

**TRAIL MANAGEMENT PLAN  
EXETER, NEW HAMPSHIRE**



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**IN ASSOCIATION WITH:**

Exeter Trails Committee

**PREPARED FOR:**

Town of Exeter  
Exeter Planning Department  
Exeter Conservation Commission  
Town Offices, 10 Front Street, Exeter, NH 03833

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## **1.0 INTRODUCTION and OBJECTIVE of TRAIL PLAN**

A Trail Management Committee was formed in early 2009 with the goal of creating a Trail Management Plan that the Town of Exeter can use in making decisions where recreational trails are concerned, and for the planning of future trails and trail improvements. The Committee is “Ad-Hoc”, meaning that it was created for the express purpose of creating the plan. The Conservation Commission has expressed a desire for the Committee to continue to deal with trail issues as they may arise.

The objective of the Exeter Trail Management Plan is to provide a framework for the management of Exeter’s multi-use trails where Exeter residents and visitors can participate in recreation activities. This has included a review of the town Master Plan, parcel-specific deeds and natural resource data.

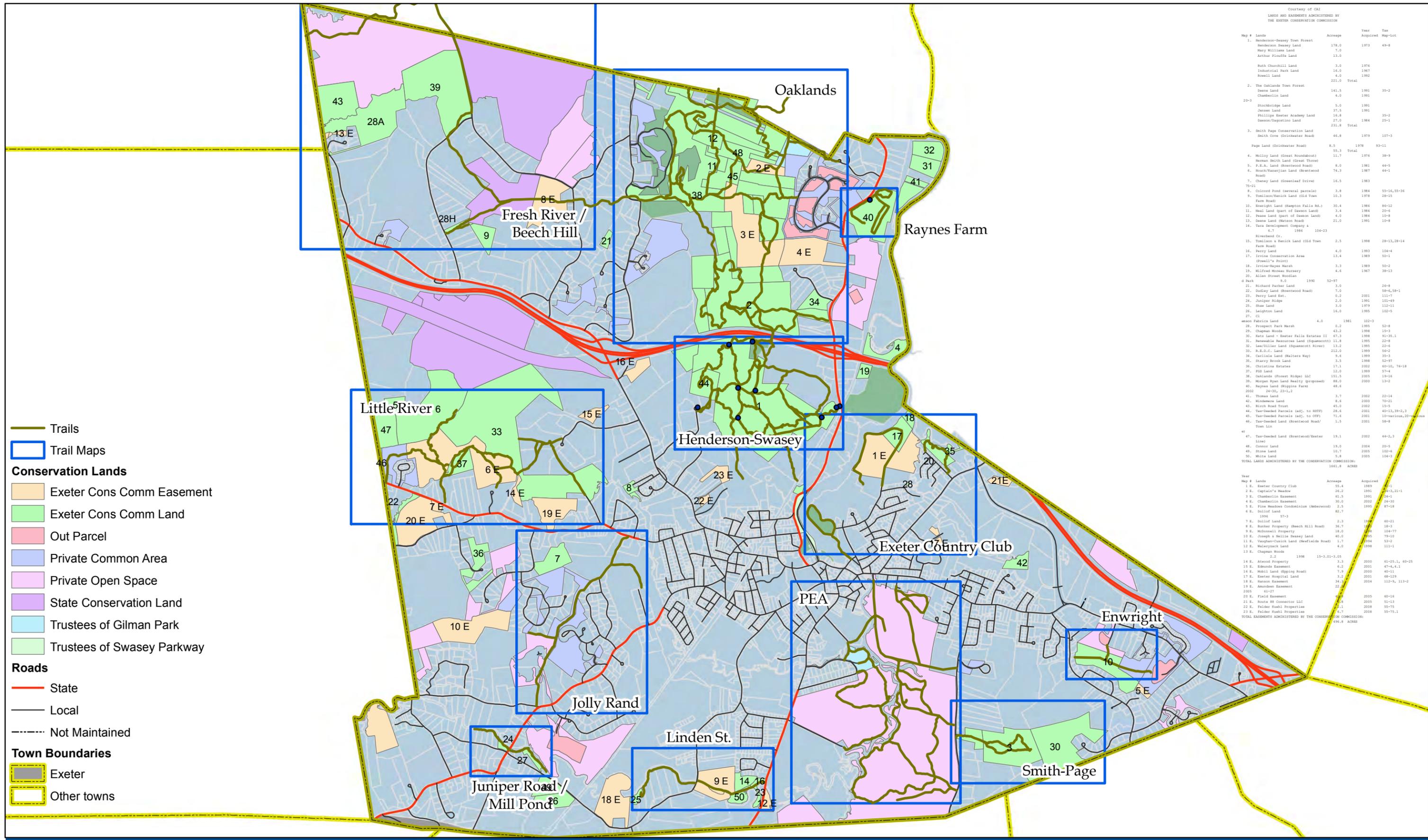
Non-motorized uses will generally include hiking, running, biking, skiing and snowshoeing. With the exception of trail maintenance equipment, motorized uses are limited to snowmobiles only, on select trails as described in this plan.

For the purposes of organization, the conservation parcels containing trails have been divided into twelve groupings. A map of these areas is presented on the following page. Detailed maps of each trail grouping are presented at the end of the plan. The trail regions are made up of individual parcels that are either owned by the Conservation Commission or are managed through a conservation easement. The Town Master Plan and town ordinances define use limitations for all conservation lands. Individual parcels may have specific use restrictions either in the deed or the easement, and these may be further defined by policies adopted by the Conservation Commission. For the purposes of managing a given trail region, the more restrictive uses have been cited. Specific use restrictions are summarized for each parcel and have been provided to the Town as a separate document. Additionally, a map of wetland crossing structures is included at the end of this document.

Many people have contributed to the written plan by posting observations on the Wiki site set up for this purpose ([exetertrailsteam wiki at my.pbworks.com](http://exetertrailsteam.wiki.my.pbworks.com)). Many others have helped by participating in the monthly trail meetings. Through this process individuals have volunteered to be stewards for the specific trail regions to provide on-the-ground input regarding trail conditions and recommended improvements. People interested in a given trail region can contact the Exeter Planning Department for a current list of stewards.

Map #	Lands	Acres	Year Acquired	Map/Lot
1.	Henderson-Swasey Town Forest	178.0	1973	48-9
	Henderson-Swasey Land	7.0		
	Mary Williams Land	13.0		
	Arthur Plouffe Land	3.0		
2.	Ruth Churchill Land	16.0	1967	
	Industrial Park Land	4.0	1962	
20-3	Stockbridge Land	5.0	1991	
	Jensen Land	37.5	1991	
3.	Phillips Exeter Academy Land	16.8	1984	35-0
	Dawson/Deighton Land	23.0	1984	25-1
4.	Smith Page Conservation Land	231.8		
	Smith Cove (Driveway Road)	46.8	1979	107-3
5.	Page Land (Driveway Road)	8.5	1978	93-11
	Holly Land (Great Roundabout)	11.7	1976	38-9
6.	Hansen Smith Land (Great Drive)	8.0	1981	44-5
	P.K.A. Land (Brentwood Road)	74.3	1987	44-1
7.	Chasey Land (Screenleaf Drive)	16.5	1983	
	Oldford Pond (several parcels)	3.8	1984	55-16, 55-36
8.	Tomlinson/Kenick Land (Old Town Farm Road)	10.3	1978	28-15
	Neal Land (part of Dawson Land)	3.4	1984	20-6
9.	Pease Land (part of Dawson Land)	4.0	1984	10-8
	Dawson Land (Buckton Road)	21.0	1991	10-8
10.	Tara Development Company & Riverland Cr.	6.7	1986	104-23
	Tomlinson & Kenick Land (Old Town Farm Road)	2.5	1988	28-13, 28-14
11.	Perry Land	4.0	1993	104-4
	Irvine Conservation Area (Powell's Point)	13.4	1989	50-1
12.	Irvine-Hope Marsh	3.3	1989	50-2
	Milfred Moore Nursery	4.6	1967	38-13
13.	Allen Street Woodland Park	9.0	1990	52-97
	Richard Parker Land	3.0		26-8
14.	Dutley Land (Brentwood Road)	7.0		58-6, 58-1
	Perry Land East	0.2	2001	112-7
15.	Juniper Ridge	2.0	1991	101-49
	Shaw Land	3.0	1979	112-11
16.	Lalington Land	16.0	1995	102-9
	CI	4.0	1981	102-3
17.	Prospect Park Marsh	0.2	1995	52-8
	Chapman Woods	43.2	1998	15-3
18.	Kata Land - Baxter Falls Estates II	87.3	1998	91-2, 91-1
	Renovated Resource Land (Spawncroft)	11.8	1995	22-9
19.	Lee/Oliver Land (Spawncroft River)	13.2	1995	22-6
	K.E.D.C. Land	212.0	1999	58-2
20.	Castine Land (Waters Way)	9.6	1989	35-3
	Starry Brook Land	3.5	1998	52-97
21.	Christina Estates	17.1	2002	60-10, 76-18
	RD Land	12.0	1989	37-4
22.	Oaklands (Forest Ridge) LLC	151.5	2005	18-16
	Morgan Ryan Land Realty (proposed)	88.0	2000	13-2
23.	Raynes Land (Higgins Farm)	48.6	2002	
	Thomas Land	3.7	2002	22-14
24.	Widmore Land	8.6	2002	70-21
	Birch Road Trust	45.0	2002	15-5
25.	Tax-Deeded Parcel (adj. to SHF)	28.6	2001	40-13, 20-2, 3
	Tax-Deeded Parcel (adj. to SHF)	71.6	2001	10-16, 20-1, 2
26.	Tax-Deeded Land (Brentwood Road/Town Line)	1.5	2001	58-8
	Tax-Deeded Land (Brentwood/Baxter Line)	19.1	2002	44-2, 3
27.	Osmer Land	19.0	2004	20-5
	Stone Land	10.7	2005	102-6
28.	White Land	5.8	2005	104-3
	TOTAL LANDS ADMINISTERED BY THE CONSERVATION COMMISSION:	1661.8	ACRES	

Map #	Lands	Acres	Year Acquired	Map/Lot
1.	Eastern Country Club	15.4	1989	
	Captain's Meadow	26.2	1991	7-3, 21-1
2.	Chamberlin Easement	61.5	1991	24-1
	Chamberlin Easement	30.0	2002	24-30
3.	Fine Meadows Condominium (Maberwood)	2.5	1995	87-18
	Dollif Land	82.7		
4.	Dollif Land	2.3	1991	60-21
	Bunker Property (Beach Hill Road)	36.7	1983	18-3
5.	McDonald's Property	18.0	1989	104-77
	Joseph & Mellicee Deasey Land	40.0	1995	79-10
6.	Vaughan-Casich Land (Newfields Road)	1.7	1994	53-2
	Waterspark Land	4.0	1998	112-1
7.	Chapman Woods	2.2	1998	15-3, 01-3, 05
	Alwood Property	3.3	2000	43-23, 1, 40-23
8.	Edmonds Easement	6.2	2001	47-4, 4, 1
	Mobil Land (Rippling Road)	7.9	2000	40-11
9.	Eastern Hospital Land	3.2	2002	48-123
	Hanson Easement	34.1	2004	112-9, 113-2
10.	Amundson Easement	22.1	2005	41-27
	Field Easement	6.0	2005	60-16
11.	Route 88 Connector LLC	2.8	2005	51-13
	Falder Knoll Properties	1.1	2008	55-75
12.	Falder Knoll Properties	6.7	2008	55-75, 1
	TOTAL EASEMENTS ADMINISTERED BY THE CONSERVATION COMMISSION:	416.8	ACRES	



- Trails
- Trail Maps
- Conservation Lands**
  - Exeter Cons Comm Easement
  - Exeter Cons Comm Land
  - Out Parcel
  - Private Common Area
  - Private Open Space
  - State Conservation Land
  - Trustees of Gilman Park
  - Trustees of Swasey Parkway
- Roads**
  - State
  - Local
  - Not Maintained
- Town Boundaries**
  - Exeter
  - Other towns

## **2.0 DESCRIPTIVE SUMMARY OF TRAIL NETWORK**

### **Enwright Land Trails**

The Enwright conservation area includes 30± acres of woodlands and wetlands located in between Hampton Falls Road (Route 88) and Hampton Road in the eastern part of Exeter. The land is relatively level and characterized by poorly drained soils and an abundance of wetlands. There are no established trails on the Enwright parcel.

Wildlife signs include small animal tracks (squirrel, chipmunk, rabbit), deer tracks, and birds (chickadee, titmouse, finch and nuthatch). Red fox have been sighted in the area, and beaver are believed to occupy one or more of the wetlands in the Enwright parcel.

Trail Description and Conditions. The primary potential trail feature of this parcel is an east-west trending sewer Right-of-Way (ROW) that is maintained by the Town of Exeter. The ROW area is cleared with a brushhog approximately every five years, creating a linear open area approximately 40 feet wide and 2,000 feet long. The clearing begins at the western edge of the Pine Meadows subdivision, and runs westerly towards Route 88. The last 1,000 feet of the ROW, towards Route 88, is not cleared and is thick with woody brush and trees.

There is a deeded easement on the entire Lot 5E of the Amberwood residential subdivision that allows access to the Enwright Parcel from that subdivision. However, this access is not entirely useable, as there is a large wetland located on the far side of Lot 5E, approximately 300 feet from the road.

Neighbors living in the Hunter Place subdivision, located off the northern side of the Enwright parcel, can access the sewer ROW from the cul-de-sac of that neighborhood. However, this access is across private land, and this access must not be used without landowner permission.



Clearing for the sewer Right-of-Way, as seen from Hunter Place.

Recommended access to the Enwright parcel is from behind Langdon Place, a retirement and assisted-living facility located off Hampton Road. Driving to the end of the access road into Langdon Place, look for a gravel area used by the development for the disposal of lawn clippings and most likely winter snow storage. There is a small trail leading from this gravel area and running in a southerly direction towards the sewer ROW.

The cleared ROW is suitable for walking, and in winter, snowshoeing and cross country skiing. Summer users should be aware the cleared ROW is covered with poison ivy, and in spring hiking may be very damp after heavy rains. Winter users should be aware there are numerous small drainages running perpendicular to the ROW, making skiing across difficult unless snow accumulations are several feet in depth. Several of these wet areas in the clearing do not fully freeze and may contain running water.

Structures. There are currently no trail-related structures on this land.

Suitability for Use.

Allowed Uses: No use restrictions. However, land is suitable for pedestrian recreation such as walking and cross-country skiing.

Restricted uses: No vehicles or structures are allowed on the Pine Meadow Condominium land.

Recommended Trail Improvements. The public access behind Langdon Place is overgrown and obscured. The access trail will need to be flagged, cleared and maintained. Volunteer Boyd Allen has indicated that he would be willing to undertake this project at some point in the future.

### **Exeter Country Club and Allen Street Trails**

This area of conservation land borders the Exeter Country Club and is known as the Irvine Conservation Area. The town of Exeter has an access easement on the Exeter Country Club land, and owns two land parcels between the club and the Squamscott River. This land runs along the Squamscott River.

Included in this trail grouping is the Allen Street trail system, shown as Parcel #35 on the Exeter Trail Network Overview map.

As shown on the map, the Exeter Country Club trail is planned to begin at the end of Jady Hill Avenue, and terminate at the Country Club parking lot. The 5<sup>th</sup> fairway must be crossed to access the Irvine Conservation Area from the end of Jady Hill Avenue. Walkers should respect the course, exercise caution, and pause at the 5<sup>th</sup> hole fairway to make sure that golfers are off the tee before crossing the fairway. However, please be advised that as of August 2009, the trail is overgrown to the point of being non-existent in most places. The original intention of the trail was to have it connect along the bank of the Squamscott River to the Powder House trail that is located behind the Exeter Mill condominiums. However, the owner of the property between the Country Club and the mill (Charles Hayes) reported to us in August 2009 that he does not want the public on his land, as he has had problems with campfires.

Trail Description and Conditions. As mentioned above, these trails are overgrown, and are currently not identifiable. The distance of the trail around the golf course, as shown on the map, is 1.1± miles. Access to the area requires bush-wacking. Users should be aware that the area of planned trails is heavily covered in poison ivy during the summer months, and that the winter months are likely the best time to enjoy this area. The Irvine parcel is brush cut annually to keep it cleared.

Structures. There are currently no trail-related structures in this area.

Suitability for Use.

Allowed Uses: Pedestrian recreation, such as walking and birding. Sledding is allowed in times of sufficient snow cover.

Restricted uses: No motorized vehicles, no horses, no camping, no dogs, no bicycles, no hunting.

Recommended Trail Improvements. The Exeter Country Club trails are in need of better delineation and improved design. The trails have become overgrown from lack of use and are overly steep in places along the river. Better trail delineation through brush clearing and trail blazes will likely result in more use, and therefore better delineation with time. The elimination of the poison ivy should be considered. The construction and maintenance of a public footpath is allowed by easement on the ECC property, shown as parcel 1E on the Trail Network Map.

**Fresh River/Beech Hill Trails**

This area is a combination of 12 parcels of land that comprise approximately 700 acres of land in total. The majority of the land is currently held by both NH Fish & Game and The Nature Conservancy, and is in the process of ownership being transferred to the Town of Exeter.

Trail Description and Conditions. There is one informal pedestrian trail on these parcels. Specifically, the trail begins from the rear of Little Brook Farm, located on the Exeter/Newfields town line, and extends to the west, following the Fresh River.

Additionally, there are non-sanctioned ATV trails located off Cuba Road (a.k.a. Cubie Road), a closed road that extends north off Beech Hill Road, at the bottom of Beech Hill and at the intersection of Old Town Farm Road. This ATV trail system is located off the western side of Cuba Road, near the closed bridge over the Fresh River. With the exception of the afore-mentioned trails, there is not a well-established trail system on these parcels.

Suitability for Use.

Allowed Uses: No restrictions. Seasonal hunting is allowed on the Webb parcel, which is owned by Fish and Game, and is located to the north and east of Beech Hill Road.

Restricted Uses: No motorized vehicles, dogs, horses, or bicycles are allowed on Parcel 29.

Structures. There is one wetland crossing on the informal pedestrian trail described above. It consists of steel grate, and has a length of approximately 20 feet in total.

Recommended Trail Improvements. No trail improvements have been identified. A site walk is recommended if it is determined that additional trails should be located in this conservation area.

### **Henderson-Swasey Town Forest Trails**

Located off Newfields Road (Route 85), this 220-acre land is comprised mainly of property given to the Town in 1971 by Mr. & Mrs. Warren Henderson, supplemented by adjacent parcels purchased by the Exeter Conservation Commission from Mrs. Eleanor Dawson and others. This forest provides a number of outdoor opportunities, including cross-country skiing, running and jogging, hiking, orienteering and mountain biking. The forest has a rich local history that includes its having been the source of the granite used in the foundations of many local Colonial and post-Revolutionary homes. The woods are characterized by numerous boulder and ledge outcrops, hummocky terrain, and a number of vernal pools and isolated wetlands. It is a fertile wildlife area whose animal populations include deer, fox, ruffed grouse, wild turkey and many species of song birds and other non-game birds.

This forest has an extensive network of existing trails. The trails are connected to the Oaklands area to the north through a large culvert that runs beneath Route 101. Trailhead parking is available at the end of the gravel drive off the west side of Route 85, just past the railroad bridge adjacent to the Exeter DPW. These trails are suitable for winter use such as snowshoeing and skiing, and are moderately well traveled in years with heavy snow. The gravel parking area is snowplowed by the Exeter DPW as annual plowing budgets and time constraints allow.

The Henderson-Swasey trails are bordered to the south by a parcel of land that is currently owned by Mr. Warren Henderson; to the west by the Exeter Industrial Park; to the north by Route 101 and the Oaklands area, and to the east by a relatively large parcel of private land (the Chamberlain Parcel) and by Newfields Road. Both the Chamberlain parcel and the Henderson parcel contain existing trails. Access to both of these private parcels is currently allowed by the property owners. However, the southern access across the Henderson parcel involves the active railroad tracks, and should not be used.

Trail Description and Conditions. The majority of the trails in Henderson-Swasey consist of upland singletrack. These trails have a considerable amount of ups and downs as they are constructed on glacial till knolls. The trails are considered to be moderate to difficult for both pedestrian use and bicycling, due to the presence of numerous rocks and roots. An example of a typical trail in the Henderson-Swasey area is shown below.



The exception is the main trail that runs generally east-west over the natural gas pipeline. This wider trail is used by gasoline maintenance vehicles, but has reverted to singletrack as most of the use is from mountain bikes.



Photo of riders on the gas-line trail. Photo courtesy of Brian Crowley, 2009.

For the purposes of this plan, and to assist members of the public that are not familiar with the relatively extensive trail network in the Henderson-Swasey conservation area, the Trails Committee has identified three recommended trail loops. These loops are shown on the Henderson-Swasey Network map that is attached to this plan with the colors green, yellow and blue. The Green Trail leaves from the railroad trestle parking lot off Route 87, and has a distance of  $1.7\pm$  miles. The Blue Trail leaves from the industrial park parking lot, and has a distance of  $1.8\pm$  miles. The Yellow Trail loop begins from the Route 101 culvert, and has a distance of  $1.0\pm$  miles. Each of these three trails should be considered to be moderate for walking, and moderate to difficult for biking. In addition, the map shows the location of numbers that will be placed at key trail intersections. Each number is unique, and will assist people in identifying their location on the trail network.

A mountain bike race has been run from the Henderson-Swasey trailhead for the past eight years. The Conservation Commission has developed a form to be completed by organizations requesting to use the town forest for an event. The form requires the organizers to obtain permission from property owners, and that a race not be run if the trails are soft or wet. Event organizers should be aware a second permit/form is required from the Town of Exeter, and needs to be approved by the Police Department. Details on event proposal requirements can be obtained by contacting the town office.

Suitability for Use.

Allowed Uses: Pedestrian recreation, such as hiking, cross-country skiing, snowshoeing, nature viewing, photography. Bicycles are allowed on established trails. Leashed dogs are permitted.

Restricted uses: Motorized vehicles are prohibited, as are horses. Hunting is not allowed in Henderson-Swasey. Off-trail riding of bicycles is not allowed.

Structures. There are two recently-constructed boardwalk-type crossings on the Deane's Dream trail, plus a short (10' long) older crossing at the uppermost section of this trail. The 2009 construction of the two boardwalk crossings was organized by volunteers Bob Kelly and Jim Clark, with permission from property owner Judy Deane, as the trail is located on private property. One of the boardwalk crossings is shown below.



Approximately four years ago, NEMBA constructed three boardwalks near the main parking area located off Newfields Road, to cross several areas of poorly drained soil. One of them is shown below.



There is one primary culvert at the northern end of this trail network. The large steel culvert runs beneath Route 101 and allows for trail users to connect to the Oaklands trail network to the north.



North-facing view of the culvert that runs beneath Route 101.

Additionally, there is an existing trail kiosk at the Railroad Trestle parking area.

Recommended Trail Improvements. The entrance to the Henderson-Swasey trail network needs improvement. Specifically, the gravel access road is poorly drained in places and would benefit from the addition of extra gravel and grading.

In addition, the Henderson-Swasey area has no organizational signage. Given the relatively large number of existing trails, a system of consistent colored blazes and numbers placed at intersections would be helpful in allowing new users to negotiate the trails along with an updated map. Volunteers Bob Kelly and Jim Clark are developing a color scheme to be presented to the trail committee. The Conservation Commission has given the go-ahead for the signage, as well as the construction of a trail kiosk at the Industrial Park trailhead and upgrading the kiosk at the Railroad Trestle trailhead.

An additional recommendation that has been discussed by the Trails Committee is to perform improvements to the trail access located out of the Norrisbrook Condominiums.

## Jolly Rand Trails

This historic trail is located in the southwestern portion of Exeter, and connects Pickpocket Road in the south to Brentwood Road in the north. In many places, the original boundaries of the trail are marked by stonewalls. Evidence of historic stone-quarrying operations can be seen along the trail, especially at each end of the trail.

The Jolly Rand trails are suitable for winter use, including hiking, snowshoeing and cross-country skiing. Both the north and south entrances to the Jolly Rand trail are signed “No motorized vehicles”.

The Jolly Rand has one branch to the west that is called the “Blue Trail”, and dead-ends in conservation land that is part of the Blackford Drive residential subdivision.



View of the entrance to the Blue Trail, a westerly branch of the Jolly Rand Trail.

In addition to the Blue Trail, there is a second trail branch in the northern portion of the Jolly Rand Trail. This second branch runs to the east, and connects to the Exeter West Condominiums, located off Ernest Avenue. This trail is not well maintained, but is generally located on solid ground and has the potential to be improved with little effort.

Parking is off White Oaks Drive, which is one of the entrances to the River Woods community, located off Kingston Road. There are four parking spaces located approximately 500 feet in from the blinking light at Kingston Road.



View of the southern entrance to the Jolly Rand Trail.

Trail Description and Conditions. The main trunk of the Jolly Rand trail is approximately 1.3 miles in length, and is currently an out-and-back trip, in that it does not have a loop. The Jolly Rand Trail generally has a usable width of approximately three feet. Selected areas are wider, reflecting the historic use of the trail as a road. The trail is fairly level, and is not considered to be strenuous.

The Jolly Rand trails are generally well maintained and well signed. There are introduction signs at both ends of the trails, and there are two small boxes at the Riverwoods (White Oaks Drive) crossing that contain a brochure for a self-guided nature walk. Numbers on the brochure correspond to small wooden plaques on the natural feature itself. The primary blaze color is white. The associated Blue Trail has rectangular blue blazes.

Suitability for Use.

Allowed Uses: Pedestrian recreation, such as walking, cross-country skiing, snowshoeing, nature viewing. Bicycles are allowed.

Restricted uses: Motorized vehicles are prohibited.

Structures. There are three existing boardwalk crossings on the Jolly Rand trail, all in the vicinity of Riverwoods. The crossings are made of pressure-treated lumber running parallel with the trail as shown in the photo below.



Recommended Trail Improvements. In May 2009, the northern portion of the trail was observed to have two areas of relatively poor drainage that could benefit from the construction of two additional boardwalk crossings of the type shown in the photograph above. A site walk is recommended during the spring season to identify these areas.

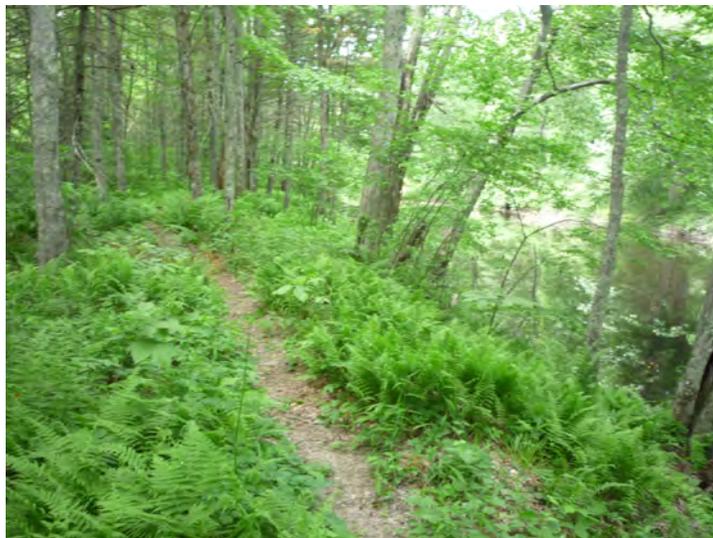
The trail could benefit from a loop. One possibility is to extend the Blue Trail further to the west, then north across conservation land associated with Blackford Drive, across Blackford Drive itself, then connect back to the Jolly Rand a distance of 2,000± feet further north from the Blue Trail.

### **Juniper Ridge – Powder Mill Road Trails**

There are two trails in this area. Each leaves from Route 111, at the point where the road crosses the Exeter River. Each trail traverses along the southern shore of the Exeter River. Activities include walking, fishing, birding, and photography. Wildlife sightings include heron, cardinals and numerous other birds.

Parking is at the intersection of Route 111 and Juniper Ridge Road. There is room on the west side of Route 111 for approximately six cars. From the parking area, the trail to the west will be referred to as the Juniper Ridge trail, and the trail to the east will be called the Powder Mill trail.

Trail Description and Conditions. Both trails are narrow, generally level, and primarily used by fishermen. They are not considered to be strenuous. Each trail has a distance of approximately one-third mile. Both trails are very scenic, but unfortunately have a lot of poison ivy.



West-facing view of the Juniper Ridge trail and the Exeter River.

Suitability for Use.

Allowed Uses: Pedestrian recreation.

Restricted uses: No use restrictions.

Structures. There are no structures on the Juniper Ridge trail, and only a small plank as a crossing on the Powder Mill trail.



Plank crossing on the Powder Mill portion of the trail.

Recommended Trail Improvements. As of June 2009, the trails are generally in good condition but in need of light maintenance such as the removal of deadfalls and branches. The Juniper Ridge portion of the trail (the westerly trail) could be improved with two boardwalk crossings, with estimated lengths of 30 and 50 feet. Alternatively, flat rocks could be placed in these areas as stepping stones, which would avoid the possibility of a crossing being washed-out from a flood, while still serving to delineate the trail.



Low-lying area of the Juniper Ridge trail that could benefit from a boardwalk crossing or stepping stones.

In addition, a portion of the Juniper Ridge trail should be clarified, in that it braids at a wetland crossing where it appears that users are not sure which direction to go. The Powder Mill portion of the trail is in need of one crossing, where a simple narrow plank has been placed down to afford a crossing of an old mill sluiceway. This is shown earlier in a photograph.

From a review of the tax maps and associated deed references, it appears that the Juniper Ridge portion of this trail system is located on private property. Additional deed research should be performed to determine whether or not there is permission for the trail to be located on private land, and no trail work should be conducted without permission of the property owners.

### **Linden Street Trails**

This trail system runs along the north side of the Exeter River between Linden Street and Route 108. The trail system begins on the McDonnell property that comprises approximately 20 acres. Activities include walking, fishing, birding, and photography. Wildlife signs include beaver, deer, Pileated Woodpecker and numerous other birds.

In the late spring, trail users are treated to a spectacular display of Dogged Tooth Violets on the north side, approximately three-quarters into the trail. The right combination of soils, filtered sunlight through the high canopy of the trees, and the moist air coming from the river has allowed the colony to thrive over the years.

The primary trail is accessed best from the parking area located off Linden Street at the Exeter River bridge. The gravel parking area accommodates about eight cars and a trash receptacle is provided for trail users. The parking area is suitable for launching canoes and kayaks into the Exeter River. This parking area is typically plowed by the Town of Exeter. Parking is also available off the side of Route 108 just before it goes over the Exeter River, traveling south.

Trail Description and Conditions. The primary trail is level and generally follows the Exeter River in an easterly direction for approximately one-half mile. The trail is heavily used by fishermen, and is not considered to be strenuous. Leaving the gravel parking area, the beginning of the trail is sandy, with a width of six feet or so.



Beginning of the Linden Street trail on the McDonnell property, near the gravel parking area.

The trail surface turns to clay and is somewhat poorly drained at a short stretch just before you get to the meadow. There is an old stone culvert connecting a large wetland on the north to the Exeter River. It is normal for this area to be wet or overflow right after the spring thaw. This portion of the trail is narrower, with a width of approximately two feet. The trail follows through the pine forest along the river, and comes out into a meadow that is part of the River Bend Parcel (7 acres) and the White parcel (6 acres). In addition, the Perry parcel (4 acres) is located in the prominent riverbend area to the east.

The second-half of this trail continues across Linden Street to the west, and runs along the south side of the Exeter River onto the Shaw land. There is a 15-foot wide fisherman's access path that runs upstream of the bridge along the Shaw land. The area along the river is heavily utilized by fishermen throughout the year and the NH Fish & Game department stocks the river with trout at several locations along this stretch. This trail peters-out after approximately 800 feet, and is need of cleanup and improvement. Previous mapping by others has shown that this portion of the trail was once approximately one-half mile long, and extended onto private property.

Suitability for Use:

Allowed uses: open to passive non-commercial recreational activity, fishing allowed.

Restricted uses: no hunting, motorized vehicles, or biking, no dogs per private landowner (9E).

Structures. There are currently no structures in this trail system.

Recommended Trail Improvements. The Exeter River is eroding close to the trail in two areas. One is about 15 feet in length and the other is approximately 35 feet. Shrub planting in these areas is recommended to help hold back the erosion. The trail should be moved several feet away from the bank at these locations.

There is one section of trail that is crossed by a small drainage brook that would benefit from a boardwalk crossing with a length of approximately 16 feet.

The portion of the trail located on the Shaw land is in need of improvement, including removal of litter and branches, trail delineation, and possibly flagging.

## **Little River Trails**

This parcel of 400± acres encompasses land along the Little River and Dudley Brook between Brentwood Road and Continental Drive. The main access points are either at the end of Continental Drive, or from a parking area located on the Dolloff property along Brentwood Road (Route 111A). Additional access points are from the end of Dolloff Farm Drive, and Old Garrison Road. The conservation area comprises land from the FGS Corporation, the Rockingham Economic Development Commission, the Houck/Kazanjian lands, and the Carroll Dolloff Easement.

To the north of the Little River trail network is the Conner Farm conservation area, which is managed by NH Fish and Game. There is a bridge from the Little River area to the Conner Farm area. The bridge access needs improvement, as it is very wet getting to it from the Little River side.

With a variety of habitats including mixed conifer and deciduous forest, wetlands and riparian habitat, the tract is home to a variety of birds, including owls, raptors and songbirds. Sightings in 2009 include: moose sign, deer, barred owl and wood duck.

Trail Description and Conditions. The trails include a primary trail coming in from the Dolloff property, and a secondary woods trail coming in from Continental Drive. The primary trail is accessed from across Brentwood Road (Route 111A), in a field owned by the Dolloff family. Parking is in the field located across the road from Mr. Dolloff's driveway. From there, follow signs for a short distance to the trailhead, which is located across Brentwood Road in Mr. Dolloff's driveway. The trail has a distance of 0.9± miles from the Dolloff trailhead to the bridge over the Little River, and a distance of 1.7± miles as a loop. The trail is considered to be moderately strenuous, due to its length, relatively high number of roots, and slightly off-camber sections along the river.

The trail off Continental Drive begins at the end of the cul-de-sac. Park along the side of the road. This entrance to the trail system is not clearly marked, although not difficult with a distance of 0.4± miles to the bridge over the Little River.

In addition to the primary trail leading from the Dolloff residence and the trail leading from Continental Drive, the Little River map shows two other trails leading in a general northwesterly direction from the crossing over Dudley Brook. These two trails are not very well marked, and users should be aware that they are difficult to follow and non-existent in places.

Suitability for Use:

Allowed uses: to be maintained as scenic open space for passive outdoor recreation. Hunting in accordance with the regulations is allowed.

Restricted uses: no wheeled vehicles.

Structures. There are currently two bridges in the Little River area. There is a relatively large bridge across the Little River that is supported by two steel beams. This bridge was repaired in 2009, as a Little River flood had previously washed the bridge off its abutments. A photograph of this bridge is shown on the following page.

A second, smaller and older bridge is located at the old Mill Site on the Dolloff property, and crossed Dudley Brook. This second bridge is in disrepair.

Recommended Trail Improvements. The older bridge over Dudley Brook needs to have the decking replaced. We estimate that the decking would cover approximately 200 square feet. The decking should consist of pressure-treated lumber.



Kristen Murphy and David O'Hearn at the Little River Bridge, spring 2009.

The access trail from the industrial park was recently cleared of small trees that had grown in. The stumps for these trees stick-up approximately four to six inches, and should be trimmed flush with the ground. Additionally, it appears that the trail from the end of the industrial park road may not be located on the Right-of-Way. Additional research is needed to clarify whether or not the trail is correctly located. If it becomes evident that the trail is not located in the Right-of-Way, then a new trail alignment should be undertaken.

The primary trail is not well defined in several areas, and could benefit from consistent and new blazes, and from three wetland crossings. In May 2009, an Eagle Scout project was approved for the purpose of upgrading the trail, including additional signage near the Dolloff parking area, improved trail marking, and the addition of a small trail to create a loop near the main bridge across the Little River. This project is scheduled to be completed by the end of 2009.

### **Oaklands Town Forest & Forest Ridge Trails**

The Oaklands Town Forest is located north of Route 101 and west of Newfields Road (Route 85). The bulk of the land was acquired through the NH Land Conservation Investment Program. The land covers approximately 230 acres of wooded glacial till uplands. The woods are characterized by numerous boulder and ledge outcrops, hummocky terrain, and a number of vernal pools and isolated wetlands.

The area has a well established trail system used primarily for hiking and mountain biking. The trails are connected to the Henderson-Swasey forest to the south through a tunnel that runs beneath Route 101. The trails also run to the north and connect to private land and to other conservation parcels such as the Chamberlain property and the Forest Ridge Subdivision, as well as trails in the Town of Newfields. Private owners have the right to restrict the use of their property. Please respect any signage or closures. The trail network is bordered to the east by three residential subdivisions (Walter's Way, Captain's Meadow, Sloan's Brook); to the north by the Town of Newfields; to the west by the Forest Ridge Subdivision and Watson Road; and to the south by Route 101.

The trails are primarily accessed from the gravel parking lot located off Route 85, to the north of the Route 101 on-ramp. The parking area is well marked with a sign reading "Oaklands Town Forest." Alternately, the trails can be accessed from a new gravel parking area located off Watson Road, at the point where it crosses beneath the regional overhead powerlines. The Watson Road parking area is under-utilized, and has a trail head located next to the telephone pole at the southern edge of the lot.

These trails are suitable for winter use such as snowshoeing, cross-country skiing, winter mountain biking, and are well-traveled and well-delineated in years with heavy snow. The northern part of the Oaklands area is traversed with a snowmobile trail that

is maintained by the Exeter Snow Hounds, as shown on the Oaklands Trail Network map. The Exeter Snow Hounds requests permission for this use on an annual basis from the Exeter Conservation Commission.

The gravel parking area located off Newfields Road is snowplowed by the Exeter DPW as annual plowing budgets and time constraints allow. The gravel parking area off Watson Road is not currently plowed. Plowing of the Watson Road parking area would allow for parking of up to three snowmobile trailers.

Trail Description and Conditions. The majority of the trails in the Oaklands consist of upland singletrack. The snowmobile trail and the powerline trail are wider and are considered to be double-track, although they are not open to jeeps or ATVs.

For the purposes of this plan, and to assist members of the public that are not familiar with the relatively extensive trail network in the Oaklands conservation area, the Trails Committee has identified a single trail loop for this area. The loop is shown in red on the attached Oaklands Trail Network map, and has a length of 5.1 miles. In addition, the map shows the location of numbers that will be placed at key trail intersections. Each number is unique, and will assist people in identifying their location on the trail network.

The access trail from the Oaklands parking lot off Route 85 was upgraded in the summer of 2009. The access trail is a former logging road that has become washed-out over the years, primarily as it follows the fall line up the hill rather than using switchbacks. The lower portion of the trail, closest to the parking lot, was upgraded in the summer of 2009 by the Exeter DPW. The upgrade consisted of the placement of compacted gravel over the trail, and the placement of two crushed-stone berms on either end, to shed water off the trail. The upper portion of the trail is still in need of restoration, including the placement of water bars and the removal of some of the

exposed rock. The Exeter Conservation Commission has requested that these improvements be made by hand as opposed to using heavy equipment, and should be completed in the next 18 months.

The access branch trail (formerly known as the Orange trail due to orange blazes) that meanders up to the large Route 101 culvert was upgraded in June 2009 through a joint project by the Greater Newfields All-Dirt Society (GNADS) and the New England Mountain Biking Association (NEMBA), with the addition of several hundred feet of boardwalk.

Suitability for Use.

Allowed Uses: Pedestrian recreation, such as hiking, cross-country skiing, snowshoeing, nature viewing, photography. Bicycles are allowed on established trails. Snowmobiles have historically been allowed on the established snowmobile trails in the winter months, as these trails are not located in the town forest. The primary snowmobile trail is shown on the Oaklands map.

Restricted uses: Motorized vehicles are prohibited, as are horses. Hunting in season is allowed in the Oaklands town forest. Snowmobiles are not allowed in the Oaklands area proper, as they are a motorized vehicle.

Structures. There are twelve bridges/boardwalks in this trail network. Two of the longer ones connect the Forest Ridge subdivision to Oaklands area to the east. One of these boardwalk crossings is shown below.



Boardwalk crossing near Forest Ridge subdivision. Photo courtesy of Brian Crowley, 2009.

Three crossings are located on the BLT trail; two are located on the Chamberlain Property (the Red Trail); two are located on a relatively new trail called the PBR, near the Newfields border; and one is located beneath the powerlines near the Captain's Meadow subdivision. Lastly, there are two longer boardwalks just to the north of Route 101. One is located north of the culvert beneath Route 101, and the other runs down from the Route 101 Culvert towards the Oaklands parking lot, on the Orange Trail (see below). Each of these crossings has been mapped as a GPS waypoint, and their locations and photographs are kept on-file at the Exeter Planning Department.

There is one primary culvert at the southern end of this trail network. The large steel culvert has an approximate diameter of eight feet, and runs beneath Route 101 and allows for trail users to connect to the Henderson-Swasey trail network to the south.

Recommended Improvements. We have identified three phases of trail improvement for the Oaklands access trail. Phase I is the addition of boardwalk to the Orange trail. This work is complete. A photograph of this work in progress is included on the following page.



Work on the new boardwalk. Photo courtesy of Brian Crowley, 2009.

Phase II is the addition of compactable gravel to the center of the main access trail. In addition, water bars should be spaced at appropriate intervals to shed water away from the trail itself. This work has been initiated at the entrance to the Oaklands lot, by the Exeter DPW, and is scheduled to be completed in 2010. Phase III is the re-routing of the upper portion of the trail as it travels south towards the Route 101 culvert. This section of trail is also an older logging road, and was never properly designed to shed water. The original trail should be abandoned, and a new parallel trail on higher ground should be utilized. This phase will also include the rock armoring and channeling of a small, seasonal, brook that crosses the trail and flows in the spring and after periods of heavy rain. All three phases have received approval from the Exeter Conservation Commission, and are scheduled for completion in 2010.

**PEA Trails**

The Phillips Exeter Academy (PEA) trails are located on a parcel of conservation land that encompasses 142 acres between Lary Lane and Crawford Avenue. The land and trails are privately owned by the Phillips Exeter Academy, and are open to the public.

The trails are soft paths and are best used for hiking. Bicycles are allowed. Roots and loose leaves are found on the paths. Use caution when running.

There is a trail map of the area available on the Town of Exeter website. The link is:  
<http://town.exeter.nh.us/phillipsexetertrail.cfm>

During spring and heavy rain the trails can be very wet. There are bridges that span areas that remain wet for most of the year.

Directions: From the Bandstand in downtown Exeter, turn right onto Water Street. Go straight through the traffic light and follow High Street to Drinkwater Road on the right. The access gate is off Drinkwater Road, and will be on your right. There is room for approximately two or three cars on the side of the road.

**Suitability for Use.**

**Allowed Uses:** The following uses are allowed on the PEA trail system:

hiking; bicycles; dogs on leash or under owner's control. Dog waste and trash must be removed.

**Prohibited Uses.** Motorized vehicles are not allowed.

### **Raynes Farm Trails**

The Raynes Farm property consists of three adjoining parcels of land, covering a total of approximately 50 acres. The property is located off Newfields Road in northern Exeter. The land consists of rolling fields and woods, with an overall slope down to the east to the Squamscott River. The property contains a large historical barn and silo located along Newfields Road. The land was put in conservation in 2002 with the assistance of the Land and Community Heritage Investment Program (LCHIP).



East facing view of the Raynes Farm fields, taken from the parking area.

The Raynes Farm property is bordered to the north by residential and undeveloped land; to the east by the Squamscott River; to the south by residential land and undeveloped fields; and to the west by Newfields Road. The property is bisected by an early railroad bed and an active rail line, and contains an old “town landing” that was locally important in the context of railroad and river transportation.

The property was historically part of the Wiggin farm, and contains an old, small cemetery with one headstone dating 1836. In the mid to late-1800s, the Exeter Cattle Market was established on the property by Mr. Chase Wiggin. This business helped

supply the Boston beef market and likely benefited other community farmers. The property was used as a part-time dairy farm by Mr. John Raynes from 1946 to the mid-1970s, and more recently has been leased to the Stuart Farm of Stratham for harvesting hay and raising corn.

The Exeter Conservation Commission completed a Management Plan for the Raynes property in 2006. A copy of the complete plan is available from the Exeter Planning Department or the Exeter Conservation Commission. Item #6 of that plan pertains to a proposed trail system on the Raynes property. The goal for this parcel is to develop a trail system that allows public access without interfering with the farming activity. The trail system has been flagged, but has not yet been completed. A map of the proposed trail network is included in the *Maps* section of this Plan. The trail will include two loops, along with an extension from the barn out to the old cemetery. One short loop crosses the stream in the northern portion of the property, and traverses in the woods and back out across the stream. The second, longer loop follows a farm road along the northern edge of the field, crosses the old railroad right-of-way, follows the field to the south, and loops back to the farm road.

Parking for the trail is located off the eastern side of Route 85, approximately 800 feet north of the red barn. The trail will be suitable for winter use, including snowshoeing and cross-country skiing.

Trail Description and Conditions. The trails on this property are not yet well established. The woods loop has been flagged, but is currently difficult to follow. The field loop is conceptual at this point in time, and will need to have grade stakes or blazes for delineation. Once established, these two trails will be relatively easy. The woods loop will have a distance of 0.3± miles, and the field loop will have a distance of 0.7± miles. In addition, the proposed trail extension from the barn out to the cemetery will cut across the field and will have a distance of 0.25± miles from the parking area.

Structures. There are currently no structures on this land.

Suitability for Use.

Allowed Uses. Pedestrian recreation

Restricted uses. Motorized and wheeled vehicles are prohibited

Recommended Improvements. An Eagle Scout completed improvements to the cemetery in 2009. This has included re-setting the headstones, clearing brush, and adding a bench.

The proposed trail system is in need of delineation. This would include blazes on trees in the wooded section, and grade-stake markers in the field. The proposed trail requires two boardwalk crossings, with lengths of approximately 20 feet each.

### **Smith-Page Conservation Land Trails**

The Smith-Page conservation area includes approximately 55 acres of woodlands and wetlands located to the east of Drinkwater Road. The land is relatively level and characterized by hummocky terrain. Much of the land is poorly drained and contains numerous small potential vernal pools.

The predominant wetland area is known as “The Cove” and forms the headwaters of a tributary to the Exeter River. A photograph of The Cove is shown on the following page. One of the unique features of The Cove is that the northern portion of the wetland drains into the Exeter River and the southern portion drains into the Taylor River. The Smith-Page conservation area is a productive wildlife area and is suitable for passive recreation such as walking, birding and photography. During a site walk in April 2009, the following wildlife and wildlife signs were observed: numerous deer scat, calls from a barred owl, a red-tailed hawk, red squirrels, and mallard ducks.

Trail Description and Conditions: The entrance to the trail is located off the eastern side of Drinkwater road, several hundred yards to the south of the entrance to the PEA trails on the opposite side of the road. There is a clearly-marked sign near a fire pond, as shown in the photographs below. The trail entrance is not clearly defined, and immediately enters a wetland area. The entrance trail meets up with what appears to be an old logging road after several hundred yards. The logging road heads easterly, then the trail branches off to the north, towards the Cove. This trail can be an out-and-back, or can be expanded into a loop that ends back at the old logging road. The trail will be relatively level, and will have a total distance of 1.1± miles if done as a loop.

Trail users should be aware that this land is open to hunting, and that it is advisable to wear blaze orange clothing during hunting season.

Structures. There are currently no trail-related structures on this land, with the exception of the entrance sign.



View of the entrance sign. Courtesy of Boyd Allen, 2009.



View of The Cove, courtesy of Boyd Allen, 2009.

Suitability for Use.

Allowed Uses: Seasonal hunting on Smith-Page proper, pedestrian recreation including hiking, snowshoeing and cross-country skiing.

Restricted uses: Hunting is not allowed on the Katz parcel (the rear of the Smith-Page conservation area). No motorized vehicles, no bicycles, no horses, no dogs, no camping.

Recommended Improvements. The entrance to the trail crosses a wetland. As this trail is open to the general public, the entrance should be improved with a boardwalk crossing. The approximate length of the crossing would be 40 feet or more. Additionally, the trail needs to be blazed and better defined, and would benefit from the creation of a loop.

## **Snowmobile Trails**

An existing snowmobile corridor is located in the northern part of Exeter, and connects the trails in Newfields (north) to the trails in Epping (west). The main snowmobile trail through Exeter is clearly shown on the *Oaklands Trail Network* map in this plan. The main corridor trail has a distance of 3.4± miles.

Trail Description and Conditions. These trails are generally wider than other trails in town, with an average width of eight feet. These trails are not strenuous, and are considered to be easy for pedestrian use in the spring, summer and fall. The trails are in good condition, and are maintained by the Exeter Snow-Hounds, a volunteer snowmobile group. The Snow-Hounds periodically request permission from property owners to use their land, and annually request access permission from the Exeter Conservation Commission. This maintenance consists of mowing beneath the power lines in the summer, clearing fallen trees in the fall, and grooming the trails in the winter. The snowmobile trails have been in use since the 1960s, and do not appear to have a significant impact on their surroundings, as their use is limited to the wintertime when the trails are frozen.

Structures. There are currently no structures related specifically to snowmobile trails.

Recommended Trail Improvements. No recommendations for trail improvements have been brought up during the monthly planning meetings.

### **3.0 TRAIL MAINTENANCE**

This section of trail maintenance applies primarily to those trails in the Henderson-Swasey forest and Oaklands, as these are the high traffic trails used by mountain bikers and hikers. For other areas, such as the Little River area and Raynes Farm, trail maintenance can be conducted on an annual basis.

Spring Maintenance. All trails should be closed during mud season. Mud season is defined as the time of spring at which the frost is leaving the ground, and typically encompasses March and April. The trails are typically soft during mud season, and susceptible to rutting from any kind of use, including walking and hiking. During mud season, all trailheads should be posted as temporarily closed by the Conservation Commission or someone appointed by the Conservation Commission. In the past, this has included the Newfields trailhead located off Conner Lane, as those trails interconnect with the Exeter trails.

Following mud season, trail maintenance should consist of the removal of organic matter from the trails, such as sticks and leaves. Removing organic matter prevents the build-up of peat soil in low areas, and prevents mud holes from developing in areas where drainage may be blocked by leaf and organic build-up. This may be accomplished by hand, or with a rake or with the limited application of a leaf blower. There has been discussion as to whether or not it is appropriate to use a leaf blower on trails. For the purposes of this plan, the current policy of the Exeter Conservation Commission is that mechanized leaf blowing is not allowed. This topic is currently under discussion between the volunteers that maintain the trail and the Conservation Commission. If this practice needs further evaluation, then we recommend that a test trail be selected, with one-half of the trail being cleared twice a year, and the other half not. Comparative trail conditions can be evaluated after one to two years.

Summer Maintenance. Typically, trail maintenance during the summer months is limited to the removal of loose rocks and exposed roots. Branches and trees may also need removal following summer thunderstorms and/or micro-bursts. Chainsaws may be used for the removal of trees and larger branches.

Fall Maintenance. Trail maintenance during the fall should consist of a one-time removal of organic matter such as sticks and leaves, as discussed in the Spring Maintenance section above.

Winter Maintenance. During the winter, trail maintenance can be accomplished by an organized group of volunteers defining the trails and keeping them open with snowshoes and cross-country skis. Mechanized grooming of winter trails is not currently conducted but could conceivably be conducted in the future if the need arises.

Branches and trees may need removal following winter ice storms. Chainsaws are allowed for the removal of trees and larger branches.

Maintenance Responsibility. It is the intention of the Trails Committee that maintenance of the individual trail networks be under the auspices of volunteer groups interested in each area, and coordinated with the Conservation Commission.

As an example, maintenance of the Oaklands and Henderson-Swasey trail networks has typically been conducted by individual volunteers and local trail groups such as the New England Mountain Biking Association (NEMBA) and the Greater Newfields All-Dirt Society (GNADS). Trail maintenance days are organized approximately once per year in the fall by NEMBA. Maintenance of the Jolly-Rand trails has been coordinated by volunteers associated with Riverwoods.

Annual maintenance of the remaining trail groupings should be organized by local volunteers and coordinated through the Exeter Conservation Commission.

Trail Maintenance Budget. For the past two years, the Town of Exeter has carried a line item of \$6,800 specifically for trail maintenance and monitoring. We have a recommendation that trail funding be endowed, presented in Section 5.2.

Annual trail maintenance days for the Fort Rock area have been funded in the past by NEMBA, including the purchase and construction of pressure-treated lumber for wetland crossings. The cost of the NEMBA trail maintenance in Fort Rock is approximately \$400 per year, according to Peter DeSantis, the Seacoast NEMBA chapter president. In addition, the Town of Exeter has an expense of \$900 per year to mow the fields in three conservation parcels (Irvine, Court and White). Projects conducted in 2009 carried an approximate cost of \$5,500, including improvements to the Oaklands entrance and work on the Green Trail in Henderson-Swasey. Given the extensive list of trail improvements that have been identified in this plan, we recommend that the Town of Exeter continue to carry an annual budget of \$6,800 for trail maintenance.

A motorized wheelbarrow would be a welcome addition to the maintenance of the trails in the Oaklands and Henderson-Swasey, with the goal of assisting volunteer trail groups. The one-time cost to purchase a motorized wheelbarrow is approximately \$1,500 and could be funded through volunteer donations. An arrangement could be made with the Exeter DPW to store the motorized wheelbarrow at their facility, which is close to the Henderson-Swasey and Oakland trailheads.

#### **4.0 RECOMMENDATIONS for TRAIL IMPROVEMENTS**

**4.1 General.** It is the goal of the Trail Committee to have trail improvements undertaken by volunteer groups. Trail improvements should be undertaken with specific approval from the Exeter Conservation Commission. New wetland crossings should be reviewed with a Qualified Wetland Scientist. If recommended by the wetland scientist, the wetland crossing should be permitted with the NH Department of Environmental Services. DES has a relatively simple form that should be completed by the wetlands scientist, and requires signature by the property owner. This form is called Notification of Trail Development Activities Having Minimum Wetland Impact. The DES website link that includes this form is:

<http://des.nh.gov/organization/divisions/water/wetlands/categories/forms.htm>

**4.2 Funding.** Funding for trail improvements within the Town of Exeter has typically come from the following sources: The Town of Exeter, administered by the Exeter Conservation Commission; The New England Mountain Bike Association; The Greater Newfields All-Dirt Society; and various donations.

It is our recommendation that a dedicated trail endowment be created. This trail endowment could be administered by the Conservation Committee, Town Treasurer, or by a permanent Trail Committee, to be formed. The endowment should consist of volunteer trail-user donations, and should be set up such that the principal balance is not accessible. Rather, monies for trail projects would be taken from interest generated by the endowment in previous years.

**4.3 Construction and Maintenance Standards.** Trail maintenance and new trail work should generally conform to standards published by the NH Bureau of Trails document entitled *Best Management Practices for Erosion Control During Trail Maintenance and*

*Construction* (<http://www.nhtrails.org/library/pdf/BMPmanual2004.pdf>) and the International Mountain Biking Association (IMBA).

While the IMBA document is geared to mountain biking trails, the construction standards will serve other uses well, such as hiking and cross-country skiing. The overarching goal of a sustainable trail is to minimize trail erosion from water. A list of trail building and maintenance resources is presented on the IMBA website, through the following link.

[http://www.imba.com/resources/trail\\_building/index.html](http://www.imba.com/resources/trail_building/index.html)

An abbreviated list of trail construction and maintenance fundamentals is summarized below, as taken and edited from the IMBA website *Designing and Building Sustainable Trails* ([http://www.imba.com/resources/trail\\_building/sustainable\\_trails.html](http://www.imba.com/resources/trail_building/sustainable_trails.html)):

Strive for three goals when designing and building trails: 1) limit environmental impacts; 2) keep maintenance requirements to a minimum; 3) avoid user conflicts.

Below is a checklist for building sustainable contour trails. A contour trail is a path that gently traverses a hill or sideslope. It's characterized by a gentle grade, undulations called grade reversals, and a tread that usually tilts or outslopes slightly toward the outer edge. These features minimize erosion by allowing water to drain in a gentle, non-erosive manner called sheet flow. When water drains in thin, dispersed sheets, dirt stays where it belongs - on the trail.

1. Do everything you can to keep the water off the tread, and users on it
2. Build on the contour and use frequent grade reversals - surf the hillside
3. Follow the half-rule: A trail's grade shouldn't exceed half the grade of the sideslope
4. Maximum grade should be 15 percent (except for natural or built rock structures)
5. Average grade should stay under 10 percent (with grade reversals)
6. Route trails to positive control points (viewpoints, water, other attractions)
7. Use bench-cut construction, and excavate soil from the hillside

- 8. For reroutes, reclaim old trail thoroughly - the visual corridor as well as the trail tread
- 9. For highly technical trails where grade will sometimes exceed 15 percent, use natural rock, rock armoring or other rock features to add challenge and improve sustainability.

Two Critical Trail Building Tips (source: IMBA website)

1. Avoid the Fall Line. Fall-line trails usually follow the shortest route down a hill - the same path that water flows. The problem with fall-line trails is that they focus water down their length. The speeding water strips the trail of soil, exposing roots, creating gullies, and scarring the environment.

2. Avoid Flat Areas. Flat terrain lures many trailbuilders with the initial ease of trail construction. However, if a trail is not located on a slope, there is the potential for the trail to become a collection basin for water. The trail tread must always be slightly higher than the ground on at least one side of it so that water can drain properly.

**4.4 Trail Marking and Signage Standards.** Trail markings such as blazes, signs and kiosks should conform to a general standard, for uniformity.

**Conservation Area Signs.** Trail regions signs will be designed with the goal of providing the public with a system for trail region identification in a way that blends with the surrounding environment. Though variation exists among the signs currently in place, we are proposing a standardized design for future signs to provide rough conformity among trail regions. Trail Regions signs will be approximately 24" x 12" routed wooden signs fixed to a two-post metal base. Lettering should be approximately 4" with the name of the conservation area capitalized. Lettering should be white with a dark green background.

**Trailhead Markers.** In order to ensure consistency with existing trailhead markers currently in use, trailhead markers will be a carved arrow on a 4"x4" wooden post as shown in the photo. The post shall be placed so that a minimum of 36" are exposed above the ground surface, and constructed of cedar or PT lumber. It is recommended that the word "TRAIL" be routed into the post, with vertical lettering.

**Kiosks.** Kiosks will generally follow existing designs of a 36" wide x 24" tall panel supported on two 4"x4" posts. Currently existing kiosks have a small overhang/roof. Designs will be two-sided where space affords to allow for trail map and use restrictions to be posted on one side and seasonal information or notices to be posted on the other.

Information presented will include a trail map, use allowances/restrictions, trail details such as length, elevation gain, and contact phone number for reporting violations, etc...

**Internal Map Signs or other Interpretive Signs.** Additional signage may be needed within the town forests at key junctures or at either side of the 101 pedestrian culvert. These signs will be designed with a 12"x12" slanted top panel. If weatherproof signs such as high-pressure laminate are not available, the top of the panel will have a plexiglass cover.

**Additional Signs.** On a case by case basis additional signs may be desired to indicate a significant resource or location. An example of this can be seen within the Little River area where the trail approaches Dudley Brook. In this case, smaller wooden carved signs would be placed similar to the Conservation Area Signs.

**Trail Blazes.** Trail Blazes will be 2"x6" painted blazes placed on trees that strike the eye, at a frequency such that not more than one is visible in either direction.

**4.5 Specific Improvements.** Below is a list of recommended trail improvements, presented in approximate order of priority based on trail traffic. This list is summarized in a spreadsheet attached at the end of this section. The spreadsheet includes the estimated lengths of boardwalk crossings, and cost estimates for construction materials and labor.

- The entrance trail from the Oaklands parking lot, and the north-south trail at the top of the hill that connects to the Route 101 culvert, requires improved drainage. These two trails were originally logging roads, and were never properly constructed to shed water. Compacted gravel was added to the beginning of the main entrance trail off Route 85 by the Exeter DPW in August 2009. Additional grading is required for portions of the remainder of the trail, especially towards the top of the climb, along with drainage swales and water bars. The north-south trail to the culvert should be re-routed to a slightly higher elevation. In addition, there is a drainage swale that crosses the north-south trail, just to the north of the intersection at the top of the hill, that requires a more defined channel and/or rock armoring. In addition, the Oaklands area requires better signage. All of this entrance trail work was authorized by the Conservation Commission in August 2009.
- A trail kiosk should be installed at the Industrial Park entrance to Henderson-Swasey. In addition, the existing kiosk at the Railroad Trestle parking area is in need of renovation, and should be re-oriented to face the parking area. The entire Henderson-Swasey area also requires improved signage. All of this work was authorized by the Conservation Commission in August 2009.

- The parking area for the Little River Trail System at the end of Continental Drive should be improved. This would delineation of a parking area, possibly with gravel and a kiosk, and signage to the entrance to the trail. The main trail itself is in need of two wetland crossings, with lengths of approximately 30 feet each. In addition, the trail that comes in from Continental Drive could benefit from blazes and additional delineation. Improvements to the main bridge over the Little River need to be completed. The decking on the old bridge at the Little River mill site needs replacement.
- The Raynes Farm trails need to be re-flagged and cut. A portion of the trail runs along the hay field maintained by Stuart Farm. This portion of the trail should be marked with grade stakes. Three wetland crossings are required, with approximate lengths of 20 feet each.
- A sign should be installed at the entrance to the Smith-Page Trail Network that notifies users that hunting is allowed, and that pedestrians should wear blaze orange. Additionally, the proposed trail requires blazes, and the entrance would benefit from a boardwalk-type crossing with a length of approximately 40 feet.
- The Jolly Rand trail requires one additional boardwalk crossing, with an approximate length of 35 feet.
- The Juniper Ridge and Powder Mill Trails would benefit from a trail day to provide better delineation of the trails. Additionally, the trail should be improved with two boardwalk crossings on the order of 40 feet each. Portions of this trail system are located on private property. No trail work should be conducted without permission of the property owners.

- The Exeter Country Club trails and the Linden Street Trails would each benefit from a trail day. For the Linden Street Trails, this would include cutting dead falls with a chainsaw and improved delineation of the trail as it crosses two fields.
- The parking area to the Oaklands, located off Watson Road, would benefit from better signage. This parking area is under-utilized.

**Exeter Trail Plan Project Recommendations. July 2009.**

<u>Location</u>	<u>Task</u>	<u>Length (ft)</u>	<u>Materials (\$)</u>	<u>Labor (\$)</u>	<u>Priority</u>	<u>Notes</u>
ECC	clear trail			280	8	need site walk
Henderson-Swasey	kiosk at industrial park		250	140	2	
Henderson-Swazey	signage & kiosk renovation		550	140	2	
Jolly Rand	boardwalk crossings (1)	35	175	280	6	
Juniper Ridge	boardwalk crossings (2)	80	400	560	7	need site walk
Juniper Ridge	deed review		0	0	7	
Little River	replace mill site bridge decking		700	560	3	
Little River	finish bridge repair		100	0	3	
Little River	boardwalk crossings (2)	60	300	560	3	
Oaklands	signage		300	280	1	
Oaklands	add compacted gravel and waterbars		2600	2700	1	site walk with DPW
Oaklands	trail re-route (upper Hamburger Hill)		0	350	1	no materials
Raynes	boardwalk crossings (2)	40	200	560	4	
Smith-Page	boardwalk crossings (1)	40	200	560	5	
Smith-Page	improved signage & bench		300	280	5	
COST TOTAL			\$5,775	\$6,970		

Notes:

Boardwalk materials cost assumes \$50 for each ten foot section (\$5/foot). Labor at \$35 per hour.

Mill site decking assumes that foundation joists are ok. Need 200 square feet of PT decking & nails/lag bolts.

Oaklands gravel repair assumes three days at \$900 per day for labor, \$600 per day for equipment, plus mobe (\$300) and gravel (\$500)

## **5.0 RECOMMENDATIONS for NEW or INTERCONNECTED TRAILS**

One of the goals of this section is to propose new or interconnected trails that will serve to connect trail regions in town. Although no proposals for significant new trails were presented to the Trails Committee during the monthly meetings to date, we do present several suggested trail connections below, along with one suggested new trail in the Henderson-Swasey area, and another in the Oaklands area.

Henderson-Swasey. A paved recreational path connecting the northern part of Swasey Parkway to the Henderson-Swasey and the Oaklands Town Forest parking areas would encourage use by downtown residents and would present a safer alternative to those that ride bikes to the trailheads from the downtown area.

One suggested new trail that has been discussed informally is the creation of an additional trail in the northwestern portion of the Industrial Park, east of Epping Road and south of Route 101. There are four relatively large undeveloped parcels in this area, and in fact there was a trail in this area in the 1980s, but it has become overgrown. The Town of Exeter already owns one of the parcels, for a future Fire Department substation. This trail would be located on private property, and would need to have owner permission, and would require notification of wetlands crossing with the NH DES.

Little River. It is recommended that the Little River area be connected to the Conner Farm conservation area to the north. A bridge does exist that crosses the tributary that separates the two regions. However, access to the bridge from the south is very wet and extensive improvements will be required to connect the two areas.

In the Little River area, a new trail should be constructed from the main bridge, connecting this part of the trail in an easterly direction back to the trail that leads

through the old sawmill site. This proposed trail was flagged once, but was never cut in, and would allow for a loop back to the main trailhead off Brentwood Road.

Oaklands. One suggested new trail that has been discussed informally is the creation of an additional trail along the western boundary of the Oaklands area, relatively proximal to Watson Road. This trail would primarily be located on private property, and would need to have permission of Mr. Scott Carlisle (see Section 7.0 below), the Exeter Highlands Homeowner's Association, and the Exeter Conservation Commission, and would require notification of wetlands crossing with the NH DES. The suggested name for this trail is Outer Limits, as it would pass along the western fringe of the Oaklands area.

Smith-Page. A new trail that connects the PEA trails off Drinkwater Road to the Smith-Page Conservation parcel would serve to encourage people to access the Smith-Page parcel. The Smith-Page parcel does not appear to be used very often, based upon our observations during 2009.

## **6.0 IDENTIFICATION of PARCELS for ACQUISITION**

Oaklands Area. Looking at the tax maps, it is evident that there are two land parcels that would help with the continuity and potential expansion of the Oaklands trails system. First is the Scott Carlisle property, a 99-acre parcel along the entrance to Watson Road. Identified on Exeter Tax Map 33 as Lot 26. This large undeveloped parcel abuts the Oaklands area to the east and would allow for additional conservation land and the expansion of the trail system to the west.

Second is the Robert Elliot property, a 38-acre parcel located off the east side of Watson Road, just southeast of the Forest Ridge residential subdivision. Identified on Exeter Tax Map 26 as Lot 15. This undeveloped parcel abuts the Oaklands area to the east and would allow for conservation of the existing trail system that crosses this property. This property was formerly operated as the Cronin Pig Farm, and contains evidence of buried surficial debris. An Environmental Site Assessment with test pits and monitoring wells would be recommended.

Henderson-Swasey Area. The western portion of this forest can be accessed from the cul-de-sac in the Industrial Park off Epping Road. There are three relatively small parcels to the north and east of the cul-de-sac that are privately owned, and which would be beneficial to maintaining access to the trails in this area. The parcels are identified on Exeter Tax Map 39 as Lots 2 and 3, and on Map 48 as Lot 3.

Additionally, Selectman Bill Campbell has suggested that it would be helpful to acquire the Churchill property, over which the public must cross to access the Henderson-Swasey conservation area.

## **7.0 LIST of TRAIL STEWARDS**

Trail stewards are those individuals who have volunteered to be the contact person for a given trail network, and who are generally responsible for coordinating trail work for that area. Please contact the Natural Resources Planner in the Exeter Town Hall if you would like to be a trail steward or to do work at a conservation parcel.

Enwright: Boyd Allen

Exeter Country Club & Allen Street: none for Country Club, David O’Hearn (Allen St)

Fresh River/Beech Hill: none

Henderson-Swasey: Jim Clark, Bob Kelly

Jolly Rand: Pete Richardson

Juniper Ridge-Powder Mill: Paul Martin, Pete Richardson

Linden Street: Ginny Raub

Little River: Bill Campbell, David O’Hearn; Pete Richardson

Oaklands: Steven Shope

Raynes Farm: Don Briselden

Smith-Page: Boyd Allen; Tom Hanson

Snowmobile Trails: Exeter Trail-Hounds

## **8.0 LIMITATIONS**

The description of a trail in this plan does not ensure that the trail is open to the public. Please check with property owners before accessing private lands.

## **TRAIL MAPS**



**Trail Network**  
Town of Exeter, NH



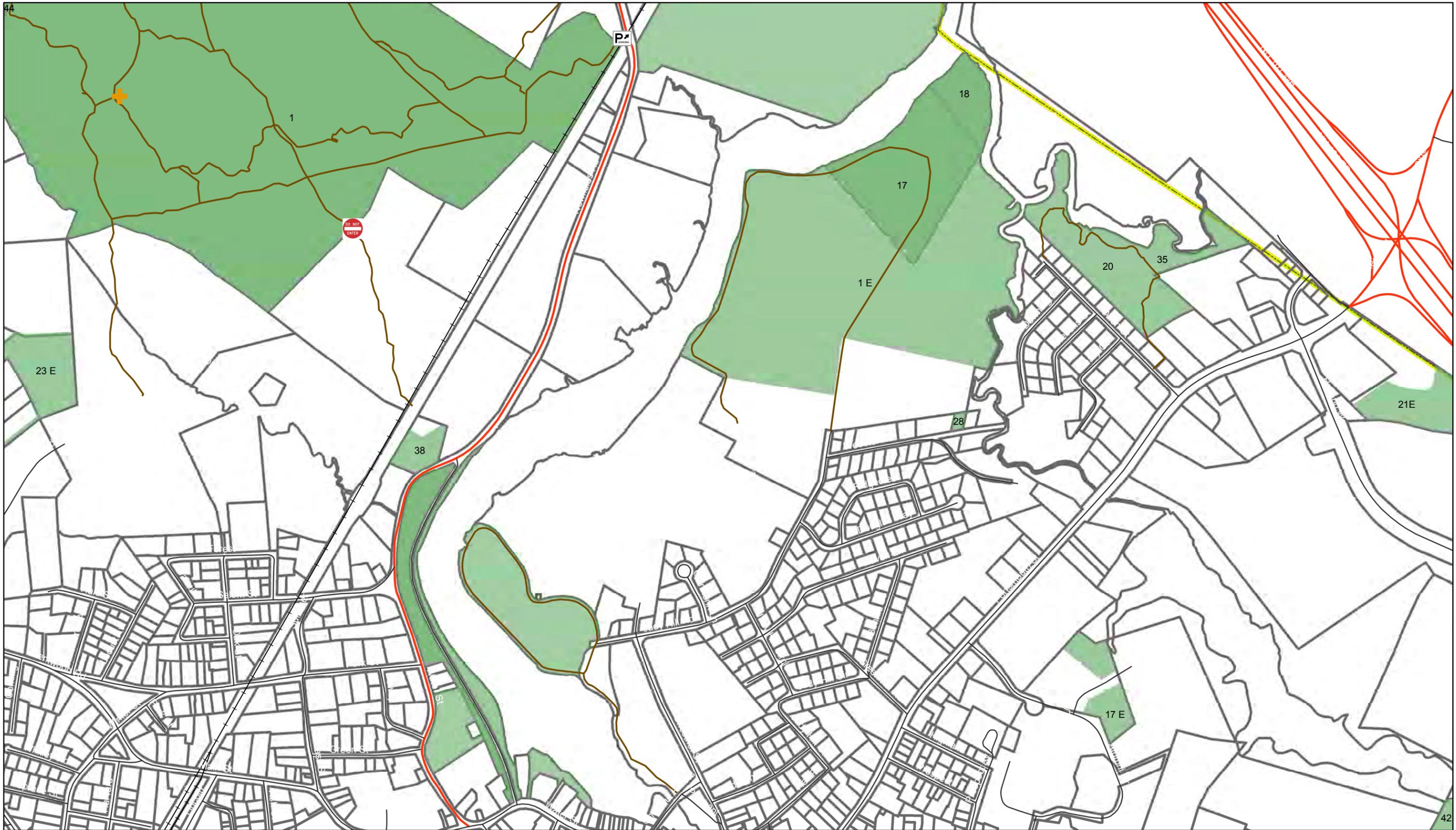
Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Enwright Network**



- |              |                    |                |                  |
|--------------|--------------------|----------------|------------------|
| Trails       | Conservation Lands | Parcel Lines   | Private Property |
| Access       | Parking            | Roads          | Local            |
| Intersection | Tunnel Sign        | Not Maintained | State            |





# Trail Network Town of Exeter, NH



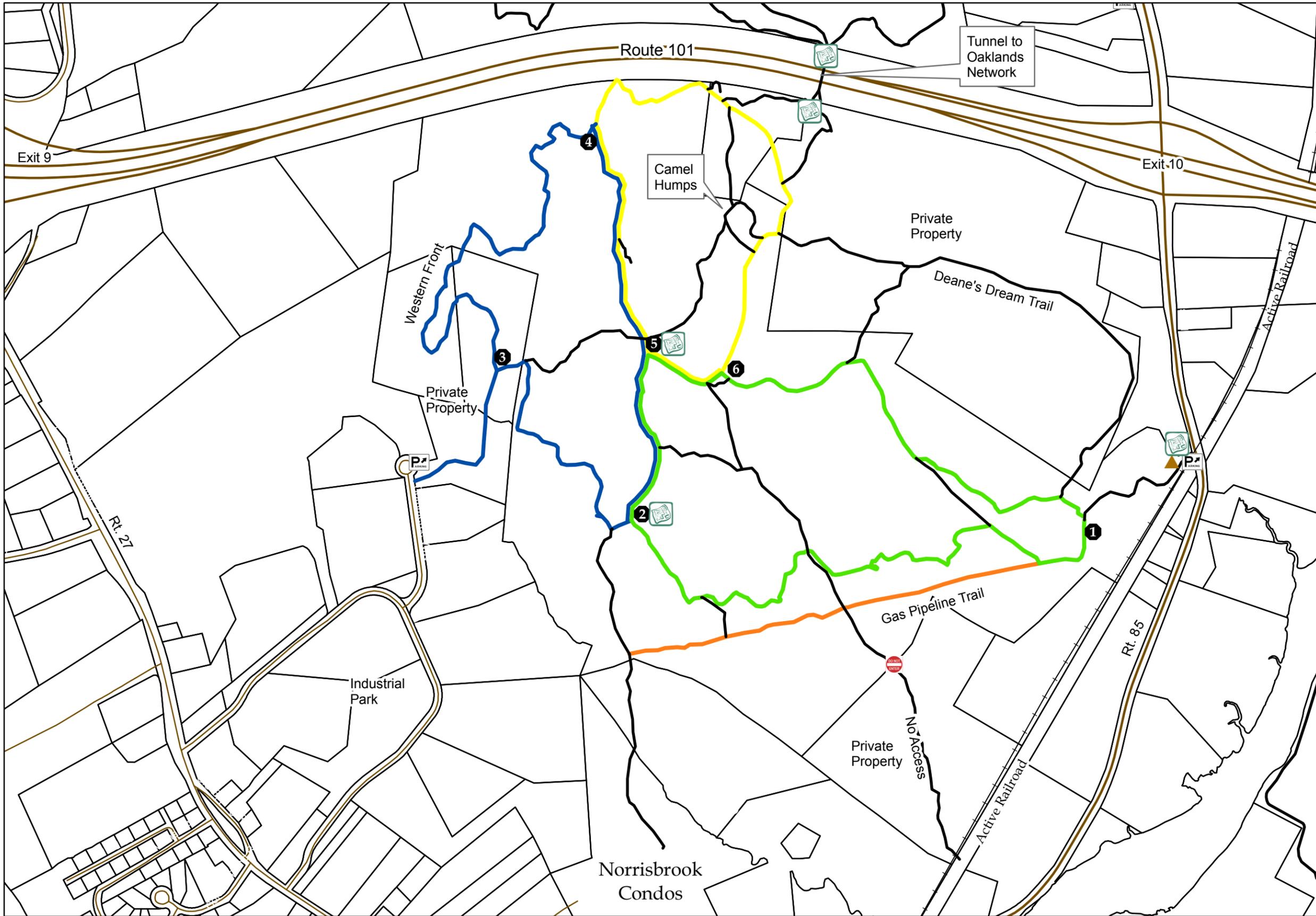
Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

## Exeter CC



- |        |                    |        |              |         |             |              |                  |       |       |                |       |
|--------|--------------------|--------|--------------|---------|-------------|--------------|------------------|-------|-------|----------------|-------|
| Trails | Conservation Lands | Access | Intersection | Parking | Tunnel Sign | Parcel Lines | Private Property | Roads | Local | Not Maintained | State |
|--------|--------------------|--------|--------------|---------|-------------|--------------|------------------|-------|-------|----------------|-------|





**HENDERSON-SWASEY TRAIL NETWORK**

This area is the result of donations by several generous individuals and has been set aside for conservation and recreation purposes. The parcels are managed by the Exeter Conservation Commission with the support of many dedicated volunteers.

Non-motorized activities including hiking, biking, skiing and snowshoeing allow for year-round enjoyment on established trails. Temporary closures may occur during very muddy or wet conditions. Closures will be posted at entrance kiosks and the Town of Exeter website.

Dogs are welcome but must be leashed and cleaned up after.

In accordance with Town Ordinances the following uses are not permitted:

- motorized vehicles
- horseback riding
- hunting

Please respect this land for the benefit of all users.

Report any misuse to the Town of Exeter at (603) 778-0591

- Green Loop (1.65 Miles)
- Blue Loop (1.75 Miles)
- Yellow Loop (0.98 Miles)
- Gas Pipeline (0.50 Miles)
- Additional Trails

- Map Locations
- Trail Posts
- End of Access
- Kiosk
- Parking
- Local Roads
- Non Maintained Roads
- State Roads
- Railroad
- Private Property
- Parcel Lines
- Other towns
- Exeter

**Legend**

Trail Network  
Town of Exeter, NH

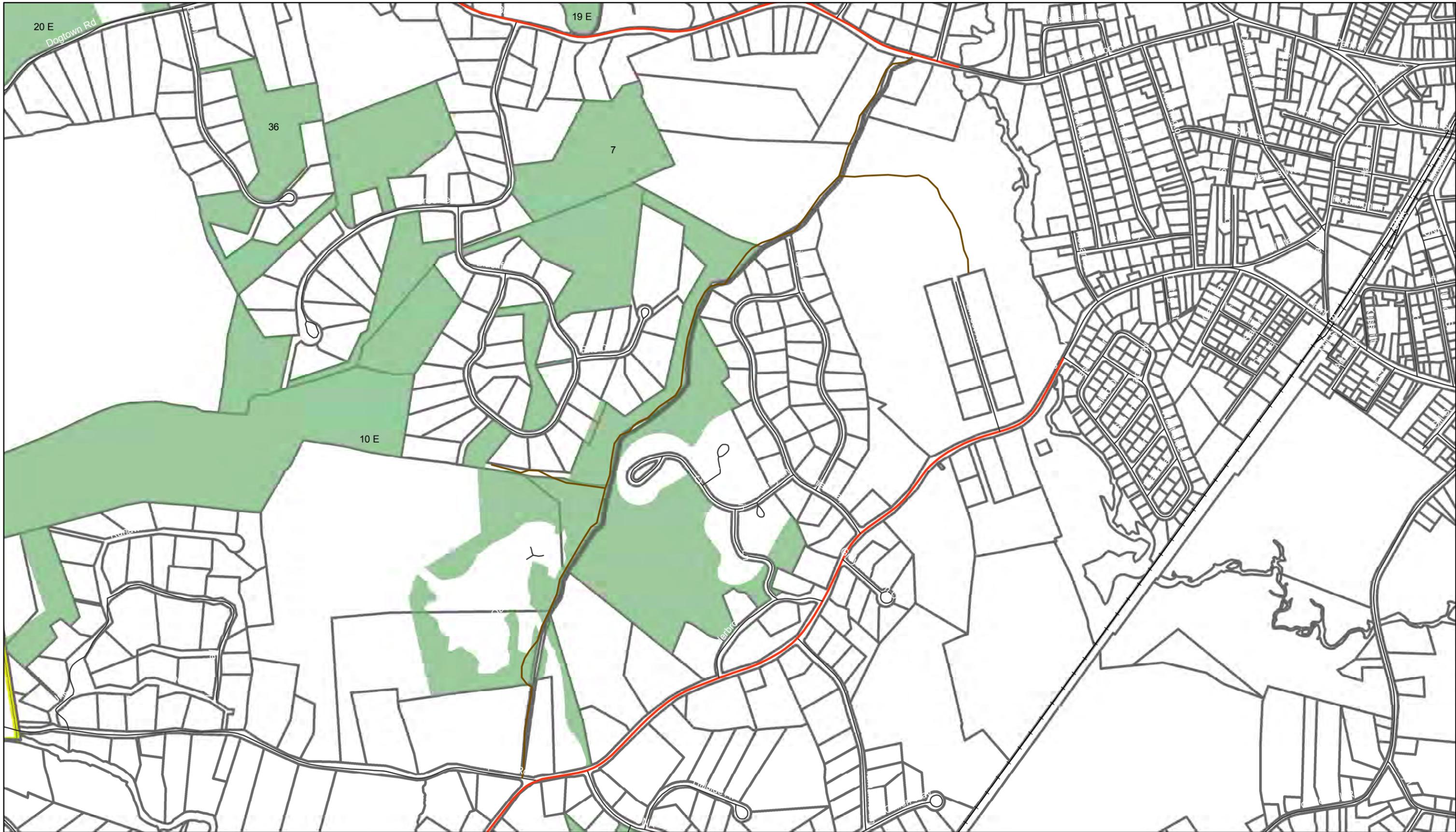


**Henderson - Swasey Network**



Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.





**Trail Network**  
Town of Exeter, NH



Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Jolly Rand Network**



- |                    |              |                        |
|--------------------|--------------|------------------------|
| Trails             | Access       | Parcel Lines           |
| Conservation Lands | Intersection | Private Property Roads |
|                    | Parking      | Local                  |
|                    | Tunnel Sign  | Not Maintained         |
|                    |              | State                  |





**Trail Network**  
Town of Exeter, NH



Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Juniper / Powder Mill Network**



- |                    |                  |
|--------------------|------------------|
| Trails             | Parcel Lines     |
| Conservation Lands | Private Property |
| Access             | Roads            |
| Intersection       | Local            |
| Parking            | Not Maintained   |
| Tunnel Sign        | State            |





**Trail Network**  
Town of Exeter, NH

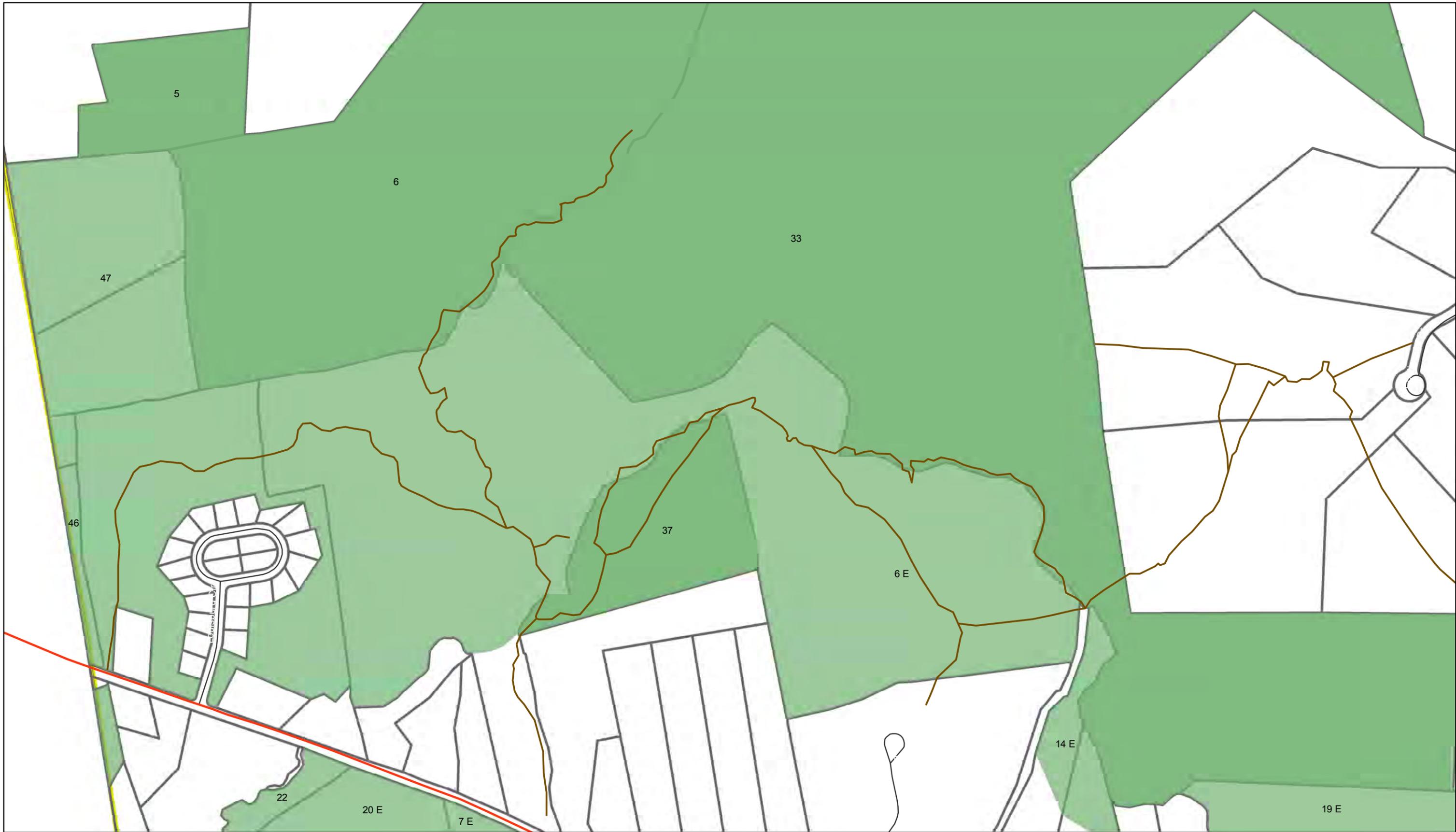


Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

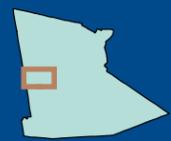
**Linden St Network**



Trails	Conservation Lands	<b>Trail Points</b>	Access	Intersection	Parking	Tunnel Sign	Parcel Lines	Private Property	Roads	Local	Not Maintained	State			
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**Trail Network**  
Town of Exeter, NH

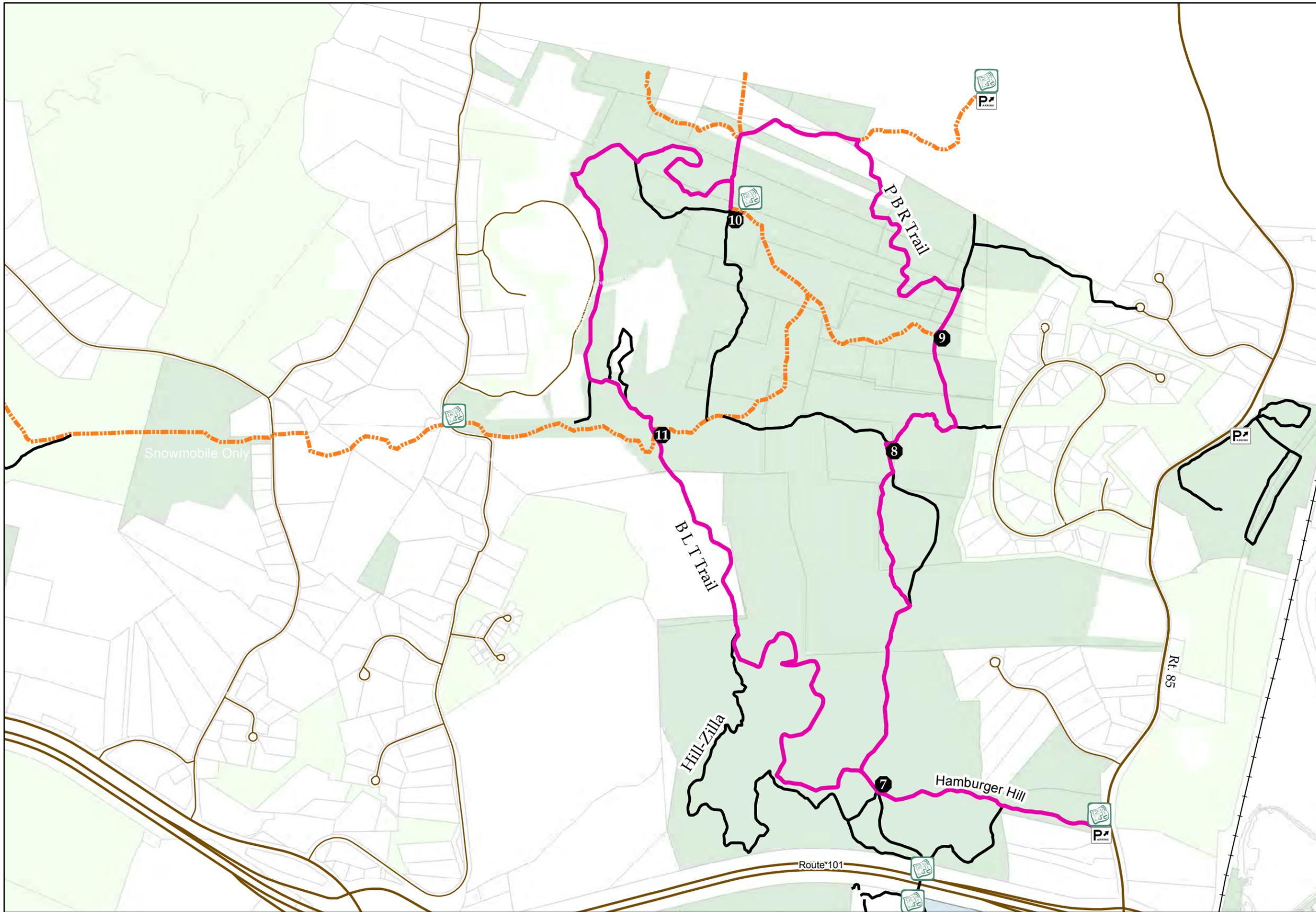


Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Little River Network**



Trails	Conservation Lands	Parcel Lines	Private Property		
Access	Intersection	Roads	Local		
Parking	Tunnel Sign	Not Maintained	State		



**OAKLANDS TRAIL NETWORK**

This area is protected as a result of donations and easements granted by several generous individuals and has been set aside for conservation and recreation purposes. The parcels are managed by the Exeter Conservation Commission with the support of many dedicated volunteers.

Non-motorized activities including hiking, biking, skiing and snowshoeing allow for year-round enjoyment on established trails. Temporary closures may occur during very muddy or wet conditions. Closures will be posted at entrance kiosks and the Town of Exeter website.

Dogs are welcome but must be leashed and cleaned up after.

Hunting in season within the Oaklands Town Forest is permitted unless otherwise posted.

In accordance with Town Ordinances the following uses are not permitted  
 --motorized vehicles  
 --horseback riding

Please respect this land for the benefit of all users.

Report any misuse to the Town of Exeter at (603) 778-0591

- Red Loop (5.1 Miles)
- - - Snowmobile Trail (6.1 Miles)
- Additional Trails

- |  |               |  |                      |
|--|---------------|--|----------------------|
|  | Map Locations |  | Private Property     |
|  | Trail Posts   |  | Parcel Lines         |
|  | End of Access |  | Other towns          |
|  | Kiosk         |  | Local Roads          |
|  | Parking       |  | State Roads          |
|  | Exeter        |  | Railroad             |
|  |               |  | Non Maintained Roads |

*Legend*

Trail Network  
Town of Exeter, NH

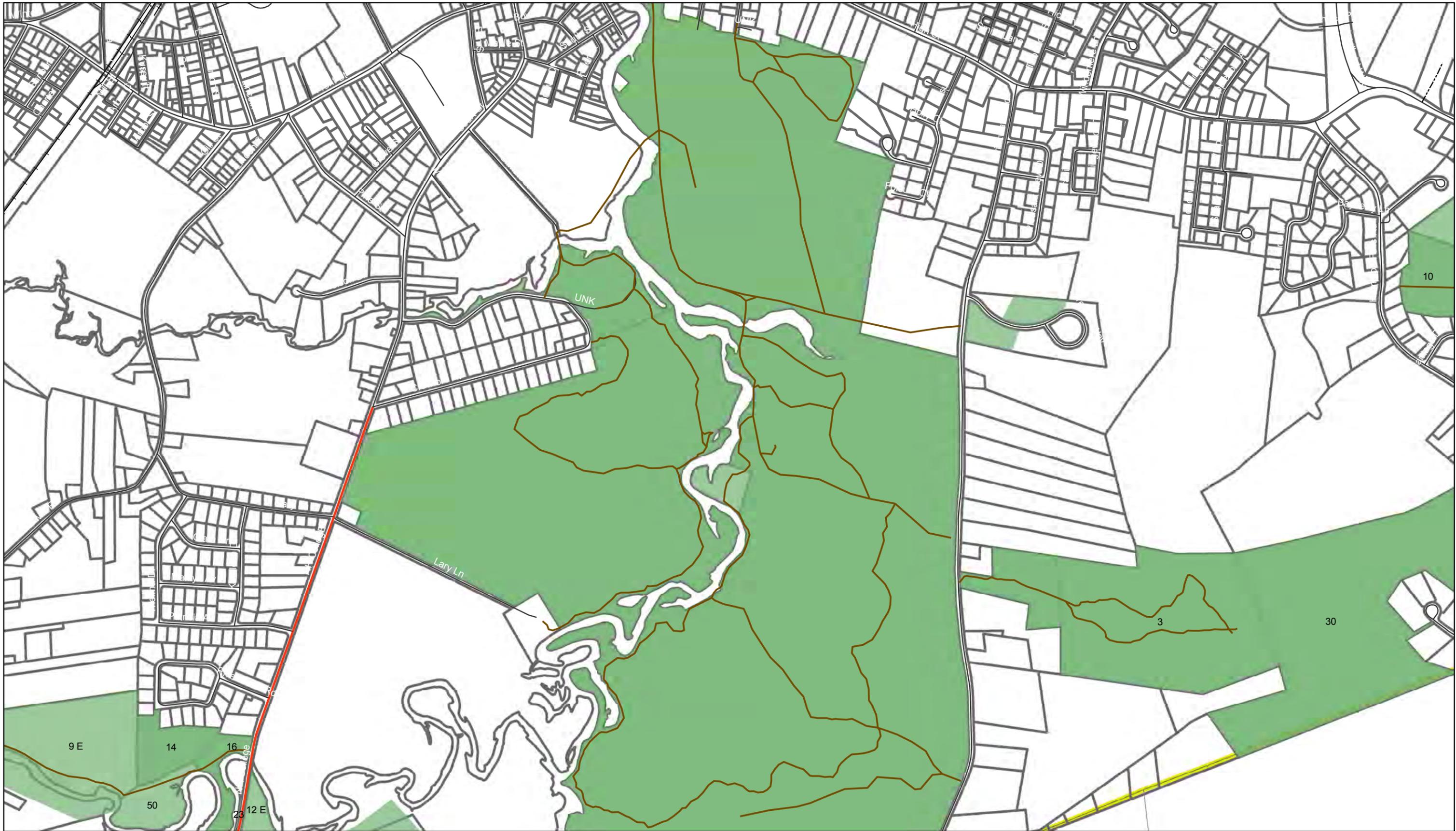


**Oaklands Network**



Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.





**Trail Network**  
Town of Exeter, NH



Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Gilman / Pea Network**



- |             |                    |              |                  |
|-------------|--------------------|--------------|------------------|
| Trails      | Conservation Lands | Parcel Lines | Private Property |
| Access      | Intersection       | Roads        | Local            |
| Parking     | Not Maintained     | State        |                  |
| Tunnel Sign |                    |              |                  |





**Trail Network**  
Town of Exeter, NH



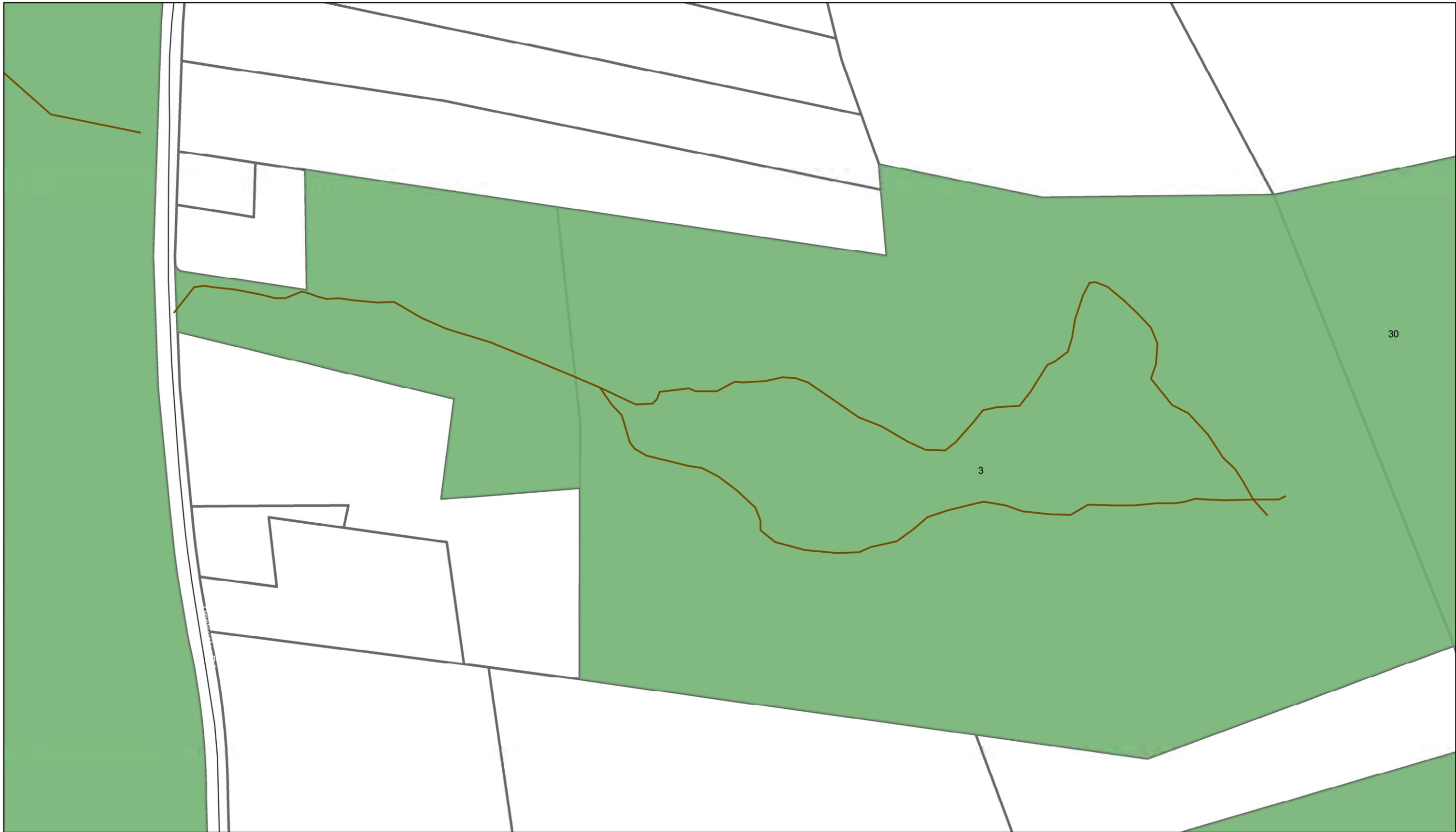
Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Raynes Farm Network**



- |             |                    |              |                  |
|-------------|--------------------|--------------|------------------|
| Trails      | Conservation Lands | Parcel Lines | Private Property |
| Access      | Intersection       | Roads        | Local            |
| Parking     | Not Maintained     | State        |                  |
| Tunnel Sign |                    |              |                  |





**Trail Network**  
Town of Exeter, NH



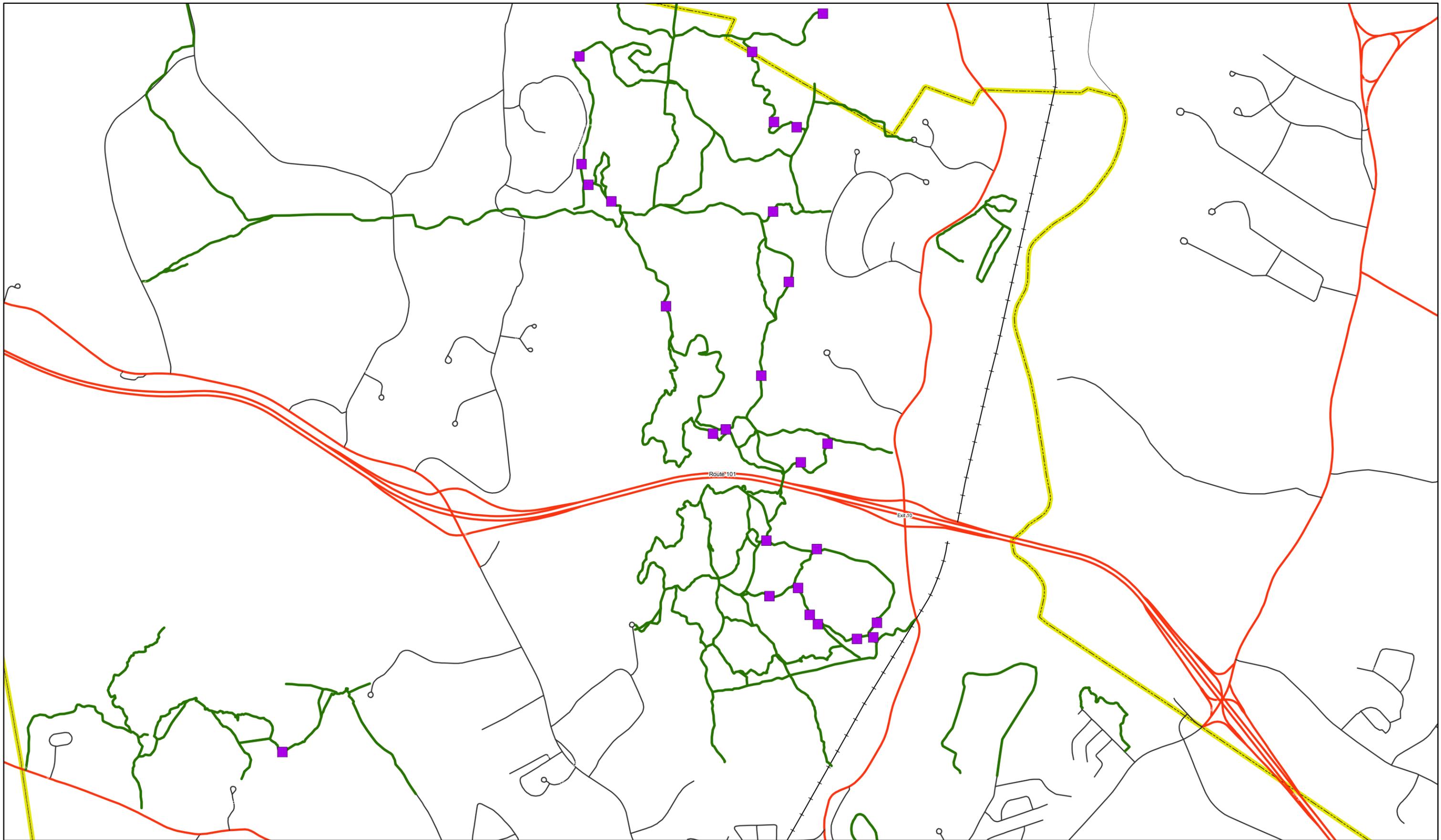
Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

**Smith Page Network**



- |                    |                  |
|--------------------|------------------|
| Trails             | Parcel Lines     |
| Conservation Lands | Private Property |
| Access             | Roads            |
| Intersection       | Local            |
| Parking            | Not Maintained   |
| Tunnel Sign        | State            |





*Trail Network*  
 Town of Exeter, NH



- Wetland Crossings
- Secondary Trails

Please note: Some trails cross onto private property. The landowners have allowed the use of the trails, but please respect their property.

