologists and Technicians continued work with the Vermont Fish and Wildlife Department to monitor the populations and habitat requirements of bats in the years following the advent of White Nose Syndrome. Potential timber sale units within the boundaries of the Robinson IRP (towns of Rochester, Pittsfield, Chittenden, and Stockbridge) and the Somerset IRP (towns of Somerset and Stratton) were monitored to determine the species composition of the bats on the landscape. Staff also assisted the Vermont Fish and Wildlife Department with bat monitoring in Middlebury.

Although Peregrine falcons were removed from the Endangered Species list a few years ago, the species remains on the GMNF Regional Forester Sensitive Species list. Nest sites on the GMNF in Rochester, Salisbury, Stockbridge, and Wallingford continue to be monitored.

In a partnership with Forest Service State & Private Forestry, pollinator habitat was assessed in permanent upland openings located in Goshen, Granville, Manchester, Mount Holly, Mount Tabor, Pittsfield, Ripton, Rochester, South Wardsboro, Wallingford, and Winhall. Our objective is to begin to understand how pollinators use National Forest habitats and which management activities are most beneficial to sustaining populations within and near the Forest.

The GMNF staff assisted the Vermont Center for Ecostudies with their long-term forest bird monitoring program. Surveys were conducted twice during the breeding season at sites in Ripton and Peru. Staff also continued conducting the Stratton Route of the North American Breeding Bird Survey. This long-term, continent-wide effort is organized by the United States Geological Survey. The Stratton Route passes through the towns of Jamaica, Londonderry, Stratton, and Winhall.

The GMNF staff continued to work closely with the Vermont Fish and Wildlife Department on a black bear study in the vicinity of the Deerfield Wind Project site. The goal of this long-term effort is to determine how the project will impact black bears and their habitats. Bears were captured and tracked in the towns of Bennington, Pownal, Readsboro, Searsburg, Stamford, Whitingham, Wilmington, and Woodford.

Along with the Vermont Fish and Wildlife Department and Central Connecticut State University, the GMNF staff assisted in deploying camera traps at several sites within the Manchester Ranger District to determine the presence of the American marten, which was reintroduced to the Forest in the early 1990s after it was believed extirpated. Cameras were placed within the towns of Arlington, Bennington, Dorset, Glastenbury, Manchester, Mount Tabor, Readsboro, Somerset, Stratton, Sunderland, Weston, Winhall, and Woodford.

In another partnership with the Vermont Fish and Wildlife Department, GMNF staff has instituted a long-term program to monitor the federally-threatened Canada lynx through the use of camera traps. This program began in response to two confirmed lynx sightings in 2016 near GMNF lands. The goal is to determine if a breeding population occurs on the GMNF while also collecting valuable data on other carnivores. Camera traps were established across the GMNF in the towns of Chittenden, Hancock, Glastenbury, Granville, Killington, Leicester, Lincoln, Manchester, Mount Holly, Mount Tabor, Peru, Readsboro, Ripton, Searsburg, Somerset, Stamford, Stratton, Sunderland, Wallingford, Wardsboro, Warren, Weston, Wilmington, Winhall, and Woodford.

Soil / Water Monitoring

The Forest sponsored its first GeoCorps program intern which assisted an environmental scientist and soil scientist in a surface water monitoring project in and near the Lye Brook Wilderness Area in partnership with Vermont's DEC. Water quality in and around the Lye Brook Wilderness Area has been monitored since 1980 in an effort to document the effects of acid deposition on sensitive lakes.

Best Management Practice (BMP's) monitoring was initiated on two Forest Service activities; permanent opening creation for the Wildlife program and prescribed fire used in the maintenance of permanent openings. The National BMP Program integrates water resources protection into management activities across the landscape. The program is intended to demonstrate compliance with the Clean Water Act, which is required by the EPA and administered by the states, through rules and regulations, including Vermont's AMPs for logging jobs, and Vermont water quality standards.

Installation of a barrier on a Forest Road in the Town of Readsboro to address erosion and water quality impacts to wetlands as a result of unauthorized vehicle use.

Forest Soil Disturbance Monitoring was conducted on ten timber sale areas throughout the Forest to estimate forest management effects on the soil resource.

Long-term Ecosystem Monitoring

Between 2008 and 2011, twenty long-term ecosystem monitoring plots (LEMPs) were established on the GMNF in order to measure change in key ecosystem parameters over the next fifty years. In preparation for the next round of monitoring scheduled to take place starting in 2018, the GMNF has been working with partners to review and refine methods and identify opportunities for additional collaboration in gathering and processing monitoring data. Through an agreement in 2016 with UVM's Rubenstein School of Environment and Natural Resources (RSENR) and the Vermont Monitoring Cooperative (VMC), plots that were missing data from 2011 after Tropical Storm Irene cut off access in Peru, Wallingford, and Woodford, were sampled in 2016.

During 2015, a group of collaborators from the RSENR, the VT FPR, and the VMC developed a state-wide network of forest health monitoring plots, building on past and existing forest health monitoring initiatives, including plots on the GMNF associated with the GMNF LEMP project, the Forest Service's Forest Inventory and Analysis Program, and the State's Hardwood Health Survey. This partnership led to the inclusion of a total of 12 plots on the GMNF as part of this network, in the towns of Bristol, Lincoln, Ripton, Salisbury, Leicester, Hancock, Rochester, Wallingford, Peru, Winhall, and Woodford. Monitoring at these locations will provide insight into long-term changes occurring in relatively undisturbed forest ecosystems in response to stressors such as atmospheric deposition, climate change, and invasive pests. Monitoring of the statewide network was initiated in 2015. These plots were monitored in 2017.

Research Activities

The following is a list of research approved on the GMNF in addition to soil and forest ecosystem monitoring, which continued in 2017:

- Adrienne Brand, Biologist, Northeastern Amphibian Research and Monitoring Initiative, USGS - a research project studying the presence of the amphibian fungus *Batrachochytrium salamandrivorans* (Bsal) in wild amphibian populations, in the towns of Somerset, Woodford, Winhall, Stamford, Chittenden, Mount Tabor, Mount Holly, Weston, Pomfret, Norwich, and Bridgewater.
- Lauren Ash, Graduate Student, UVM – a survey for the presence of Ranaviruses and other amphibian disease in green frogs (*Lithobates clamitans*), wood frogs (*Lithobates sylvaticus*), spring peepers (*Pseudacris crucifer*), spotted salamanders (*Ambystoma maculatum*), and Eastern newts (*Notophthalmus viridescens*), in the vicinity of Abbey Pond in the towns of Bristol and Lincoln.
- Dr. Paul Hapeman, Assistant Professor of Biology, Central Connecticut State University – a research project studying the extent of occurrence of American marten (*Martes americana*) in southern Vermont and northwestern Massachusetts and key habitat features associated with their presence, in the towns of Woodford, Searsburg, Pownal, Stamford, and Readsboro.

Wildfire and Prescribed Fire Activities

Fire management personnel on the GMNF were very active this past season accomplishing eleven prescribed fires while suppressing or assisting in the suppression of three GMNF wildfires. Prescribed fire treatment objectives were focused on reducing forest fuels, improving wildlife habitat and reinvigorating native blueberry patches. The following are the prescribed burns that were carried out and the wildfires that were responded to this past year:

Town	Activity	Name	Acres
<u>Rochester</u>	Prescribed Fire	Rochester RD Wildflowers	2
<u>Granville</u>	Prescribed Fire	Upper White River	11
<u>Pittsfield</u>	Prescribed Fire	Mayo Meadow	30
<u>Goshen</u>	Prescribed Fire	Goshen Blueberry Mgmt	5
<u>Weston</u>	Prescribed Fire	Holt Mountain Road	2
<u>Peru</u>	Prescribed Fire	Hapgood Barrow Pit	2
<u>Peru</u>	Prescribed Fire	Snow Valley B	6
<u>Peru</u>	Prescribed Fire	Country Road C	10
<u>Winhall</u>	Prescribed Fire	French Hollow Slash Pile	10
<u>Peru</u>	Prescribed Fire	Mad Tom Slash Piles	10
<u>Woodstock</u>	Prescribed Fire	AT Brush Piles	1
<u>Manchester</u>	Wildfire	Prospect Rock	.10
<u>Mount Tabor</u>	Wildfire	FR10	.16
<u>Killington</u>	Wildfire	Deer Leap	.10
		Total Acres	90

In addition to the work that was done here in Vermont, 22 individuals were involved with providing support directly or indirectly for wildfire season here in Vermont and nationally. This support was in the form of assisting in the mobilization of resources or by directly responding to wildfires and all hazard incidents throughout the nation. These 22 individuals collectively spent approximately 565 days on these efforts.

The fire management staff would also like to thank the dedicated firemen and women from the Volunteer and Municipal fire departments that responded to and assisted in the suppression of the wildfires that occurred this past year on the GMNF.

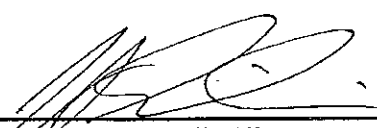
Conservation Education

Smokey Bear was invited to attend the 2017 Addison County Fair and Field Days in Addison, where he challenged passersby to a game of Emerald Ash Borer style bean bag toss. Winners of each game received a Smokey Bear bracelet and a water bottle. The bean bag toss game was played to raise awareness about Vermont's Don't Move Firewood effort, and to help the public identify the emerald ash borer and the potentially devastating effects that it could have on our Vermont landscape.

Each year, the Forestry Building at the Vermont State Fair in Rutland houses exhibits from the Vermont Department of Forest, Parks & Recreation, the GMNF, Vermont Audubon Society and many other local entities. During 2017, Smokey met his new friend; Gizmo, the new Forestry Building's mascot. Gizmo is the new greeter at the Forestry building, designed and built by using repurposed odds and ends of wood and metal parts. Smokey, his handler and Gizmo were often seen fielding questions surrounding forestry and fire safety topics in the state of Vermont. A total of 263 Smokey supporters stopped by to color a maple, beech, or ash tree leaf to place on the Kid's Forest tree.

In addition, Forest employees staffed a both focused on trail-based recreation opportunities on the GMFL at White River Valley Harvest Days in Rochester where we offered an opportunity to name a trail in the new Rochester Valley Trail network behind the Ranger Station. An eight week Junior Ranger Program was offered in Stockbridge where students at the Stockbridge Central School took part in an after school program involving numerous staff from our timber, fire, recreation, wildlife, planning and fisheries programs. A one-week Junior Ranger Program was offered to twenty students as part of the One Planet Summer Camp's Adventure Week. Campers attend from Rochester, Bethel, Stockbridge, and Hancock. Another half-day intensive Junior Snow Ranger Program was offered to students from Stockbridge, Rochester and Bethel and included outdoor activities such as snow-shoeing, skins and skulls, search and rescue, building a fire in winter conditions, dressing to stay warm, snow bubbles, and much more.

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. Our offices are open Monday through Friday from 8:00 AM until 4:30 PM. You can also visit us at our website on-line: <https://www.fs.usda.gov/gmfl>. Like us on Facebook: <https://www.facebook.com/GreenMountainFingerLakesNF/>

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