



LITCHFIELD RAIL TRAIL

LITCHFIELD, CONNECTICUT



KING'S MARK

ENVIRONMENTAL REVIEW TEAM

REPORT

King's Mark Resource Conservation and Development Area, Inc.



LITCHFIELD RAIL TRAIL

LITCHFIELD, CONNECTICUT



APRIL 1995

Environmental Review Team Report

**Prepared by the King's Mark Environmental Review Team of the
King's Mark Resource Conservation and Development Area, Inc.
Haddam and Wallingford, Connecticut**

for the

Litchfield Conservation Commission

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the Commission and the Town. The results of the Team action are oriented toward the development of a better environmental quality and long-term economics of the land use. The opinions contained herein are those of the individual Team members and do not necessarily represent the views of any regulatory agency with which they may be employed.

ACKNOWLEDGMENTS

The King's Mark Environmental Review Team Coordinator, Elaine Sych, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this report.

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Kenneth Metzler	Ecologist/Environmental Analyst III CT DEP - NRC, Natural Diversity Data Base
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David Poirier	Staff Archaeologist CT Historical Commission

I would also like to thank Ned Lancaster, chairman of the Conservation Commission, David Thompson, the director of public works, Martin Connor, the zoning enforcement officer, Mike Gallagher, the park & recreation director, Clifford Cooper, chairman of the Litchfield Bike Trail Committee and Peter Litwin, Bike Trail committee member for their cooperation and assistance during this environmental review.

EXECUTIVE SUMMARY

INTRODUCTION

An environmental review was requested by the Litchfield Conservation Commission for review of a proposed rail trail.

The 2.5 mile trail will be constructed on the bed of an abandoned railway line. It will connect the Borough of Litchfield with the Borough of Bantam by a 10 foot wide paved surface trail that will have three stream crossings and a concrete box tunnel. The major concern is the construction and use of the trail since it traverses an environmentally sensitive wetland system.

The review process consisted of an inventory of the site's natural resources, assessment of these resources, identification of resource problem areas and presentation of planning, management and land use guidelines.

SOIL RESOURCES

Analysis of the soils maps reveals that approximately 65% of the trail's length will run through wetland soils. Any construction in these soils will require permits, but intrusion into new wetland soils should be minimal since the trail will be constructed on the existing railbed. The wetlands do provide many functions and benefits that include flood control, ground water recharge and discharge, water quality improvement, biological productivity, fish and wildlife habitat, biodiversity, open space, and education and scientific research.

To minimize erosion, existing vegetation should be left in place whenever possible. Other considerations include:

1) Grading, filling and paving of the railbed - an erosion and sediment control (E&S) plan should be included with the plan of development. Additional surface runoff from the paved trail should be taken into consideration so that increased water flows do not negatively impact the wetlands or streams. Alternatives to an asphalt surface may be a worthwhile consideration.

2) The three proposed bridge crossings - a proper E&S plan should address the construction phase of the three bridges with the main objective of minimizing disturbance and keeping sediments from the streams. Alternatives to pressure treated lumber or similarly chemically treated materials should be examined.

3) Concrete box tunnel - the soils in the area proposed for the box tunnel, according to the soil survey, are well suited for construction purposes of this type.

4) Parking areas - the soils at the western terminus of the trail appear adequate for parking and the soils at the eastern end also appear adequate for use as a parking area.

WETLAND RESOURCES

The trail will be located among a large diverse wetland system which drains south into the Bantam River and into Bantam Lake. The inland wetlands are classified as open water, emergent, shrub/scrub and forested.

At the time of the review the railbed appeared to be level, stable and elevated from the surrounding water levels, except at a point west of Whites Woods Road and just east of Bissell Road. In these areas water was flowing over the railbed at low points. There also appear to be five locations where culverts are most likely located and they drain water from one side of the railbed to the other.

The wetlands deserve a high functional value rating for education. The trail would be located close to three public schools and would create improved access for educational purposes and recreational opportunities. The size, diversity and pristine quality of the wetlands along with a high rating for all functional values makes it important that this project be carefully planned and implemented so there are no negative impacts.

Possible negative impacts include:

- 1) Removal of valuable wildlife habitat in and near wetland areas in order to provide sufficient trail width and adequate crossings.
- 2) Disturbance of wildlife due to increased pedestrian traffic once the trail is improved.
- 3) Sedimentation of wetlands and watercourses from construction and storm-water runoff.

Recommendations :

- 1) Besides local inland wetland permit procedures the town should obtain a Water Quality Certificate (WQC) from the CT DEP if the project will directly impact .5 acres or more of wetlands, and if the project will alter, modify or diminish the instantaneous flow of the waters of the state (i.e. bridge construction) then a permit may be required from the CT Water Diversion Policy Act.
- 2) Detailed plans, which will be required for regulatory approvals, should locate and quantify direct impacts to wetlands. Plans should include existing grades, notable vegetation, culverts, wetland boundaries, property lines, easements, proposed grades and wetland fill and clearing lines.
- 3) The filling of wetlands and the clearing of vegetation to achieve the 14 foot trail width should be minimized. One or both shoulders should be eliminated at narrower sections or where large trees exist. Maintaining a vegetative buffer along the trail will help to lessen disturbance to wildlife.
- 4) Best management erosion control practices should be used during trail construction to minimize erosion and sedimentation.
- 5) Properly graded and stabilized surfaces will help to reduce erosion after construction.

6) All existing culverts should be located and flagged in the field to avoid having them plugged by fill material. New culverts should be provided where necessary to preserve hydrologic conditions, and culverts should be continually monitored for blockages.

THE NATURAL DIVERSITY DATA BASE

The Natural Diversity Data Base maps and files have been reviewed and according to the information there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species occurring at the project site.

AQUATIC RESOURCES

The Bantam River, Butternut Brook, and Moulthrop Brook can be classified as cool water resources. The three streams are low gradient with surface flow predominated by deep moving pool. The surface waters have been protected from degradation and the DEP classifies the Bantam River as "B/AA" surface waters and Butternut and Moulthrop Brooks are classified as Class "AA." The three streams are almost identical physically, but channel width and depth does vary.

Fisheries Division resource inventories have only been conducted at the Butternut Brook crossing site. Fish species collected include: pumpkinseed sunfish, redbreast sunfish, black crappie, largemouth bass, yellow perch, chain pickerel, blacknose dace, common shiner, golden shiner, tessellated darter, brown bullhead, and white sucker. Fish species composition is expected to be similar in the other streams. Trout are also stocked by the Fisheries Division in the Bantam River and Butternut Brook. These fish are released in the vicinity of the proposed stream crossings.

A section of the proposed trail between South Lake Street and White Woods Road will be adjacent to Cemetery Marsh which is managed by the DEP Fisheries Division for the propagation of northern pike. Northern pike have been successfully reared in the marsh and released into Bantam Lake. Studies have indicated that without marsh management to enhance spawning, the northern pike population in Bantam Lake would continue to decline and may face complete elimination. Due to marsh management efforts, Bantam Lake is now regarded as Connecticut's premier northern pike fishery resource.

The Fisheries Division's primary concern is the location of the proposed trail along Cemetery Marsh because management of the marsh is critical in the maintenance of the northern pike population in Bantam Lake. Cemetery Marsh was selected for its relative isolation. Research indicates that northern pike spawning success, as well as adult and juvenile emigration or migration patterns, can be disrupted by extraneous

activity. Pedestrian traffic along the trail could reach levels that would be disruptive.

Other concerns include:

- 1) The Fisheries Division needs to access the marsh by motor vehicle, the trail could make that access unavailable or cause conflicts with pedestrian traffic.
- 2) Increased potential for vandalism of the marsh outlet structure or trapping facility.
- 3) Susceptibility of the brood stock to injury or mortality from illegal angling or other method of attempted take.
- 4) Elimination of spawning habitat should trail widening be required.
- 5) Impairment of trapping facility maintenance.

Recommendations to be considered:

- 1) Relocate or eliminate development of the .5 mile section of trail between South Lake Street and Whites Woods Road.
- 2) Bridges for the three stream crossings should be constructed on existing abutments where feasible. New abutments or supporting structures should be constructed outside of stream channels to avoid in-stream disturbance.
- 3) Bridges should be designed to allow handicapped fishing.
- 4) A comprehensive erosion and sediment control plan should be developed.
- 5) Limit any construction activity adjacent to watercourses to historic low precipitation periods of the year, usually summer to early fall.

WILDLIFE RESOURCES

The Team Wildlife Biologist does not see the benefit in having an additional 2.5 miles of trail through the already accessible and trail rich White Memorial Foundation properties.

Concerns include:

- 1) The trail width of 14 feet seems very wide and would not minimize impacts.
- 2) Wildlife disturbance will occur during construction and use. A substantial amount of nesting takes place in the wetlands surrounding the railbed. Trailside nesters will relocate to areas farther from the trail. Construction should avoid the primary nesting season which is March 15 - June 30. It would not be practical to restrict use of the trail during that high demand time, but the impacts of increased human use is almost always negative for wildlife.
- 3) There is the potential for a never ending problem with beavers since the beaver population in the area is high.
- 4) The environmental benefits cited by the Bike Trail Committee do not apply to this site since it is already open space for the preservation of wildlife.
- 5) The benefits of the project do not seem to outweigh the concerns for wildlife and the cost of constructing and maintaining the project.

PARK PLANNER COMMENTS

This proposal offers an excellent opportunity to link the two main population, civic and business centers in Litchfield with a safe, off-road bike trail. Children will have a safe alternative to traveling along town roads.

Several issues to be addressed include:

- 1) Possible conflict with the State pike spawning area.
- 2) Design of drainage seeps across the railbed.
- 3) Design of the trail crossing at the intersection of Bissell Road and Route 202.
- 4) Design of the trail adjacent to the PTC Company.
- 5) Design of the High Bridge Road crossing, with the proposed box culvert preferable to a grade crossing.

TRANSPORTATION AND LAND USE CONSIDERATIONS

The proposed rail trail will have a positive impact on the local and regional transportation network by providing an alternative means of transportation between Litchfield and Bantam. It will provide a biking and pedestrian alternative to travel along a busy segment of Route 202 which has narrow shoulders and is projected by ConnDOT to have capacity deficiencies in the near future.

The Litchfield Hills Council of Elected Officials (LHCEO) has endorsed this project as a regional priority for the use of ISTEA funds. In addition to federal policy and funding support for the project, the Town of Litchfield Vision Plan specifically recommends the development of a "continuous recreation trail from Litchfield center to Bantam center along the abandoned railbed." The LHCEO has also supported the rail trail in their draft Regional Bicycle Plan, and construction of multi-use facilities to enhance bicycling and walking is supported by ConnDOT in their "1995 Long Range Transportation Plan."

From a planning perspective, it appears that the trail is compatible with surrounding land uses provided any environmental impacts are suitably mitigated.

A small parking area at the western end of the rail trail in Bantam appears feasible and should be considered.

ARCHAEOLOGICAL AND HISTORIC SIGNIFICANCE

A review of the State of Connecticut Archaeological Site Files and Maps show no known archaeological resource along the proposed trail, and no railroad-related structures, other than the railbed, have retained their historic integrity, so that the rail trail

will have no effect upon properties listed on or eligible for the National Register of Historic Places.

The State Historic Preservation Office and the Office of State Archaeology support the creative and adaptive use of the abandoned rail corridor for 20th-century recreational purposes.

The town may want to consider the rehabilitation and adaptive use of historic highway bridges to be used for the three stream crossings.

INTRODUCTION

An environmental review was requested by the Litchfield Conservation Commission for proposed rail trail.

The proposed 2.5 mile trail will be constructed along an abandoned railroad line. The trail will start at the southerly end of South Lake Street in the Litchfield Borough along what is referred to as the Ghost Trail. The trail will then cross Whites Woods Road, just south of Plumb Hill Road, crossing Moulthrop Brook and it will continue to Bissell Road. The trail will then continue southwest crossing Butternut Brook to North Shore Road. It then continues south of the PTC Aerospace Complex and crosses the Bantam River. After the river a concrete box tunnel is proposed for the High Bridge Road crossing. The trail then proceeds westerly to Route 209 in the Bantam Borough along the south side of the Bantam River. (Please refer to location map and plan.)

The trail will be built over an existing railbed. A 10 foot wide paved surface with a 2 foot gravel shoulder on each side is proposed. Wooden bridges will be used for the three stream crossings, and they will range in length from approximately 24 feet to 42 feet. Small parking areas are planned.

Eighty percent of the trail will be federally funded through the Intermodal Surface Transportation Efficiency Act (ISTEA) and twenty percent would come from the town (to be raised by various methods). The trail will serve as a non-motorized transportation corridor between Litchfield and Bantam centers. Activities that could be conducted on the trail include walking, biking, rollerblading and rollerskating, cross-country skiing and snowshoeing. The trail will also be handicap accessible.

This environmental review has been requested because the bike trail will be constructed on a railbed built on wetlands and traverses White Memorial Foundation land which is considered environmentally sensitive. The review is to assist the Conservation Commission, the bike trail committee, landowners and interested citizens in making recommendations and decisions regarding this proposal. Specific areas of concern that the Team addressed include: soils, erosion and sediment control, and the effect of trail construction and use on wetlands, wildlife, fisheries and land use.

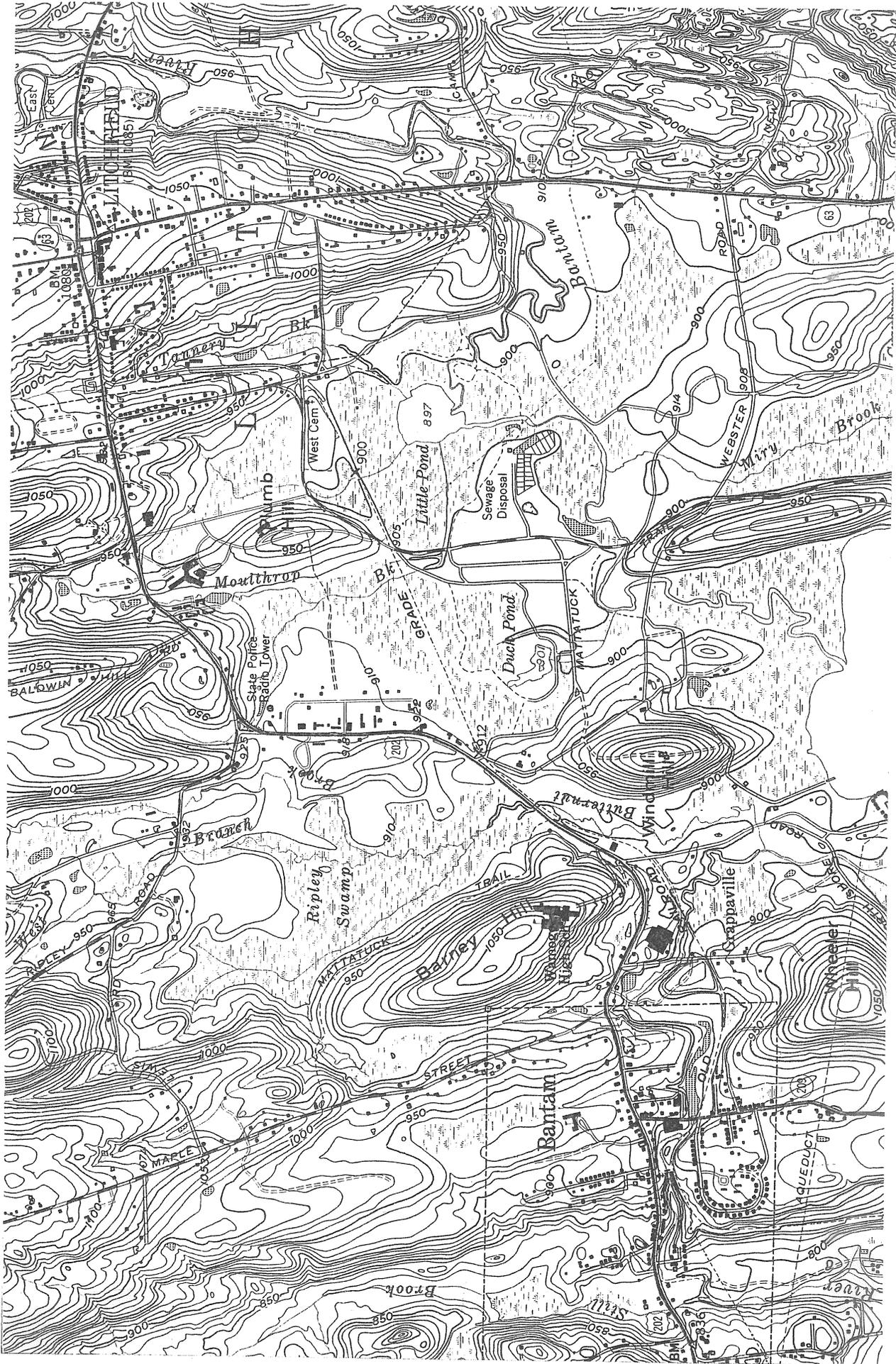
The Environmental Review Team Process

Through the efforts of the Town of Litchfield and the King's Mark ERT, this environmental review and report was prepared for the town. This report primarily provides a description of the on-site natural resources and presents planning, management and land use guidelines. The review process consisted of 4 phases:

- 1) Inventory of the site's natural resources (collection of data);
- 2) Assessment of these resources (analysis of data);
- 3) Identification of resource problem areas, and
- 4) Presentation of planning, management and land use guidelines.

The data collection phase involved both literature and field research. The ERT field review took place on February 16, 1995. Mapped data or technical reports were also perused, and specific information concerning the property was collected. Being on-site allowed some Team members to verify information and identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. Results of this analysis enabled Team members to arrive at an informed assessment of the property's natural resource opportunities and limitations. Individual Team members then prepared and submitted their reports to the ERT coordinator for compilation into the final ERT report.



LOCATION MAP

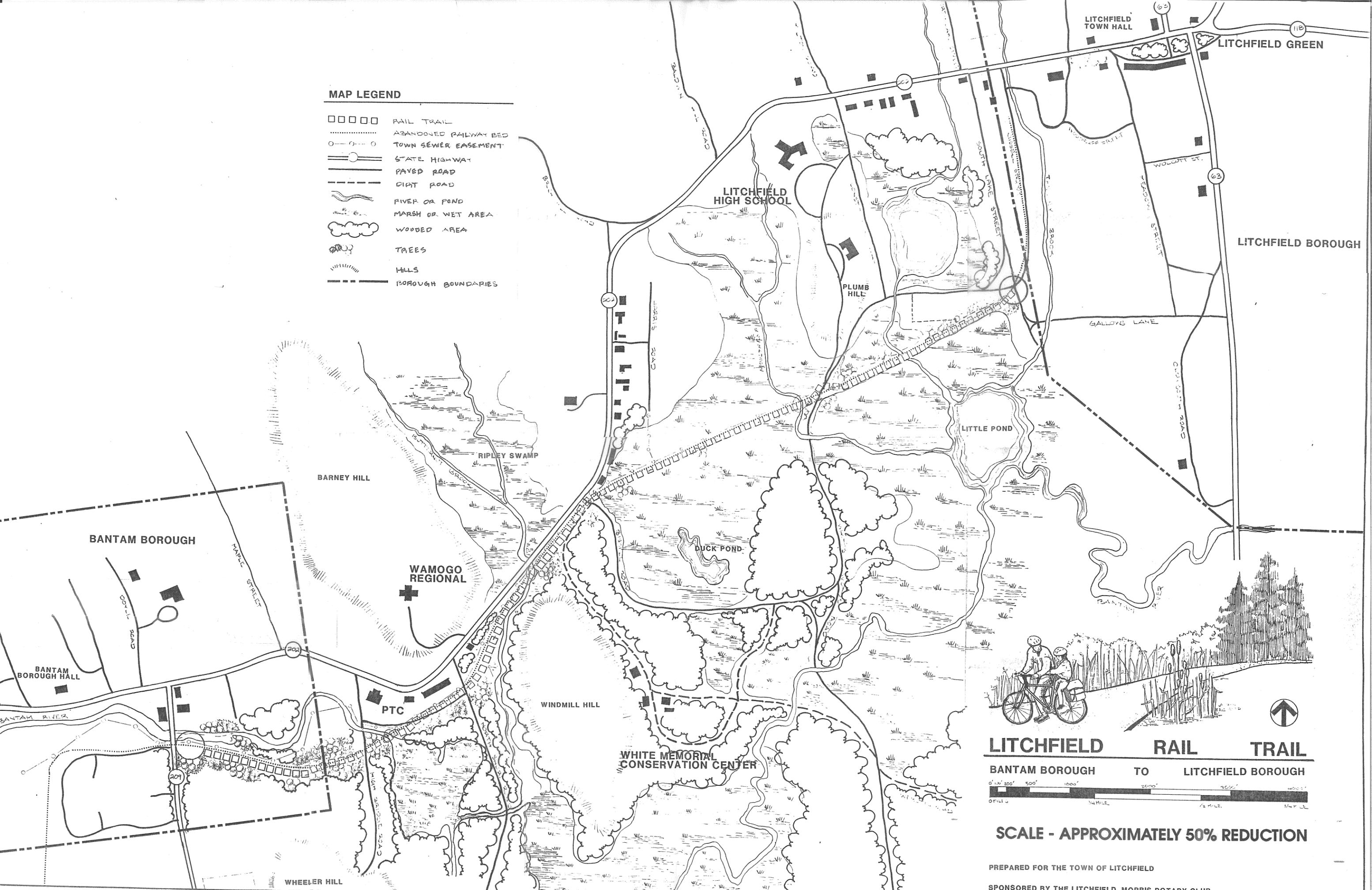
Scale 1" = 2000'

Approximate Trail Location



MAP LEGEND

- □ □ □ RAIL TRAIL
- ABANDONED RAILWAY BED
- — ○ — ○ TOWN SEWER EASEMENT
- == STATE HIGHWAY
- == PAVED ROAD
- - - - DIRT ROAD
- ~~~~ RIVER OR POND
- ~~~~ MARSH OR WET AREA
- ☁ WOODED AREA
- 🌳 TREES
- 🏞 HILLS
- - - - BOROUGH BOUNDARIES



LITCHFIELD RAIL TRAIL

BANTAM BOROUGH TO LITCHFIELD BOROUGH



SCALE - APPROXIMATELY 50% REDUCTION

PREPARED FOR THE TOWN OF LITCHFIELD

SPONSORED BY THE LITCHFIELD MORRIS ROTARY CLUB

SOIL RESOURCES

Included in this section is a general soils map showing the type and extent of soils in the tract of land under consideration. Due to the proposed bike trail's linear configuration, large areas of contrasting soil types would be crossed. As can be seen from the map, the following soil types are under consideration: Au - Au Gres loam fine sand, Bz - Birdsall silt loam, Am - Alluvial Land, Pk - Peat and Muck, Lm - Limerick silt loam, Sb - Saco sandy loam (0 - 3% slope), TwA - Tisbury and Sudbury soils (0 - 3% slope), CaB - Charlton fine sandy loam (3 - 8% slope), and DeA - Deerfield loamy fine sand (0 - 3% slope).

Analysis reveals that roughly 65% of the trail's length will run through wetland soils. Wetland soils are transitional areas between land and water, and encompass diverse and complex ecosystems. Due to their variability, wetlands can provide different functions of varying values. Some of the benefits provided by this fragile ecosystem include flood control, ground water recharge and discharge, water quality improvement, biological productivity, fish and wildlife habitat, biodiversity and open space, and education and scientific research.

Any construction activity within these areas will require permits. As the trail will be constructed over the existing railbed, intrusion into new wetland soils should be minimal. To minimize erosion, existing native vegetation should be left in place whenever possible. Allowing the vegetation to remain will provide for stable soils and serve as good wildlife habitat. While little direct construction activity is expected to occur in the wetland areas, there are four major areas of consideration.

The first area of concern is related to the grading, spot filling and paving of the rail bed. An erosion and sediment control plan should be included with the plan of development to ensure that these activities do not release sediments into the surrounding wetlands and that disturbances are minimal. Typical control measures would include, but not be limited to, siltation fence, which would run along the entire length of the bike trail. A typical erosion and sediment control plan should include such features as: phased construction, sediment fence erosion checks downslope from construction, and temporary and/or permanent vegetation covers and other measures needed for the final development plan.

Due to the substantial amount of paving which is proposed, consideration to the additional surface runoff which will result from the bike trail should be taken into account. Increasing water flows into the wetlands or adjacent streams may negatively impact the integrity of the wetland system, and may contribute silts or other pollutants. Alternatives to an asphalt surface might be a worthwhile consideration.

The second area of consideration relates to the three proposed bridge crossings over the Bantam River, Moulthrop Brook, and Butternut Brook. As above, a proper erosion and sediment control plan should be included in the plan of development to address the construction phase of the bridges. Again, the main objective is to contain any sediments from depositing into the adjacent stream or wetland and to minimize any disturbances. Consideration might also be given to the materials which will be used in the bridge construction, as all three location are sensitive wetland areas. Alternatives to pressure treated lumber or similar chemically preserved materials should be considered.

Proposed bridge at Moulthrop Brook

According to the Litchfield County soil survey, the Saco silt loam (Sb) at this site has high available moisture capacity, but is very poorly drained and subject to frequent flooding. This soil offers poor stability and compaction, and is subject to "piping" (removal of soil material through subsurface flow channels or "pipes" developed by seepage water). Saco silt loam is classified as a hydric soil.

Proposed bridge at Butternut Brook

According to the soil survey, there are three soil types which converge at this location: Saco silt loam (Sb), Limerick (Lm) silt loam, and Alluvial land (Am). The Saco and Limerick soils have high available moisture capacities. The Alluvial land which is also present consists of soils which vary in composition from silt loams to coarse sands. As such, the Alluvial soil exhibits variable permeability. Like the Saco, the Limerick and Alluvial soils are also classified as hydric. Some areas are well drained or moderately drained, while others are poorly drained or very poorly drained. Both the Saco silt loam and the Limerick soils exhibit poor stability and compaction, and are subject to piping.

Proposed bridge at the Bantam River

According to the soil survey, the Merrimac sandy loam (MyB) located at this site is rapidly permeable and has a low moisture capacity. Merrimac soils exhibit good to fair stability and compaction, and have favorable characteristics for construction purposes.

Proposed Concrete Box Tunnel

Another area of consideration is the concrete box tunnel at Highbridge Road. According to the soil survey, Charlton (CaB) soils are present at this site. Charlton soils exhibit fair stability and compaction, are moderately permeable, and in places contain numerous stones and cobblestones. Charlton soils are well suited for construction purposes of this type.

Parking Areas

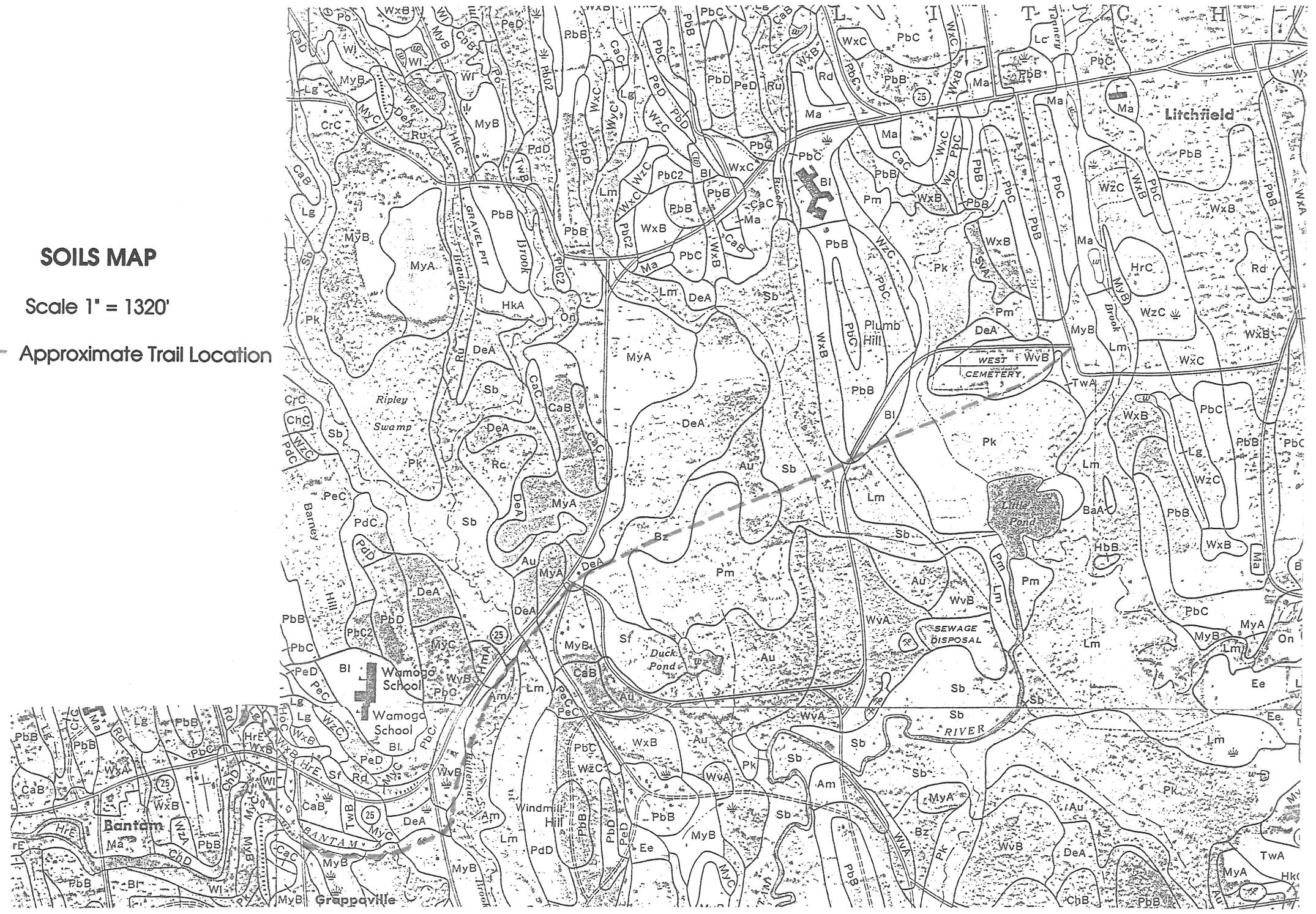
The last area of consideration for this proposal lies in the potential parking areas which will serve the trail. At the west end of the proposed trail, the soils map indicates the presence of Borrow and Fill land, loamy material (Bl). Borrow and fill land consists of borrow areas and cut and fill material over loamy materials. It varies in permeability and drainage. While the soils are variable, the site appears adequate for use as a parking area. As indicated by the soil survey, the east end of the proposed trail consists of Merrimac sandy loam (MyB). Merrimac has rapid permeability and has a low available moisture capacity. Merrimac exhibits good to fair compaction and stability and is well suited for construction purposes. This soil type should be adequate for parking purposes.

SOILS MAP

Scale 1" = 1320'



--- Approximate Trail Location



WETLAND RESOURCES

Existing Conditions

The proposed rail trail will follow the path of an existing abandoned railroad bed for a distance of approximately 2.5 miles. Much of the railbed is located among a large, diverse wetland system which drains south into the Bantam River and into Bantam Lake. These inland wetlands cover the entire spectrum of freshwater classification including open water, emergent, shrub/scrub and forested.

There are three points where the railbed once spanned small watercourses. These bridges are no longer present. The railbed appeared to be level, stable and elevated from the surrounding water levels at those areas inspected in the field, except at a point west of Whites Woods Road where water was flowing over the railbed at a low point. Another similar "breach", located just east of Bissell Road, was detected as a result of aerial photo interpretation. Also detected on aerial photos were five locations where culverts are most likely present which drain water from one side of the railbed to the other.

Wetland Functional Values

This topic is adequately addressed within the "Soil Resources" section of this report which lists several pertinent functional values, however, one of the functional values, "education" has such a high potential that it should be reiterated here. The close proximity of three public schools gives these wetland areas a very high rating for this functional value. Creation of this rail trail would enhance the educational value of these wetlands by providing improved access to this resource. The size, diversity and near pristine quality of these wetland areas would afford each of the functional values listed in the Soil Resources section "high marks", therefore, the land disturbances involved with this project should be carefully planned and executed in order to avoid negative impacts.

Proposed Activities

In the absence of more detailed site plans, the only descriptions of proposed activities, besides a simple location map, are in narrative form. The "Preliminary Construction

Estimate" included in the package indicates that gravel, granular and processed aggregate base will be used, apparently for the installation of three crossings, one tunnel and the augmentation of the existing railbed, where needed, to maintain the required width and/or grade. The finished trail is proposed to be surfaced with ten foot wide bituminous concrete with two foot grassed shoulders on either side.

Impact of Proposed Activities on Watercourses and Wetlands

As mentioned above, the proposed activity would serve to increase the educational value of the surrounding wetlands and would provide a very positive impact to the wetlands. In addition, the creation of this rail trail would serve to augment the recreational opportunities available at the nearby White Memorial Conservation Center, providing increased access for the public to this well known, private natural area.

Possible negative impacts of this proposed activity include:

1. Removal of valuable wildlife habitat in or near wetland areas and the filling of wetlands and watercourses in order to provide sufficient trail width and adequate crossings. The woody vegetation currently existing along the slopes of the railbed should be considered a very valuable extension of the adjacent wetland areas. Known as "ecotones", these habitats exist on the edge of two different ecosystems (upland and wetland in this case) and provide valuable functions, primarily as a perching and roosting area for songbirds and birds of prey who use the wetlands as feeding grounds.
2. Disturbance of wildlife due to increased pedestrian traffic once the trail is improved. While hard to quantify, this impact can have negative effects on sensitive wildlife such as birds of prey, wading birds and waterfowl. In addition, as mentioned in more detail in the Aquatic Resources, a CT DEP pike spawning areas exists adjacent to a portion of this trail. According to DEP Fisheries personnel, pike are particularly sensitive to human intrusion.
3. Sedimentation of wetlands and watercourses resulting from erosion of disturbed areas during the construction period as well as erosion resulting from stormwater runoff after the construction period.

Recommendations

1. Besides local inland wetland application procedures, a Water Quality Certificate (WQC) should be obtained from this CT-DEP if this project is to directly impact .5 acres or more of wetlands. However, this is a basic guideline. WQC permits may be required for other specific activities proposed for wetland areas. For questions regarding this regulatory program contact Sally Snyder of the CT-DEP at 203/424-3019. In addition, if this project is to cause alteration, modification, or diminution of the instantaneous flow of the waters of the state (for instance, as a result of bridge construction), certain activities involved with this project may require a permit from this division as called for in the Connecticut Water Diversion Policy Act (sections 22a-365 through 22a-378 of the Connecticut General Statutes). It is recommended that the applicant call Bob Gilmore of this division at 203/424-3019 to determine the need for such a permit.
2. It was understood that more precise site planning will be generated for future regulatory approvals. This will be necessary in order to locate and quantify direct impacts (filling) of wetland areas. Detailed plans should include existing grades, notable vegetation, culverts, wetland boundaries, property lines and easements as well proposed grades, areas of wetland fill, and clearing lines.
3. While the proposed trail width of 14 feet, plus the side-slope is considered to be a minimum width for a trail of this type, filling of wetlands and clearing of vegetation along wetland boundaries to achieve this width should be minimized. One or both shoulders could be reduced or eliminated at narrower sections, or where large trees exist in the "footprint" of the trail. Maintaining this vegetative buffer along the trail would also decrease the impact that users will have on nearby wildlife.
4. Erosion and sedimentation during construction of the trail should be minimized through the use of best management erosion control practices. Phasing of the construction period should be considered. Use of a "turbidity curtain" would be helpful to reduce excessive sedimentation at bridge construction sites.
5. The possibility of erosion after the construction period will be reduced with a properly graded and stabilized surface. If stormwater is planned to be concentrated at any location, adequate erosion protection should be included. According to Jim Sipperly, Environmental Planner for the Town of Cheshire (203/271-6670), the use of

bituminous concrete on their municipal rail-trail was beneficial for several reasons. With proper crowning and adequate shoulders, erosion resulting from stormwater runoff is negligible. Wheel ruts that would form in cinders or woodchips would not be a factor. It gives access to handicapped users. It also permits plowing so that winter use is an option (half the trail could be kept unplowed for the skiers). Perhaps most importantly, various toxic contaminants were detected in their railbed, most likely deposited by the trains using it in the past. The impermeable surface reduced infiltration of stormwater and thus acted to stabilize the toxins.

6. All existing culverts should be located and flagged in the field to avoid having them plugged by fill material. Existing low areas where water currently flows over the trail should be filled to the desired grade and provided with culverts to preserve the hydrologic connection. These and all existing culverts should be continually monitored for blockage to avoid overtopping of the railbed and subsequent erosion.

THE NATURAL DIVERSITY DATA BASE

The Natural Diversity Data Base maps and files regarding the Litchfield Rail Trail location have been reviewed. According to our information, there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species occurring at the site in question.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultation with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

AQUATIC RESOURCES

Site Description

The proposed Litchfield Rail Trail will be constructed on an abandoned rail line. Through its 2.5 mile length between South Lake Street, Litchfield, and Route 209, Bantam, the trail traverses wetlands associated with the Bantam River, Butternut Brook, and Moulthrop Brook and will cross each watercourse at one location apiece.

Each of these streams can be classified as a cool water resource. The three streams are low gradient with surface flow predominated by deep moving pool. Being within a relatively unaltered watershed, surface water has been protected from degradation. The Department of Environmental Protection has classified the Bantam River as "Class B/AA" surface waters with Butternut Brook and Moulthrop Brook being "Class AA".

The three streams are nearly identical physically, having roughly vertical side slopes and uniformly level streambed. However, channel dimension varies with the Bantam River approximately 50 feet in width, averaging 5 feet in depth, Butternut Brook approximately 25 feet in width, averaging 3 feet in depth, and Moulthrop Brook approximately 12 feet in width, averaging 3 feet in depth. Substrate of all streams is composed of gravel, coarse sand, and sand-silt fines. Grasses and woody shrubs predominate as riparian vegetation. Physical in-stream habitat is provided by undercut banks and fallen or overhanging vegetation.

Aquatic Resources

Of the three proposed stream crossings, Fisheries Division resource inventories have been conducted only at the Butternut Brook site. Fish species collected at that site included pumpkinseed sunfish, redbreast sunfish, black crappie, largemouth bass, yellow perch, chain pickerel, blacknose dace, common shiner, golden shiner, tessellated darter, brown bullhead, and white sucker. Although inventories have never been conducted at the crossing sites of the Bantam River or Moulthrop Brook, the fish species composition is anticipated to be similar to that found in Butternut Brook.

In addition to the species previously listed, trout are stocked by the Fisheries Division in the Bantam River and Butternut Brook. A portion of the fish allocated for each

stream are released within the vicinity of the proposed crossings.

A section of the proposed trail between South Lake Street and Whites Woods Road will be adjacent to a 5.9 acre marsh, referred to as Cemetery Marsh, which is managed by the DEP Fisheries Division for the propagation of northern pike. Originally released in the early 1970's, the population of northern pike in Bantam Lake experienced a marked decline. This had been attributed to inadequate natural reproduction. In effort to bolster the Bantam Lake pike population, the Fisheries Division began investigating the potential of rearing northern pike in controlled marsh environments. Cemetery Marsh was one of three marsh habitats evaluated in those investigations. The three marshes were chosen for study based ample water supply, appropriate spawning and rearing vegetation, existing water control structures (culverts), and relative isolation.

During an initial study period from 1988 through 1992, more than 6,000 northern pike juveniles were successfully reared in Cemetery Marsh and released in Bantam Lake. Pike juveniles from Cemetery Marsh accounted for approximately 58% of the total number produced in the three managed marshes. Study results indicated that without marsh management to enhance spawning, the northern pike population in Bantam Lake would continue to decline and may face complete elimination.

The Fisheries Division currently relies on management of Cemetery Marsh and only one other marsh for augmentation of Bantam Lake's northern pike population. Since the initial study, several thousand northern pike from Cemetery Marsh, and production from the second marsh, has resulted in a four-fold increase of the Bantam Lake northern pike population. Due to marsh management efforts, Bantam Lake is now regarded as Connecticut's premier northern pike fishery resource.

Impacts

Of primary concern to the Fisheries Division is the location of the proposed trail along the Cemetery Marsh. As previously mentioned, the management of the marsh is critical in the maintenance of the northern pike population in Bantam Lake. One criteria in selecting the marsh for northern pike propagation was relative isolation. Research indicates northern pike spawning success as well as adult and juvenile emigration or migration patterns can be disrupted by extraneous activity. Pedestrian traffic along the proposed trail may reach levels causing such disruption.

The proposed trail also promotes the following concerns:

- The trail, designed to accommodate pedestrian traffic, may render the marsh inaccessible to motor vehicles used by the Fisheries Division. Should the trail be made accessible to vehicles, conflicts with pedestrian traffic may persist.
- Increased potential for vandalism of the marsh outlet structure or trapping facility.
- Susceptibility of adult broodstock to injury or mortality from illegal angling or other method of attempted take.
- Elimination of spawning habitat should trail widening be required.
- Impairment of trapping facility maintenance. Such maintenance is necessary to assure proper facility function and to prevent stormwater runoff from overtopping the marsh outlet.

Recommendations

The following should be considered in effort to mitigate impacts potentially affecting aquatic resources within the bounds of the Litchfield Rail Trail:

- Relocate or eliminate development of the 0.5 mile section of trail between South Lake Street and Whites Woods Road.
- Bridges should be used at the three stream crossings as proposed and be founded on existing abutments where feasible. Should new abutments or other supporting structures be required, they should be constructed outside of stream channels to avoid in-stream disturbance.
- Bridges at the three stream crossings should be designed in a manner which allows for handicapped fishing.
- Establish a comprehensive erosion and sediment control plan with mitigative measures (hay bales, silt fence, etc.) to be installed prior to and maintained through all phases of trail development phases; land disturbance and clearing should be kept to a minimum with all disturbed areas being protected from storm events and re-stabilized as soon as possible.

- Limit any construction activity adjacent to watercourses to historic low precipitation periods of the year; reduced precipitation periods of summer - early fall provide the least hazardous conditions to work near sensitive aquatic environments.

WILDLIFE RESOURCES

Generally, the Team Wildlife Biologist is a proponent of the rails to trails concept from a purely recreational perspective, however, he does not see the great benefit of having an additional 2.5 miles of trail through the trail rich White Memorial Foundation properties. The wetland area between White Woods Road and the West Cemetery provides very little additional transportation value over wide, safe town roads to the Litchfield High School or the quality of White Memorial's trails available in the area. The potential environmental damage may not offset the benefits of a 2.5 mile recreational trail.

This particular site does have some wildlife considerations that should not be overlooked. The old railbed was a significant disruption to the wetlands and the wildlife at the time of installation and use. Today it is a potential base for this rail trail with a minimum of additional disturbance, but the proposed 14 foot wide bed seems a little wide to minimize impacts.

Some wildlife disturbance will occur during construction. Since a substantial amount of nesting takes place in the wetlands surrounding the railbed, construction should avoid the primary nesting season which is March 15 - June 30.

Wildlife disturbance will also occur during use of the trail. Most trailside nesters will relocate nest sites to areas a bit further from the railbed. Again the primary nesting season (March 15 - June 30) would be the time of most impact. It would not be practical to restrict use of the trail during this high demand time. The impacts of increased human use is nearly always negative for wildlife.

The heavy use of this area by wildlife brings with it some potential problems with beaver. The potential in this area for beaver problems is near 100% and is not one with a likelihood of resolution. The beaver population is high and White Memorial does not permit trapping on its properties. Cleaning of culverts and low bridges could be a daily routine. DEP no longer relocates problem beaver, and relocation is not a effective resolution to a reoccurring problem where large numbers of beaver exists. The Team Wildlife Biologist can almost guarantee that trail maintenance people will deal with this problem and it is no small matter.

The environmental protection benefits outlined in the Litchfield Bike Trail Committee's literature do not apply to this site (see Appendix B.) The site is already open space for the preservation of wildlife. It is the Team Wildlife Biologist's assessment that the benefits from a 2.5 mile trail do not compensate for the cost of trail construction or for the potential negative impact to wildlife.

STATE PARK PLANNER COMMENTS

The Litchfield Rail Trail Proposal offers an excellent opportunity to link the two main population, civic and business nodes in Litchfield with a safe, off-road bike trail.

Other potential linkages include schools, the White Memorial Conservation Center, and the PTC Company, a major local employer. Thus the rail trail offers a number of intermodal possibilities for residents and visitors alike. Of specific interest is the potential for children to travel safely off-road by bike between these two town focal points. From field inspection, it is recognized that several issues remain to be addressed, including:

- Possible conflict with the pike spawning area control structure and the periodic overflow across the former rail bed when the marsh is flooded during the spawning season.
- Design of several drainage seeps across the rail bed easterly of Bissell Road, perhaps using sloped fords versus piping.
- Design of the trail crossing at the intersection of Bissell Road and Rt. 202.
- Design of the trail adjacent to the PTC Company, as PTC encroachment onto the right-of-way will necessitate trail relocation pending negotiation with PTC regarding a new alignment on PTC property.
- Design of the High Bridge Rd. crossing, with the proposed culvert preferable to a grade crossing.

TRANSPORTATION AND LAND USE CONSIDERATIONS

The proposed Litchfield Rail Trail will have a positive impact on the local and regional transportation network by providing an alternative means of transportation between the two major activity centers in Litchfield - Bantam Borough and the Borough of Litchfield. In addition to linking these two major activity centers, the new trail will also link numerous residences, all public schools, and the principal employers of the community. The trail will serve as an important biking and pedestrian alternative to travel along a busy segment of Route 202 which has narrow shoulders and is projected by CONNDOT to have capacity deficiencies in the near future. Because of the benefits to the regional transportation network, and the opportunity to add a valuable recreational amenity, the Litchfield Hills Council of Elected Officials (LHCEO) has endorsed the Litchfield Rail Trail as a regional priority for the use of transportation enhancement funds under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) program.

It is federal transportation policy to promote the increased use and safety of bicycling and walking as transportation modes. In fact, the Federal Highway Administration (FHA) has established as a goal the doubling of the current percentage of total trips made by bicycle. The FHA maintains that increased levels of bicycling and walking will result in significant benefits in terms of health and physical fitness, the environment, and transportation related effects.

A bike trail is considered to serve a valid transportation purpose if it provides a connection between origins and destinations according to federal planning guidelines. The Litchfield Rail Trail clearly meets this criteria and thus will serve a transportation function as well as a recreational purpose. Federal funding under the ISTEA transportation enhancement program has been authorized to cover 80% of the design and construction cost of the Litchfield Rail Trail.

In addition to federal policy and funding support for the project, the Town of Litchfield Vision Plan specifically recommends the development of a "continuous recreation trail from Litchfield center to Bantam center along the abandoned railbed." Construction of the Litchfield Rail Trail is also supported in the LHCEO's draft Regional Bicycle Plan.

Construction of multi-use facilities to enhance the bicycling and walking environment throughout Connecticut is also supported by CONNDOT in their "1995 Long Range Transportation Plan."

A listing of the special benefits of off-road bicycle trails, excerpted from "The National Bicycling and Walking Study" by the FHA, is included in the Appendix A of this report.

The proposed rail trail is located along a CL&P right of way. According to town officials, the White Memorial Foundation has a licensing agreement with CL&P regarding the use of the right of way. Land use adjacent to the rail line is largely undeveloped open space with numerous scenic views of wetlands, waterbodies, woodlands, and open fields. There are few residences or other structures located immediately adjacent to the rail line. Utilities (i.e. sewer lines) are located within the right of way, but these are not considered to be a limiting factor to rail trail development according to the town engineer. From a planning perspective, it appears that the proposed rail trail is compatible with surrounding land uses provided any environmental impacts are suitably mitigated.

While access to the proposed rail trail is available at several locations, including the Litchfield Middle School parking lot and along the local roads which cross the trail the rail trail, a small parking area at the western terminus of the rail trail in Bantam appears feasible and should be considered during the project design.

ARCHAEOLOGICAL AND HISTORICAL SIGNIFICANCE

A review of the State of Connecticut Archaeological Site Files and Maps show no known archaeological resource along the trail system. Two prehistoric Native American encampments are recorded in the area associated with Ripley Swamp. However, these resources should not be affected by the proposed trail system. Likewise, no railroad-related structures, other than the railbed, have retained their historic integrity, and, therefore, the proposed rail-to-trail conversion will have no effect upon properties listed on or eligible for the National Register of Historic Places.

The State Historic Preservation Office and the Office of State Archaeology support the creative and adaptive use of the abandoned rail corridor for 20th-century recreational purposes. Further, they strongly recommend and encourage the Town of Litchfield to consider the rehabilitation and adaptive use of historic highway bridges, which are under review for replacement by ConnDOT (Connecticut Department of Transportation) elsewhere in the state, to solve its pedestrian stream crossing needs. (For more information on this please contact: Ralph Stedham at 594-2924 or Mark Foran at 594-2925. They are with ConnDOT, Bureau of Policy and Planning, Environmental Planning Division.)

APPENDIX A



The Many Benefits of Off-Road Trails

Depending on its location and design, a separate bicyclist/pedestrian path can not only serve a transportation function, but may also function as a linear park or greenway (Case Study No. 7). Benefits include:

Transportation

Trails can significantly increase the percentage of bicycling and walking commuter and other utilitarian trips, improve safety, increase access, and promote intermodal travel. In the Chicago area, census zones where five linear trails exist averaged 15.6 percent of commuter trips by bicycle, compared to only one percent for the region as a whole.

Recreational

Trails provide an easily accessible outdoor resource for many forms of recreation in addition to bicycling and walking. Healthy People 2000 calls for greatly increased community availability and accessibility of physical activity and fitness facilities to include more miles of hiking, bicycling, and fitness trails.

Economic

Off-road trails can produce income from shared utility leases, increase the value of neighboring real estate, generate income from tourists and other users, create jobs for trail development and maintenance, and protect existing corridors from development.

Planning Tool

Trails and other greenway corridors promote parkland development, wetland preservation, and environmental protection. They preserve undeveloped lands in urban areas and separate and buffer competing land uses.

Environmental

Environmental benefits fall into the categories of wildlife preservation, water quality protection, storm water management, preservation of vegetation, and other benefits such as serving as a fire break.

Educational

A trail corridor often encompasses several different environments along its route and can be thought of as an outdoor classroom full of educational materials. Value is realized by the scientific community, educators, and students through a wide range of studies such as biology, history, and art.

Historical and Cultural

Off-road trails can educate and increase awareness about the history and culture of a region, aid in the preservation of historic sites, and provide a location for cultural events.

Additional Quality-of-life Benefits

Increases in the quality-of-life associated with off-road trails are realized through expressions of community character and pride, aesthetics of the local environment, economic revitalization of the community, access to the outdoors, opportunities for socialization, and easy freedom of mobility.



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APPENDIX B

BACKGROUND INFORMATION
for the
PROPOSED LITCHFIELD/BANTAM BIKE PATH

Prepared by the Litchfield/Bantam Bike Trail Committee
January 5, 1993

For further information, contact:

Clifford Cooper, Chairperson 567 9876

Peter Aziz	567 9431	Ed Fabbri	567 1307
Tammy Brown	567 9012	Wendy Gladstein	567 3005
Michelle Childs	567 3510	Ursulla Hoskins	567 2022
Ernie Clock	567 8725	Peter Litwin	567 0877
Laura Derwin	567 4095	Craig Minor	567 5133
Lou Donne	567 4380	Dave Paletsky	567 9847
Jim Eisenhaure	567 0813	Dave Thompson	567 4651

HISTORY OF RAIL-TRAILS (BIKE TRAILS) AND GREENWAYS IN AMERICA:

- During the late 19th century the United States began the creation of the largest railroad system in the world. By 1916 there were approximately 300,000 miles of completed track. During the period between the 1930's and the 1950's the railroad industry suffered a severe decline. Today, less than half the original number of miles of rail system remain and 2,000 miles of track are abandoned every year.
- Former rail corridors provide a unique opportunity for future transportation uses and trails for public enjoyment. These long, narrow, open greenways provide the opportunity to create a multi-faceted linear recreation and transportation system on a minimal amount of property.
- The total number of rail-trails in the United States is greater than 550 and includes almost 7,000 miles in 45 states. The oldest trails are approximately 25 years old and have an excellent track record.
- Many problems originally anticipated by rail-trail opponents never occurred. In 1992 the Rivers, Trails and Conservation Assistance program of the National Park Service performed a study which examined both trail users and nearby owners along three rail-trails around the country. It particularly looked at commonly perceived trail problems such as increased vandalism/crime and a decline in property values.
- The study found that these concerns were unfounded. Adjacent landowners observed that living near the trail was better than they had expected and better than living next to an old rail corridor. The study also cited the specific benefits the rail-trail brought to the community and found that instead of lowering the quality of life in the three communities, rail-trails actually enhanced it. Other studies have shown similar results.

- Motorized transportation has been a primary focus for the United States for many years. Years ago, vehicles traveled more slowly and far fewer traveled the roadways than they do today. As a pedestrian walking alongside a contemporary road, one experiences vehicles speeding by in a plume of exhaust fumes. As we enter the 21st century our transportation focus needs to turn to alternatives or non-motorized methods. This new focus would encourage the public to regain the pedestrian/ non-motorized transportation experience.

- Greenways provide a place to pursue non-polluting options in transportation and recreation, to preserve open space close to where users live, to preserve an historic aspect of our nations development and to link together rural and urban spaces in the landscape.

RAIL TRAIL ACTIVITY IN CONNECTICUT

According to the State DOT, numerous projects are underway which deal with Pedestrian/Bikeway facilities and/or Rails-to-Trails conversions. These are projects that were selected for Transportation Enhancement Funding for the federal fiscal years of 1992 and 1993. (Transportation Enhancement Funding is part of the ISTEA program, which is explained below, under "More About Federal Funding".)

Under this Federal Enhancement program there are ten categories of activities that qualify for these funds, such as scenic highways, landscaping, historic preservation, etc. By far, the majority of applications received by the Connecticut DOT has been for the funding of Pedestrian/Bikeways or Rails-to-Trails projects.

The Connecticut Towns that were selected for funding in 1992 and 1993 are:

Monroe	Hamden	West Haven
Plainville	Vernon	East Lyme
North Canaan	Cheshire	Hamden
Stamford	Newtown	Winchester
Middlebury	Bridgeport	Norwich
Killingly	Thompson	Mansfield
Manchester		

THE PURPOSES AND BENEFITS OF HAVING A TRAIL IN OUR COMMUNITY:

- **Recreation**

Activities that could be conducted on the trail include running, hiking, walking, biking, rollerskating, rollerblading, cross-country skiing, and snowshoeing. Unlike other recreation resources, a multi-use trail affords the opportunity to engage in activities regardless of age, profession, athletic ability, disability (trail would be handicap accessible) or income level. The trail would also provide an opportunity for the two communities to interact. In the future, this trail would fit into a larger scale network of trails for the region.

- **Education**

The trail creates a direct route between Litchfield and Wamogo schools. It would provide easy access to the students and could offer numerous opportunities for use by school athletic programs and science programs, as well as link the schools to the town centers.

- **Transportation**

The trail would serve as a non-motorized transportation corridor between the communities of Litchfield and Bantam. The trail would enable residents to commute to work or school without contributing to auto congestion or air pollution in the two communities.

- **Environmental Protection**

The trail would assist in the conservation of open space and preservation of wildlife. It would serve as a plant and animal conservation corridor by providing a continuous "ribbon" of suitable habitat.

- **Historic Preservation**

The trail would contribute to the preservation of a potentially significant historic railroad line and the role it played in the development of the nation.

- **Economic Development**

There would be opportunities for trail user dollars to be spent on food, beverages, lodging, equipment rentals, and gasoline. . Also, as people are willing to pay more to have a multi-use trail in their neighborhood, landowners near trails have experienced an increased value in homes.

WHERE THE TRAIL WOULD BE LOCATED:

Starting at the southerly end of South Lake Street the Bike Path will travel west, on the south side of West Cemetery, and along what is referred to as the Ghost Trail. It will then cross Whites Woods Road, just south of Plumb Hill road (which is the location of the Litchfield High School and Litchfield Middle School), and then would continue to Bissell Road.

The trail will continue south west, crossing Butternut Brook, just south of Wamogo Regional High School to North Shore Road, and on to the south of the PTC Aerospace complex. It will go over the Bantam River and through a tunnel at High Bridge Road, and then proceed westerly along the south side of the Bantam River to Route 209.

There would be small parking areas at each end of the trail.

HOW THE TRAIL WOULD BE BUILT:

The trail will have a 10 foot wide asphalt surface bordered on each side by a 2 foot wide gravel shoulder. A 4" wide yellow centerline stripe will be painted to separate opposing traffic. Standard traffic control devices such as stop signs, advanced warning crossing signs, painted crosswalks and trail markers will be installed at all trail/street intersections. A bollard, or fence type barrier will be installed at all trail/street intersections to keep unauthorized motor vehicles off the trail.

There will be three wooden bridges spanning the Bantam River, Butternut Brook and Moulthrop Branch. A concrete box tunnel will be installed at Highbridge Road.

HOW THE TRAIL WOULD BE FUNDED:

80% of the cost of the trail would be federally funded. That funding would come from a program called ISTEA, which is described below.

20% of the cost of the trail would come from the town.

Our goal will be that no general funding will be necessary. The 20% will be raised by fund raisers, individual, corporate and business sponsors, pledges, private grants and in-kind services.

MORE ABOUT THE FEDERAL FUNDING:

ISTEA - Unlike previous federal transportation legislation which funded roads and highways exclusively, the Intermodal Surface Transportation Efficiency Act (ISTEA) set national goals for improved air quality and energy conservation. Additionally ISTEA advocated funding for non-traditional projects such as rail-trails, with more than half of ISTEA's highway funds identified as being eligible for use in the construction of bicycle and pedestrian facilities.

ISTEA was passed by Congress in late 1991 and is a six-year reauthorization of the Highway Trust Fund. All federal transportation funds are authorized under ISTEA and administered by state Departments of Transportation.

The Transportation Enhancement Program (TEA) is the most easily accessible ISTEA funding for a rail/trail project. TEA identified 10 specific activities as eligible transportation enhancement, one of which was "the preservation of abandoned railway corridors..for pedestrian or bicycle trails".

PRELIMINARY CONSTRUCTION ESTIMATE

January 3, 1994

Proposed Litchfield Bikeway and Pedestrian Facility
South Lake Street to Route 209, Bantam

<u>#</u>	<u>ITEM</u>	<u>ESTIMATED COST</u>
1	Clear and Grub	\$ 7,000
2	Formation of Subgrade	28,000
3	Granular Fill	30,000
4	Bank Run Gravel Subbase; Processed Aggregate Base	145,000
5	Bituminous concrete	96,000
6	Bridge Structures and Concrete Abutments	80,000
7	Reinforced Concrete Box Culvert (Tunnel)	50,000
8	Erosion and Sedimentation Control	26,000
9	Drainage Systems	20,000
10	Intersections - Bollards, Signage, Striping, Timber Railing etc.	56,000
11	Topsoil, Seed and Mulch	24,000
12	Temporary Construction, Maintenance and Protection Traffic	7,000
13	Construction Stake Out	6,000
	Total Estimated Construction Cost	\$575,000
	Contingency	25,000
	Total	\$600,000
	Preliminary Engineering (Survey, Mapping, Construction Plans, etc.)	50,000
	Inspection and Construction Administration	30,000
	Right-of-Way (Estimate)	5,000
	Total Estimated Cost	\$685,000

ABOUT THE TEAM

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state and regional agencies. Specialists on the Team include geologists, biologists, soil scientists, foresters, climatologists and landscape architects, recreational specialists, engineers and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC&D) Area - an 83 town area serving western Connecticut.

As a public service activity, the Team is available to serve towns within the King's Mark RC&D Area - **free of charge**.

Purpose of the Environmental Review Team

The Environmental Review Team is available to assist towns in the review of sites proposed for major land use activities or natural resource inventories for critical areas. For example, the ERT has been involved in the review of a wide range of significant land use activities including subdivisions, sanitary landfills, commercial and industrial developments and recreation/open space projects.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision making. This is done through identifying the natural resource base of the site and highlighting opportunities and limitations for the proposed land use.

Requesting an Environmental Review

Environmental reviews may be requested by the chief elected official of a municipality or the chairman of an administrative agency such as planning and zoning, conservation or inland wetlands. Environmental Review Request Forms are available at your local Soil and Water Conservation District and through the King's Mark ERT Coordinator. This request form must include a summary of the proposed project, a location map of the project site, written permission from the landowner/developer allowing the Team to enter the property for the purposes of a review and a statement identifying the specific areas of concern the Team members should investigate. When this request is reviewed by the local Soil and Water Conservation District and approved by the King's Mark RC&D Executive Council, the Team will undertake the review. At present, the ERT can undertake approximately two reviews per month depending on scheduling and Team member availability.

For additional information regarding the Environmental Review Team, please contact the King's Mark ERT Coordinator, Connecticut Environmental Review Team, P.O. Box 70, Haddam, CT 06438. The telephone number is 203-345-3977.

