
TOWN OF DEERFIELD TRAIL INVENTORY AND PLAN



Neatline Associates
Deerfield, NH
www.nhgis.com

August 2011

CONTENTS

Project Background and Scope	1
Need.....	1
Geography	2
Public input	2
Inventory of Existing Trails.....	3
Class VI Roads	
Great Brook Trail	
Dowst-Cate Town Forest	
Lindsay Flanders Conservation Area	
Freese's Pond Trails	
Other town-owned or town-protected properties	
Recommendations.....	6

LIST OF MAPS

- Map 1. Conservation Land and Trails Overview
- Map 2. Great Brook Trail Conservation Areas
- Map 3. Great Brook Trail Inventory and Maintenance Needs
- Map 4. Dowst-Cate Town Forest
- Map 5. Dowst-Cate Trail Inventory and Maintenance Needs
- Map 6. Lindsay-Flanders and Linden Conservation Areas
- Map 7. Freese's Pond Conservation Area
- Map 8. Freese's Pond Trail Inventory and Maintenance Needs
- Map 9. Arthur Chase Town Forest
- Map 10. Arthur Chase Trail Inventory and Maintenance Needs
- Map 11. Potential Future Trails

APPENDICES

- Appendix A. Full results of online survey
- Appendix B. Summary of Conservation Parcels
- Appendix C. Photographs

Neatline Associates wishes to thank the Lamprey River Advisory Committee for funding this project. We are also grateful to the Deerfield Planning Board and Conservation Commission for their assistance, and to the many individuals, including Jerry Coogan, Wilmer Frey, Jeff Horton, Al Jaeger, Bob Kilham, Dave Linden, Joe Manzi, Fran Menard, and Kevin Verville who provided input. Thanks also to all the residents of Deerfield who responded to the online survey.

TOWN OF DEERFIELD TRAIL INVENTORY AND PLAN

PROJECT BACKGROUND AND SCOPE

The Deerfield Planning Board and Neatline Associates received a grant from the Lamprey River Advisory Committee to conduct an inventory of trails in the town of Deerfield and develop a plan for the town's existing and future trails. One purpose of the project is to examine current public access to the Lamprey River, and promote public access to, use of, and understanding of the river.

To identify the existing trails in town, we compiled in a geographic information system (GIS) the trails maps originally published by the Conservation Commission; maps of Class VI roads; and power line rights of way. We also met with a group of interested residents whose knowledge of local resources helped identify other trails, Class VI roads, and usage areas that had not been previously identified. Finally, we and volunteers collected new information about some of these trails with GPS. We also conducted an online survey to gather information about residents' usage of trails (or lack thereof), and their needs and wishes for the trail system.

We compiled the results of the inventory, public input from interested residents and the online survey, and related planning efforts, in order to develop a set of recommendations for the town. These recommendations address ways to enhance public knowledge of the trails, maximize public use of the trails, and improve trail maintenance. Additionally, we have identified areas that would be likely places for new trails to provide connections to community places of interest and access to natural features such as the Lamprey River.

NEED

The Deerfield Planning Board has hoped to examine the status and role of trails in town for some time now. In 2004, a warrant article approved at town meeting established a Class VI Roads Committee to evaluate the town's Class VI roads and develop a policy to govern their use and potential for adoption or abandonment. While it was clear that a number of trails existed in town and that residents used them for a variety of purposes, there had not been a comprehensive and systematic inventory of the trail system, or an effort to plan for its future.

Like the rest of southeastern New Hampshire, Deerfield has experienced double digit population growth for decades. From 1990 to 2000, the population grew from 3,125 to 3,678 (an increase of 17.7%). By 2008, the population had grown an additional 13.5%, to 4,201. Increased traffic on all of the main roads through town, including NH Routes 43 and 107 as well as Church Street, Ridge Road, Middle Road, South Road, and Nottingham Road, has made walking and biking on those roads more dangerous. An improved trail system could potentially provide safer walking and biking (whether for recreation or travel), foster community involvement, enhance physical fitness/wellness of youth and adults, enhance knowledge of natural resources (including the Lamprey River) in town, and promote stewardship of our natural areas and public lands.

GEOGRAPHY

By area, Deerfield is the largest town in Rockingham County (52 mi²). Despite the population growth of the last 40 years, Deerfield remains relatively rural. It is bracketed by two major state parks that are among the largest remaining unfragmented areas in southeastern New Hampshire: Pawtuckaway State Park to the east (about 5,500 acres) and Bear Brook State Park to the west (nearly 10,000 acres), both of which have most of their acreage in neighboring towns. Additionally, a group of contiguous open space parcels totaling over 1,700 acres, collectively managed by the Northwood Area Land Management Collaborative (NALMC), lies just on and across the northern border of town. Each of these three large neighboring conservation areas contains a network of trails. Deerfield also belongs to the seven-town Bear-Paw Regional Greenway, which works to expand conservation lands and public access in the region.

There are several prominent natural features in town. The Lamprey River is a third and fourth order stream as it runs through the town from its headwaters in Northwood Meadows State Park (part of the NALMC lands) south to the Raymond border. A dam near the northern junction of Routes 43 & 107 briefly impounds the river, forming the 80 acre Freese's Pond. The North Branch River, one of the Lamprey's major tributaries, is a second order stream as it crosses the southwestern portion of town, from its headwaters at Beaver Pond in Bear Brook State Park southeast to the Candia border.

Higher elevation areas include Nottingham Mountain (in the Olsen/Villnave conservation property), Adams Hill (in the Melinda Geddes conservation easement), Wheeler Hill (in the Curry conservation easement), as well as Meetinghouse Hill, Mount Delight, and Leavitt's Hill (not in conservation lands). Mount Pawtuckaway lies just east of town in Pawtuckaway State Park, and Saddleback Mountain lies just north of town, in the NALMC lands.

At least 64 parcels are currently recorded as conservation lands, with a total size of over 6,000 acres, representing nearly 20% of the total area of town. Most of these properties contain trails open to the public. Two exceptions are the Shores-Fogg easement, to which access is restricted, and the Stillbach easement, to which access is not allowed. The state of New Hampshire, through the Department of Fish & Game and the Department of Resources and Economic Development, is the largest protecting agency, with nearly 3,200 acres; the town itself protects nearly 1,800 acres. Please see Table 1 summarizing conservation parcels, ownership, and access.

Map 1 provides an overview of the geography of Deerfield, and its water bodies, conservation lands, and roads. Of particular note for understanding and evaluating the towns' trails, it also displays the Class VI roads, PSNH transmission lines, and community destinations (such as parks and schools). The map's background is a gradient representing population density, from a low of 0 to a high of 292 people per square mile.

PUBLIC INPUT

1. PUBLIC MEETINGS. A public meeting was held to discuss the potential of creating an entity such as a "Deerfield Trails Club" that could continue to highlight existing trails, pull together interested groups (such as scouts, 4H, horseback riders, snowmobile riders, etc.), and become involved in the maintenance of the trail system.
2. SURVEY. A web-based survey was developed and advertised in *The Forum*, the town website, and through word of mouth and direct email to town committee members. It received 112 responses. Respondents showed a range of interests in trail usage, including snowmobiling, ATV, horseback riding, snowshoeing, and walking. Fewer respondents were interested in identifying or developing safe walking routes to schools. Please see the full results of the survey in Appendix A.

INVENTORY OF EXISTING TRAILS

Most of Deerfield's mapped trails run through the town's more than 6,000 acres of permanently protected land (Map 1). Many of these properties explicitly allow public access; others (especially those that are conservation easements on private property) allow public access at the landowner's discretion. Some explicitly allow foot traffic, but allow the landowner to post against vehicle traffic. Appendix B summarizes the ownership and access information for these properties.

Ten years ago, the town conservation commission published a pamphlet of trail maps and descriptions of thirteen conservation properties (nine of which are grouped together as part the Great Brook conservation lands between Harvey Road and Coffeetown Road). For this project, we geo-referenced those paper maps and digitized the hand-drawn trails on them. We also used a handheld GPS (Delorme PN40) to collect new data for these trails. In most cases, the data collected by GPS was used when developing individual property trail maps.

Currently the Deerfield Conservation Commission takes the lead on most management and maintenance efforts for trails on town-owned or town-protected land, though the Board of Selectmen also has authority over these lands. In the past, some trails on these lands have been designed and built as scout projects, but maintenance has fallen to landowners and individuals associated with the conservation commission.

Public Service New Hampshire (PSNH) owns or holds easements for several transmission lines through town. With a total length of about 20 miles, these transmission line rights-of-way are continuous linear features that could be key elements of a unified town-wide trail system. Approximately 8 miles of the transmission line are owned by the utility, while the remaining 12 miles are on easements on private land. The utility-owned portion also serves as a snowmobile trail during the winter months (NH Corridor 17 in the state-wide trail system). PSNH informed us that they would be happy to work with the town on various potential uses for these lands they own. They have created policies previously that they would draw from to develop a policy for their lands in Deerfield.

Deerfield contains many miles of Class VI roads – town-owned, unmaintained roads that are subject to gates and bars. About 10.3 miles of Class VI road are recorded in the state Department of Transportation's road inventory. Volunteers who attended the public meeting held in the fall of 2010 (convened as a result of this project) identified an additional 3-4 miles of Class VI road. Table 1 (below) summarizes the length and condition of these unmaintained roads.

Table 1. Summary of Class VI Roads

Class VI Roads (from NH DOT)			
Name	Length (miles)	Uses	Other Comments
Adams Hill Rd	0.93		
Allenstown Rd	0.34	Car, bike, horse, foot	In Bear Brook State Park
Blakes Hill Rd	0.93	Car, bike, horse, foot	Very passable; does not need any major work.
Brown Rd	0.25		In conservation in Stillbach easement.
Candia Rd	0.94	4x4, bike, horse, foot	Upper portion has been improved. Very steep; wet in spring.
Cilley Rd	0.15	Not Usable	Used to be known as County Rd. Cut off by large swamp.
Dow Rd	0.13		No longer a Class VI road.
Freese Pond Rd	0.30	Car, bike, horse, foot	
Island Rd	0.31	Bike, horse, foot	Semi-barrier. Everything but cars OK.
Lang Road	0.45	Bike, foot	Very bad bridge; if culver repaired, could be more usable.
Mountain Rd	0.80	Bike, horse, foot	Connects all the way to Mountain Rd Ext.
Perkins Rd	0.51	Car, bike, horse, foot	Passable through to Blakes Hill Rd.
Perry Rd	0.47	4x4, bike, horse, foot	Passable through water.
Ridge Rd	1.91	Car (partial), bike, horse, foot	Continues to Thurston Pond to Middle Rd. Goes over dam.
Ritchie Rd	0.34		
Swett Rd	0.35		
Tandy Rd	0.91	Car, bike, horse, foot	Fairly good condition; goes into Pawtuckaway
Unknown - Gilman Rd?	0.78		
Unknown - off South Rd.	0.42		
Woodman Rd	1.02	4x4, bike, horse, foot	Goes into marsh and all the way to Rte 43.
Other Class VI (or possible Class VI) Roads (Not from DOT)			
Peter Moore Rd	1.32		From South Rd. to Currier Rd. in Candia.
Thurston Pond Rd	0.64	Bike, horse, foot	
Tinpot Rd	0.74	Bike, horse, foot	
Unknown - b/w Mt. Delight & Whittier	1.83		

DESCRIPTIVE SUMMARY OF EXISTING TRAILS ON TOWN-OWNED/MANAGED PROPERTY

New maps were prepared for the five existing trail systems on town-owned/managed property: the Great Brook Trail, Dowst-Cate Town Forest, Lindsay Flanders Conservation Area, Freese’s Pond, and Arthur Chase Town Forest. These maps will be available for download in PDF format from the town’s website. Additionally, Google maps of each of these properties and trails will also be available. Separate maps were also created depicting the results of each trail’s inspection, identifying maintenance needs and photopoint locations. Appendix C contains the photographs that are referenced in the inventory maps.

1. GREAT BROOK TRAIL (MAP 2)

The Great Brook Trail is approximately 2 miles long and runs from Harvey Road to Coffeetown Road across seven different privately-owned properties. The town holds conservation easements on each of these properties. The easements allow for public access by foot, not by motor vehicle. The trail is appropriate for hiking and nature study, not for biking, ATV, or hunting.

Condition: The trailhead at each end of the trail is marked with a sign and kiosk. One car can park nose-in at each trailhead, and a few cars more cars can park along the shoulder of the roads. The trail itself is generally well-marked and easy to follow. Some side trails, however, are indistinct and need to be re-blazed. A side trail

to The Knob and Silver Wood is labeled at its intersection and marked part of the way with stone cairns, but eventually becomes indistinct. Side trails to vernal pools and Twin Rocks are very difficult to follow. Based on town parcel records, a side trail to a scenic overlook appears to leave the protected properties, but does not have a sign indicating that public access is not allowed. The landowner may wish to clarify their wishes regarding public access to this point.

The biggest maintenance issues along the Great Brook Trail are the safety of the stream crossings. The trail crosses Great Brook several times, and at times of high water this can be quite difficult. Two of the crossings have log bridges that are in serious need of repair, removal, or replacement. All other crossings have no bridge at all, and require fording the brook. Please see the Great Brook trail inventory map for maintenance needs and photo locations (Map 3).

2. DOWST-CATE TOWN FOREST (MAP 4)

The Dowst-Cate Town Forest contains an approximately 1 ½ mile long trail loop. Because of its relatively short length, easy access, and gentle topography, this is an ideal trail for people for people who need or want a less vigorous hike. The property is owned by the town and is appropriate for hiking and nature study, but not for ATV use. (A copy of the property's deed was not available at the time of this writing, so it is unclear whether usage limitations are established in the deed.) A town forest sign marks the trailhead, and a parking area is available for two to three cars.

Condition: The trail itself is generally well-marked and easy to follow. However, at one point where it crosses a wetland, it is very easy to lose the trail. This area should be re-blazed, and possibly have a boardwalk to make it easier to cross the wetland. A small footbridge near the southeastern edge of the trail is in disrepair and should be repaired or removed. Please see the Dowst-Cate Town Forest trail inventory map for maintenance needs and photo locations (Map 5).

3. LINDSAY FLANDERS CONSERVATION AREA (MAP 6)

The Lindsay-Flanders Conservation Area is located directly behind Bicentennial Field. A simple trail, about two-thirds of a mile long (one way) runs down one edge of the property, from the ball field to Nicholls Brook. Ample parking is available at the ball field.

Condition: The trail is in very good condition, with no pressing maintenance issues. While the property extends all the way to Cole Road, during times of high water crossing Nicholls Brook is difficult. In order to use the portion south of Nicholls Brook, a footbridge would be needed. Because of the property's location in the center of town, building a footbridge could contribute to the development of a larger trail loop. (See Map 11, Potential Future Trails.)

4. FREESE'S POND TRAILS (MAP 7)

A well-maintained network of trails is located directly behind the Deerfield Community School and along the edge of Freese's Pond. The main trail loop is approximately three-quarters of a mile long, and is accessed from the far end of the playground behind the school. The trail is used by school children throughout the school year for nature study, physical education (hiking and snow-shoeing), and cross-country running.

Condition: The trails are in very good condition, with no pressing maintenance issues. A newer footbridge in very good condition is located just beyond the school's playground area. Some small shelter-like structures have been built out of sticks along the trail, and a fire ring is located in a clearing at the northeastern portion of the trail. Several signs have been posted near the Freese's Pond shoreline reminding users that wheeled vehicles are prohibited. Please see the Freese's Pond trail inventory map for photo locations (Map 8).

5. ARTHUR CHASE TOWN FOREST (MAP 9)

The Arthur Chase Town Forest contains an approximately 1.25 mile long trail loop. Parking is available for few cars at the corner where Ridge Road meets Range Road, though the trail itself begins a quarter mile down the Class VI portion of Ridge Road (bringing the total walking distance to about 1.75 miles).

Condition: There are no signs at the parking pull-off on Range Road that would inform people of the presence of the Town Forest or its trails. The trailhead—where the trail departs from Ridge Road—is very indistinct and needs a new sign. The trail is narrow and the vegetation along it is in need of pruning to widen the trail. Stream crossings further along the trail can be difficult in times of high water. Additionally, several steep sections of trail present potential erosion problems. Please see the Arthur Chase trail inventory map for maintenance needs and photo locations (Map 10).

6. PEG KING PARK

The Peg King Park contains a very short (< a quarter mile) trail that leads from the parking area on Ridge Road to Nicholls Brook. There is a picnic table next to the brook, and a footbridge crossing the brook was recently built as an Eagle Scout project. At this time, the trail does not continue beyond the bridge. However, with the permission of landowners, new trails could extend to a large beaver meadow on private land or all the way to the playground and gazebo field behind the town hall (Map 11).

Condition: The parking area, short trail to the brook, and new bridge are all in very good condition. The trail is not blazed, but it is short enough and its path clear enough not to require it.

7. BROWER PROPERTY, CATE, CLARK, CURRY, DEVRIES, DOANE/SCHORR EASEMENT, FREESE TOWN FOREST, FOWLER CONSERVATION AREAS, HART TOWN FOREST, KATHARYN WILLIAMS EASEMENT, LEVESQUE LOT, MCNEIL CONSERVATION AREA TOWN FOREST, O'NEAL LOT, WEISS TOWN FOREST, WELLS TOWN FOREST, YEATON LOT

No formal trails have yet been constructed at these town-owned or town-protected properties.

RECOMMENDATIONS

- **GET THE WORD OUT:** Maps and descriptions of existing trails need to be more readily available to the public. There is a clear interest in using the trails, but not enough knowledge of where existing trails are located. One suggested solution for this is through a stronger presence on the Town's web site, and increased availability of printed maps at town functions. Another is to make the trail maps available for download from the town website as PDFs, and possibly also as GPS-ready tracks and KMZ (Google Earth) files.
- **CREATE A "TRAILS CLUB":** There is a need for the formation of a group to coordinate management of the town's trails, maintain good relations with private land owners who have trails existing on their property, and conduct maintenance of existing trails. Local groups such as the Boy Scouts, Northwood Crank Pullers, and equestrian trail

rider clubs have taken active roles in the past in the creation of trails. Pulling these groups together to create a “Deerfield Trails Club” would be a benefit to the community. At their July 2011 strategic planning meeting, the Conservation Commission indicated that they are interested in collaborating with the Board of Selectmen and the Planning Board to create a Deerfield Trails Club as a new committee (or sub-committee, probably of the Conservation Commission) to conduct the continued maintenance of these trails. The Conservation Commission is willing to provide guidance and oversight to this group, at least one member of which would probably be from the Conservation Commission.

- **MAKE NEW TRAILS, AND FRIENDS:** There were a number of respondents to the survey who were landowners, and were open to the possibility of new trails being created on their land. These leads should be taken into consideration after a system of maintenance has been put in place.
- **CONNECT KEY POINTS:** There are key destinations in town that people have interest in connecting with trails. These areas include: downtown (Town Hall, library, playground, gazebo field), the post office, George B. White Building, The Lazy Lion, The Lovin’ Spoonful (now the Deerfield Café), Deerfield Community School, and Veasey Park.
- **WALK AROUND DOWNTOWN:** There is a need for downtown walking trails to allow for residents to move safely between the town-owned buildings either on foot or on bike. The most pressing need is for a crosswalk across Route 43/107 in front of the George B. White Building to connect the building’s after-school program, businesses, and offices with the Bicentennial Field, library, playground and the rest of “downtown” Deerfield. Because this impacts a state-owned road, constructing a crosswalk would require approval and cooperation of NH DOT. A new trail could be constructed on the town-owned property north of Bicentennial Field to cross from Route 43/107 to Candia Road, and then follow the small strip of town-owned land from Candia Road to the Gazebo Field (Map 11).
- **RIVER ACCESS:** Of all the trails in Deerfield, only the PSNH power line/snowmobile trail and the trails around Freese’s Pond (at the Deerfield Community School) are within one quarter mile of the Lamprey River (see Map 1). Public access to the river is also available through the Menard easement on James City Road, the Devries property, and from the roadside near the southern junction of Routes 43 and 107. However, despite the limited direct connection to the Lamprey River, almost all of the trails in Deerfield exist on properties that either border or cross the Lamprey River or one of its tributaries. With the approval of the landowners, there could be appropriate signage put in place to raise trail users’ awareness of their location within the Lamprey’s watershed and the role the Lamprey River plays in our community.
- **PARTNER:** PSNH is open to creating a formalized trail plan for the sections of trail that they own. Using the PSNH land would provide an opportunity to develop a plan that could add to the existing trails. Creating a trail agreement with PSNH could also result in beneficial monitoring of an area that is potentially prone to misuse.