

Hartford's
Camp Courant
Nature Trail/
Outdoor Classroom

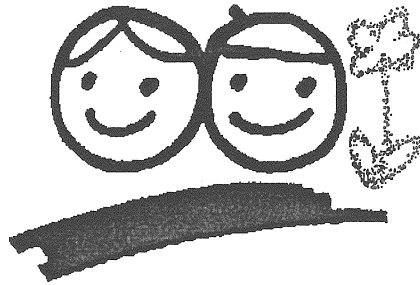
Farmington, Connecticut



Eastern Connecticut
Environmental Review Team
Report

Eastern Connecticut
Resource Conservation & Development Area, Inc.

Hartford's
Camp Courant
Outdoor Classroom/Nature Trail
Farmington, Connecticut



Environmental Review Team Report

Prepared by the
Eastern Connecticut Environmental Review Team
of the
Eastern Connecticut
Resource Conservation and Development Area, Inc.

for the
City Manager
Hartford, Connecticut

March 2000

CT Environmental Review Teams
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Acknowledgments

This report is an outgrowth of a request from the Hartford City Manager to the Hartford County Soil and Water Conservation District (SWCD). The SWCD referred this request to the Eastern Connecticut Resource Conservation and Development Area (RC&D) Executive Council for their consideration and approval. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The Eastern Connecticut 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.

The field review took place on Tuesday, November 30, 1999.

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I would also like to thank Elizabeth Gibbs, executive director, Camp Courant, for her cooperation and assistance during this environmental review.

Prior to the review day, each Team member received a summary of the proposed project with location and soils maps. During the field review Team members were given additional information. Some Team members made separate or follow-up field visits. Following the review, reports from each Team member were submitted to the ERT coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site plans or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project - all final decisions rest with the city and the camp board. This report identifies the existing

resource base and evaluates its significance to potential development, and also suggests considerations that should be of concern to the city and camp board. The results of this Team action are oriented toward the development of better environmental quality and the long term economics of land use.

The Eastern Connecticut RC&D Executive Council hopes you will find this report of value and assistance in planning, constructing and using the proposed outdoor classroom/nature trail.

If you require additional information please contact:

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Introduction

Introduction

The Hartford City Manager has requested assistance from the Eastern Connecticut Environmental Review Team in conducting an environmental review of the proposed outdoor classroom/nature trail at Camp Courant in Farmington. (Figure 1)

Camp Courant is located on 36 acres on Batterson Park Road across from Batterson Park in Farmington. The property is owned by the City of Hartford and leased to Camp Courant. The camp is operated as a free summer day camp for city children. The camp serves approximately 2500 children during a seven week season. The children range in age from five to 12. The camp currently uses 13 acres for program space and buildings. Current activities include athletics, a low ropes challenge course, computer laboratory, creative arts, special programs and an early learning program. (Figure 2)

The Camp is proposing to use the additional 23 acres for an outdoor classroom/nature trail that will allow the expansion of programming to include environmental awareness, natural resources study (wildlife, forestry, geology, wetlands, etc.), outdoor/hiking safety, gardening, and horsemanship. (Figure 3) This project is part of the camp's capital improvement plan and is listed as part of Phase 2 - Expansion and Renovation.

Objectives of the ERT Study

This ERT report will assist the camp board of directors with the planning, design, construction, management and use of the proposed outdoor classroom/nature trail. The report provides a natural resource inventory, discusses potential environmental impacts, makes recommendations for design and construction and provides information on educational opportunities and resources available.

The ERT Process

Through the efforts of the City Manager and the Camp Courant Board of Director's this environmental review and report was prepared for the City of Hartford.

This report provides an information base and a series of recommendations and guidelines which cover the topics requested by the city.

The review process consisted of four phases:

1. Inventory of the site's natural resources;
2. Assessment of these resources;
3. Identification of resource areas and review of plans; and
4. Presentation of education, management and land use guidelines.

The data collection phase involved both literature and field research. The field review was conducted on Tuesday, November 30, 1999. The emphasis of the field review was on the exchange of ideas, concerns and recommendations. Being on site allowed Team members to verify information and to identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. Individual Team members then prepared and submitted their reports to the ERT coordinator for compilation into this final ERT report.

Figure 1.



Location and Topographic Map

Scale 1" = 2000'

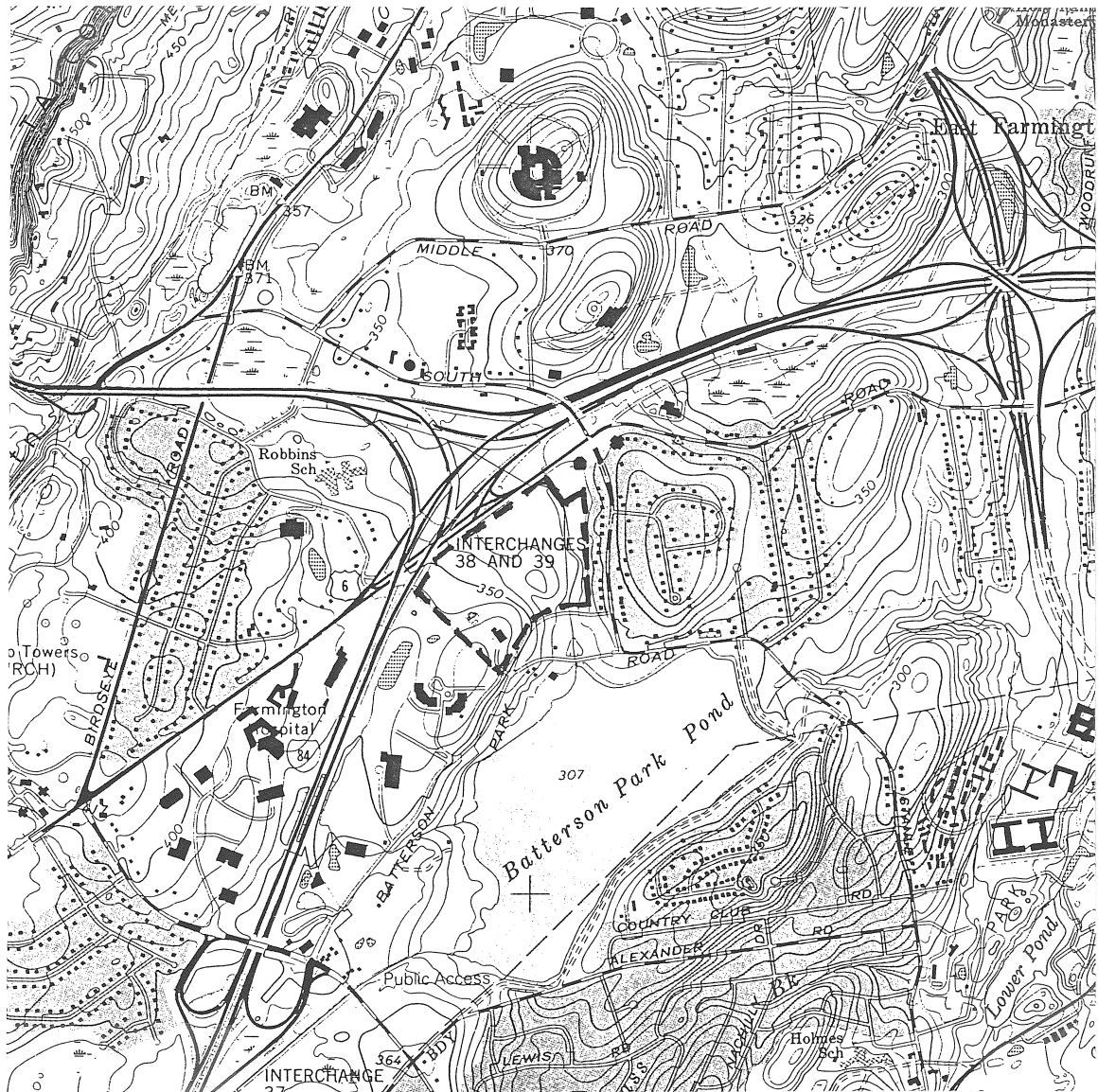


Figure 2.

Camp Courant Master Plan Map
13 acre current program area

↑
N

Hiking
Trail



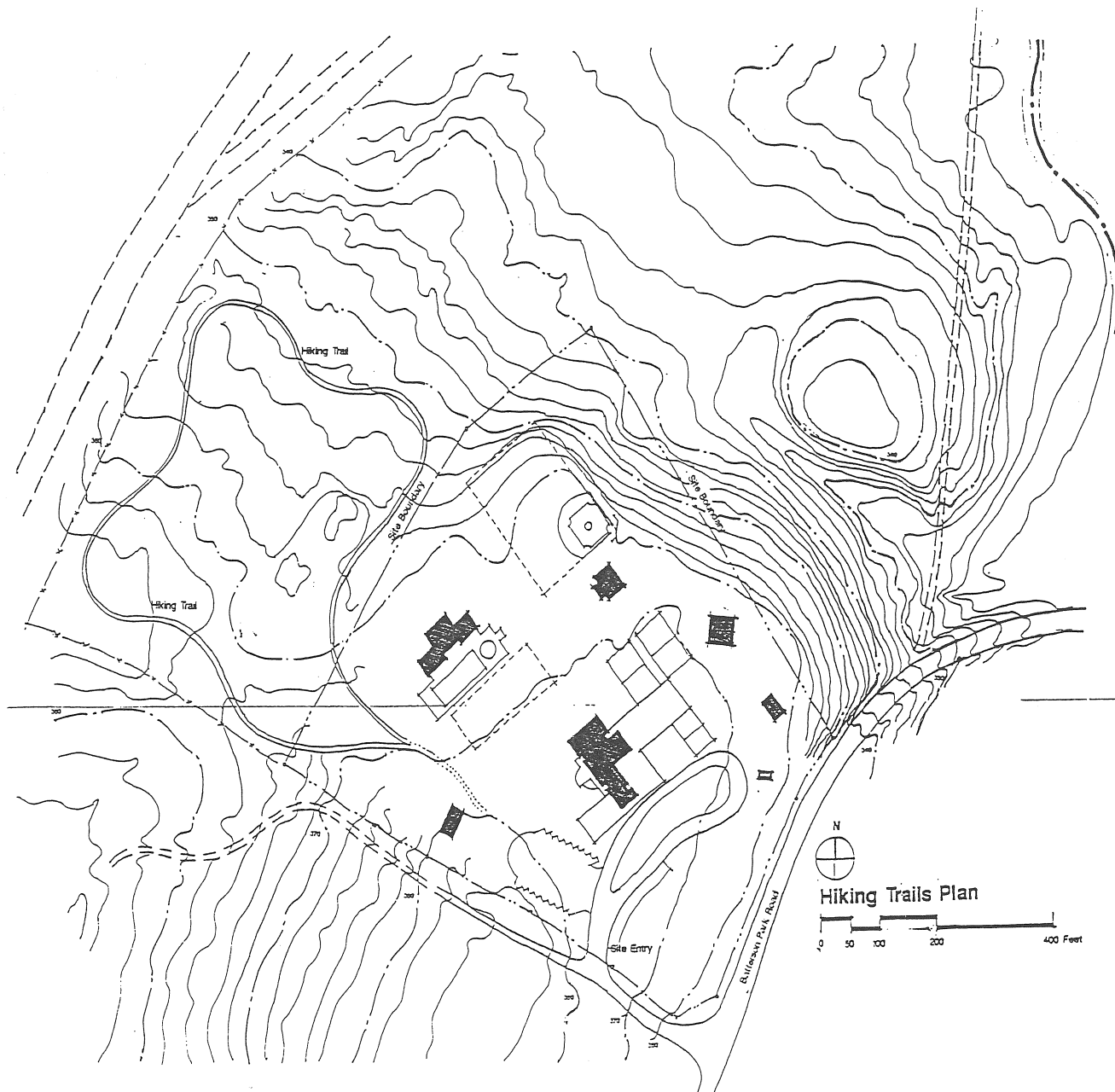
Site Plan
0 40 80 ft
CAMP COURANT MASTER PLAN
Farmington, Connecticut
January 20, 1968

Arthur
Cook &
Jepson
Farmington, CT

Figure 3.

↑
N

Hiking Trails Concept Plan Given to Team Members



Topography and Geology

The 36 acre parcel belonging to Camp Courant straddles a north-northeast valley drained by a permanent stream which flows into Batterson Pond (Figure 4).

Slopes are gentle most everywhere except along a steep sided northwest-southeast ravine just east of the main camp buildings. This "dry valley" is perhaps the most unique and interesting natural feature of the property.

The whole area is underlain by sandy glacial till - poorly sorted material ground up and dragged along at the base of the last major continental scale glacier to cover Connecticut (20,000 - 30,000 years ago). The surface of the till however is strewn with well rounded cobbles and boulders, 2 - 4 feet in size, and is characterized by a rather hummocky topography as if washed and partially eroded by rapidly flowing subglacial waters. The base of the dry valley is paved by rounded boulders up to a foot or so in diameter left behind by these same erosive waters. The source of the subglacial stream seems to have been the bedrock notch on Route 4 near the Hillstead Museum. The surficial geologic map (Figure 5) shows a sand and gravel "crevasse" deposit just east of the notch aligned along a low swale which heads directly to the Camp Courant "dry valley" (Figure 6). The perennial stream on the property drains a large area to the northeast and seems to have eroded its valley long after the ice disappeared from the area.

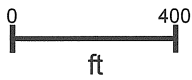
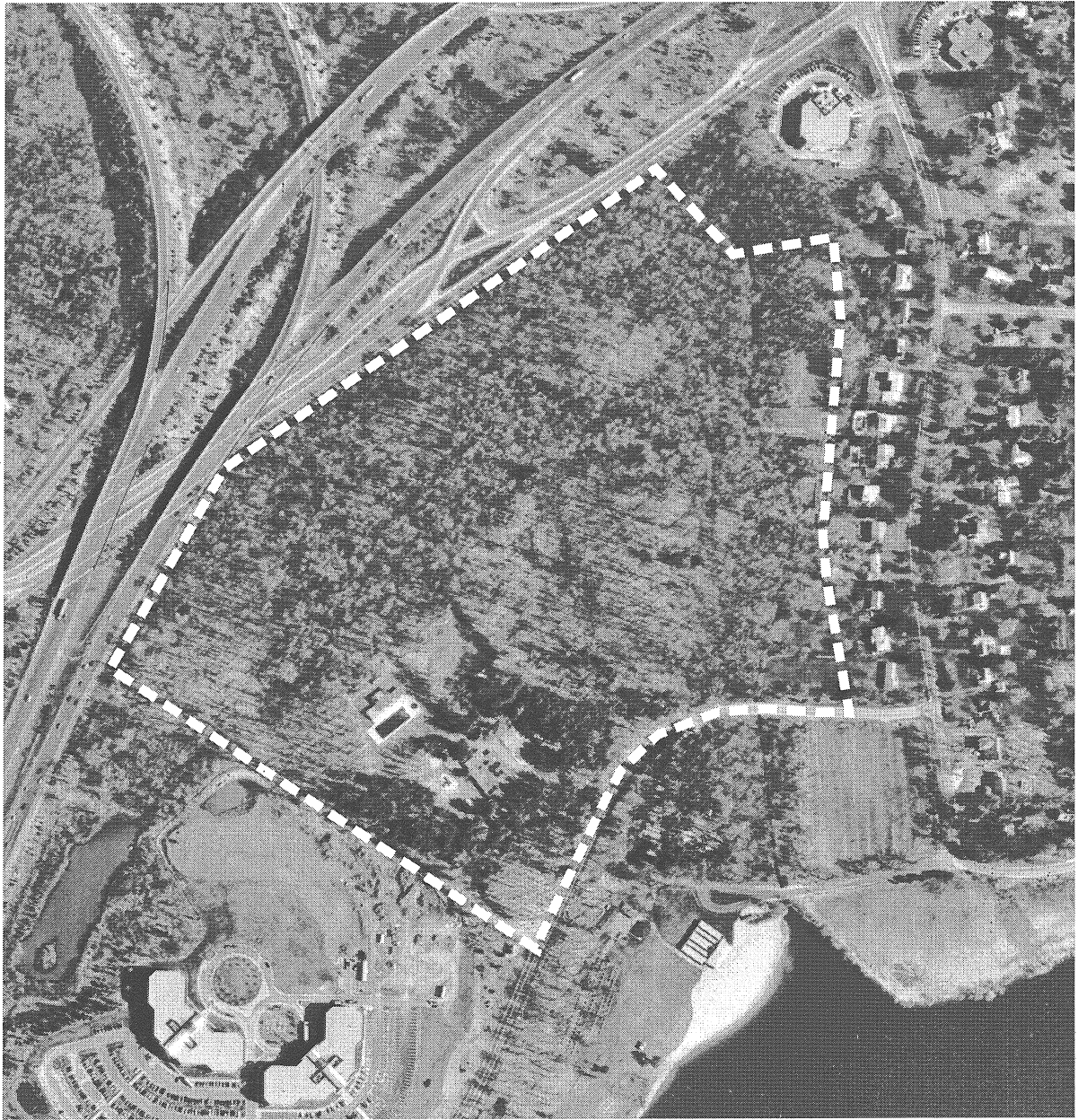
Although not exposed anywhere on the property the bedrock beneath the till is either the Holyoke basalt lava flow or the red sandstones and shales belonging to the New Britain Formation. The upper contact of the Holyoke is inferred to pass along the southern boundary of the camp. (Figure 7) The bedrock is roughly 200 million years old and was deposited just as Pangea began to break up to form the Atlantic Ocean.

Further information on the bedrock and surficial geology of the site can be found in:

Simpson, Howard E., 1959, Surficial Geology of the New Britain Quadrangle. USGS Geologic Quadrangle Map, GQ - 119.

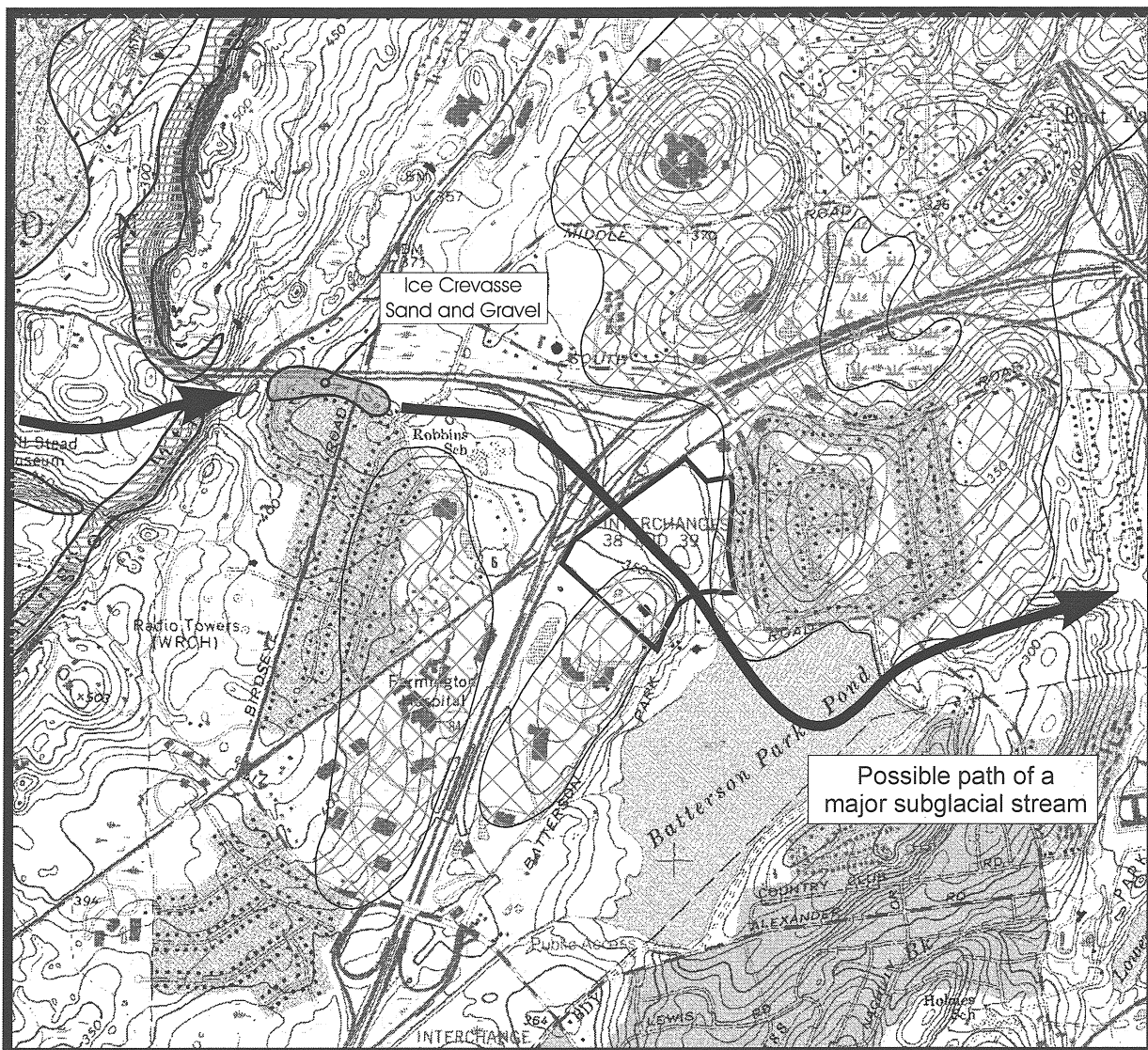
Simpson, Howard E., 1966, Bedrock Geology of the New Britain Quadrangle, USGS Geologic Quadrangle Map, GQ - 494.






Figure 4.



Camp Courant, Farmington CT

Figure 5.
Surficial Geology in the Neighborhood of Camp Courant



-  Kame Terrace Sand & Gravel
-  Ice Crevasse Filling Sand & Gravel
-  Glacial Till
-  Thick Glacial Till
-  Bedrock Outcropping

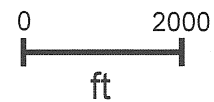
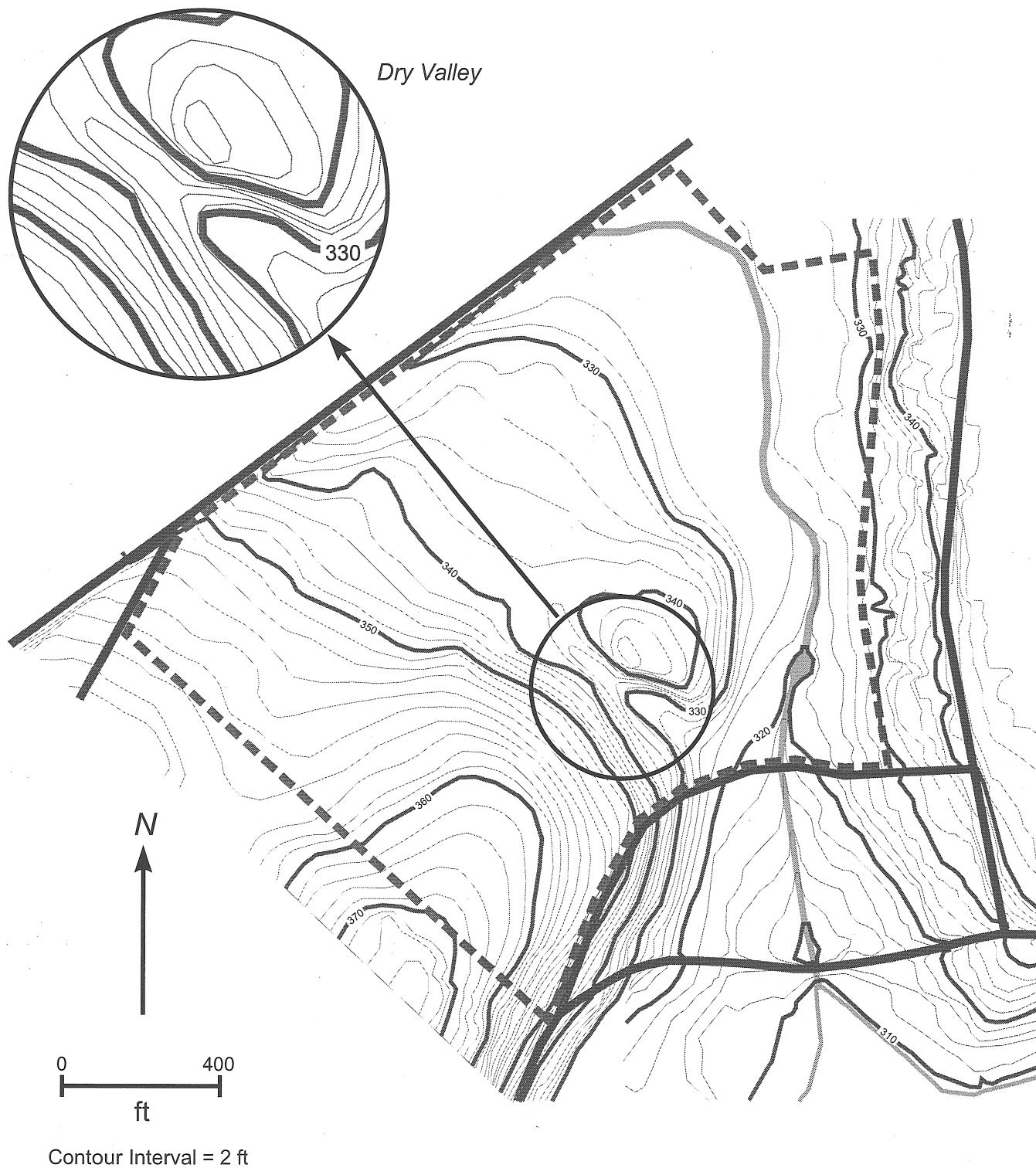
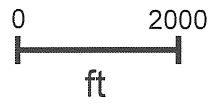
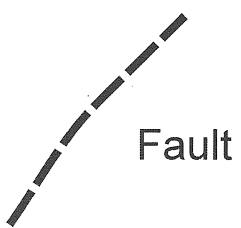
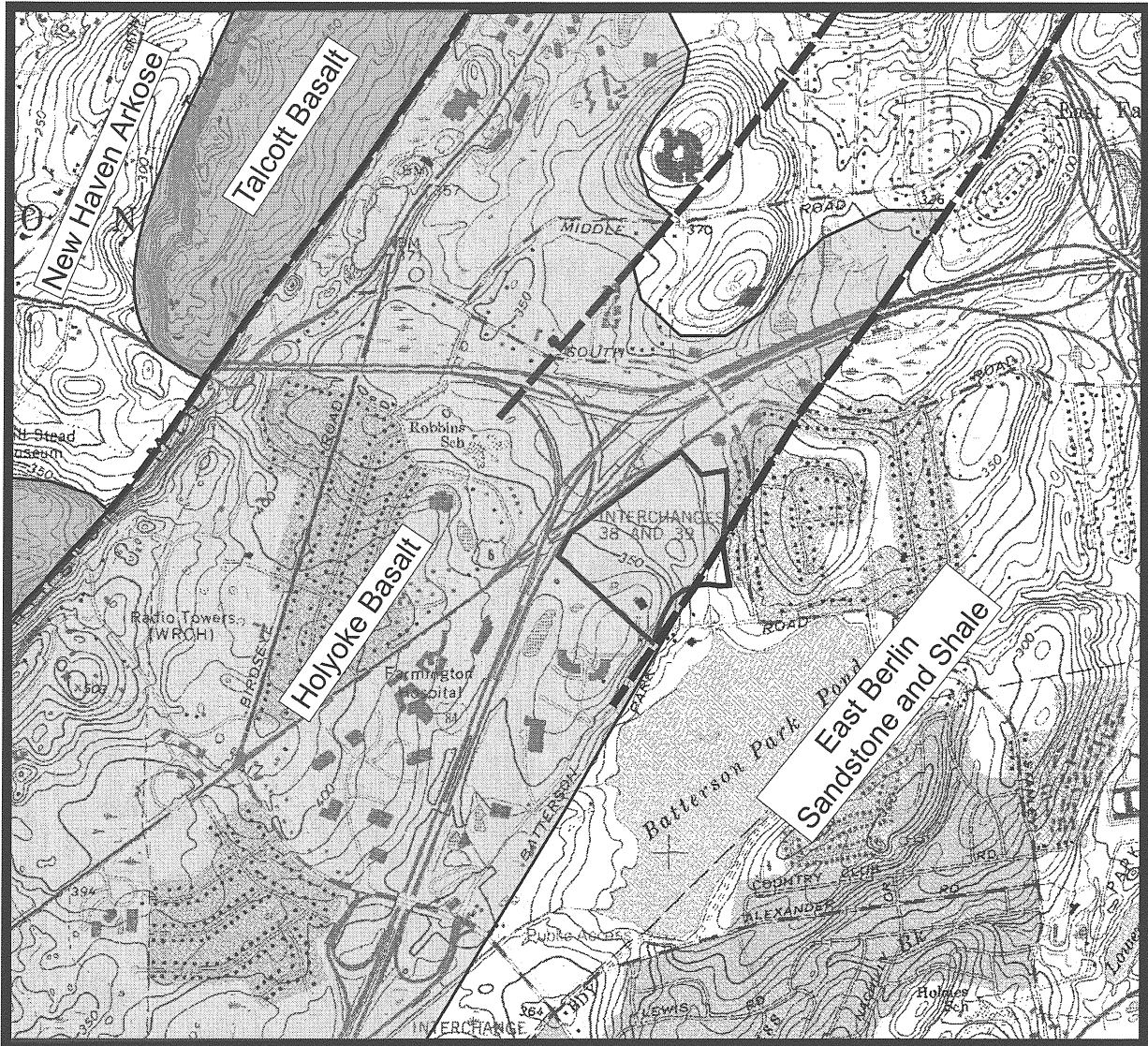


Figure 6.



Topography of Camp Courant showing detail of the 'Dry Valley'

Figure 7.



Bedrock Geology in the Neighborhood of Camp Courant

Soils Review

Camp Courant requested assistance in the evaluation of a potential trail system and other outdoor education possibilities. The camp currently utilizes a 13 acre parcel containing open fields and buildings and would like to create a trail system within the surrounding 23 acres of woodland for environmental education and hiking safety lessons. In addition, there is interest in creating a vegetable garden and a site is needed to temporarily contain horses that on occasion visit the camp for daytime education purposes. This section provides comments on the general soil conditions in relation to the proposed trail system and advice on the garden and horse corral siting.

Soil Resources

The general mapping unit descriptions from the USDA Hartford County Soil Survey, 1962, shows that the site contains a range of well drained to poorly drained soils including; Ludlow, Watchaug, Menlo, Wethersfield and Wilbraham soil types. Reference the soil tables and descriptions for more information (see Appendix A). The soil survey information is intended for use as a general planning tool and its limited accuracy may have excluded wetland inclusions.

Paths and trails for hiking should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones and boulders on the surface.

The wet soils appear to border the property on the east, north and west sides while the well drained soils are located in the center. Most soils on site tend to be well drained and well suited for recreation trails if properly installed and maintained. Some wet area crossings may be needed in the poorly drained soil types. Please keep in mind that wetlands are regulated and that local and state permits may be needed before work begins in or near wetlands. There are two areas along the trail that may contain vernal pools (please refer to Wetland Review and

Wildlife Review sections). Foot traffic in these areas may be harmful to wildlife species that utilize these fragile habitats.

Horse Corral Siting

In regards to natural resources, typical concerns associated with horses are manure management and erosion control. Proper siting of activities involving horses and proper manure storage and handling reduce potentially harmful impacts from horses. Because the camp only has horses on-site during occasional daytime visits and all manure is collected during the visits and taken back to the horse owner's operation, the impact to the camp will be minimal. The purpose of the corral at the camp is to contain the horses while the horse owner educates the students.

A feasible site for this purpose is just west of the pavilion located along the southern property boundary. The area is flat to gently sloping with well drained soils. If the horses will not be ridden inside the corral, trees can be left standing and would provide summer shade. If the horses will be ridden in the corral, placing sand and leveling the site may be desired. Regardless, a vegetative buffer should be maintained along the property line and minimal trees removed. If horses are to be on-site on a regular basis, a horse management plan is recommended.

Garden Siting

Currently there is no garden at the camp. A small vegetable garden could be created east of the pool house. Summer sun should reach the area, which is accessible by paved access roads. Raised beds could be constructed for gardening by wheelchair.

The soil in this area appears to be fill material and if the source is not known, a contamination test should be taken before any gardening takes place. Conditioning of the soil may be needed to create a fertile growing medium. Soil nutrient testing should be done to determine the nutrients needed to grow garden vegetables. Soil test kits can be obtained through the Agricultural Experiment Station in Windsor by

calling, (860) 683-4977 or through the University of Connecticut Soil Testing Lab in Storrs by calling, (860) 486-4274. Adding mature compost helps to increase soil health and the Town of Farmington may have compost available or know of a local source. The vegetation on the banks along the edge of this potential garden area, which includes blackberry bushes, should be maintained for erosion control.

Figure 8.



Soils Map

Scale 1" = 1667'

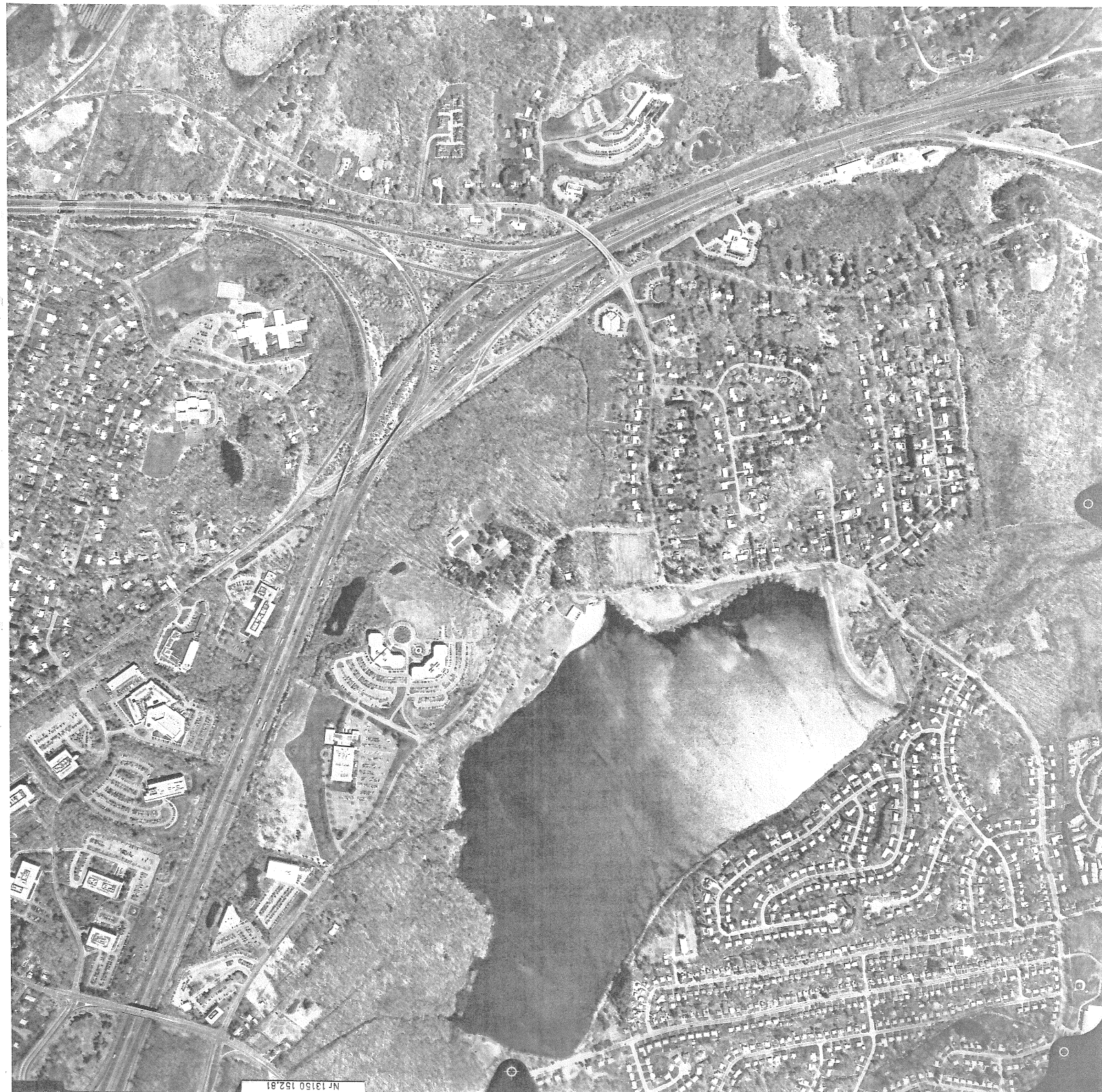


Figure 9.



Aerial Photo

Scale 1" = 1000'



Wetland Review

Please refer to the accompanying sketch (Figure 10) for a generalized, graphical representation of the wetlands and watercourses present on this site.

The wetlands and watercourses on this property exist within the watershed of the Bass Brook which is part of the Park River drainage basin. The primary wetland area (indicated as "#1" on the sketch) flows to the east into an off-site watercourse that flows south across Batterson Park Road into Batterson Park Pond. A small portion of this wetland area drains to the northeast into the swale that parallels the highway. This wetland exists at the top of its local watershed with the divide being basically this parcel's southwestern property line.

The soils of this parcel, as mapped by the Soil Survey of Hartford County, contain a restrictive, "hardpan" layer a foot or two below the surface that tends to keep infiltrating rainwater from seeping through it. This groundwater then travels horizontally down hill, over this hardpan and will seep out where the hardpan comes close to or intersects the surface favoring the creation of a wetland habitat.

It appears that the soils of the western portion of this wetland have been altered by the removal of topsoil. This activity took place at least 25 years ago based on the age of the vegetation throughout this area. The removal of this topsoil would effectively bring the groundwater that is supported by the hardpan described above, closer to the surface to make this area wetter than it had been prior to disturbance.

As a result of the soil modifications the surface contours of this area vary enough to create small, shallow pools of water. During the site visit, this area supported many of these waterbodies, however, the Team wetland specialist does not believe that they would be deep enough and exist long enough during the growing season to support amphibian species characteristic of vernal pools.

Vernal pools are small, shallow, circular depressions in the landscape which fill with water during the wetter periods of the year (spring and

late fall), and become drier during the warmer summer months. True vernal pools also support unusually diverse and dynamic assemblages of wildlife. Much of this wildlife, particularly amphibians such as salamanders, is solely dependent on these areas for one or more periods of their life-cycle. Because of the absence of permanent water, fish do not live in these ephemeral pools, making these areas very attractive to certain animals which would normally fall prey to these carnivorous fish. Rare and endangered amphibian species are often found in these pools. The amphibian life that use these pools as breeding grounds soon migrate into the surrounding uplands to live out their adult phase and return to the pools only to breed.

Wetland #2 is situated within a short, broad swale that drains off the southeastern corner of the property. Most of the wetland area here is transitional in nature and only becomes more definite at the boundary line where a small pool is created. Again, this one would not appear to qualify as a "true" vernal pool.

The "Potential Vernal Pool" indicated on the sketch does appear that it would be able to hold water long enough for an extended period of time with suitable habitat for the necessary amphibian species to breed and develop, however, it would not be known for sure until it is observed during the early portion of the growing season (April/May).

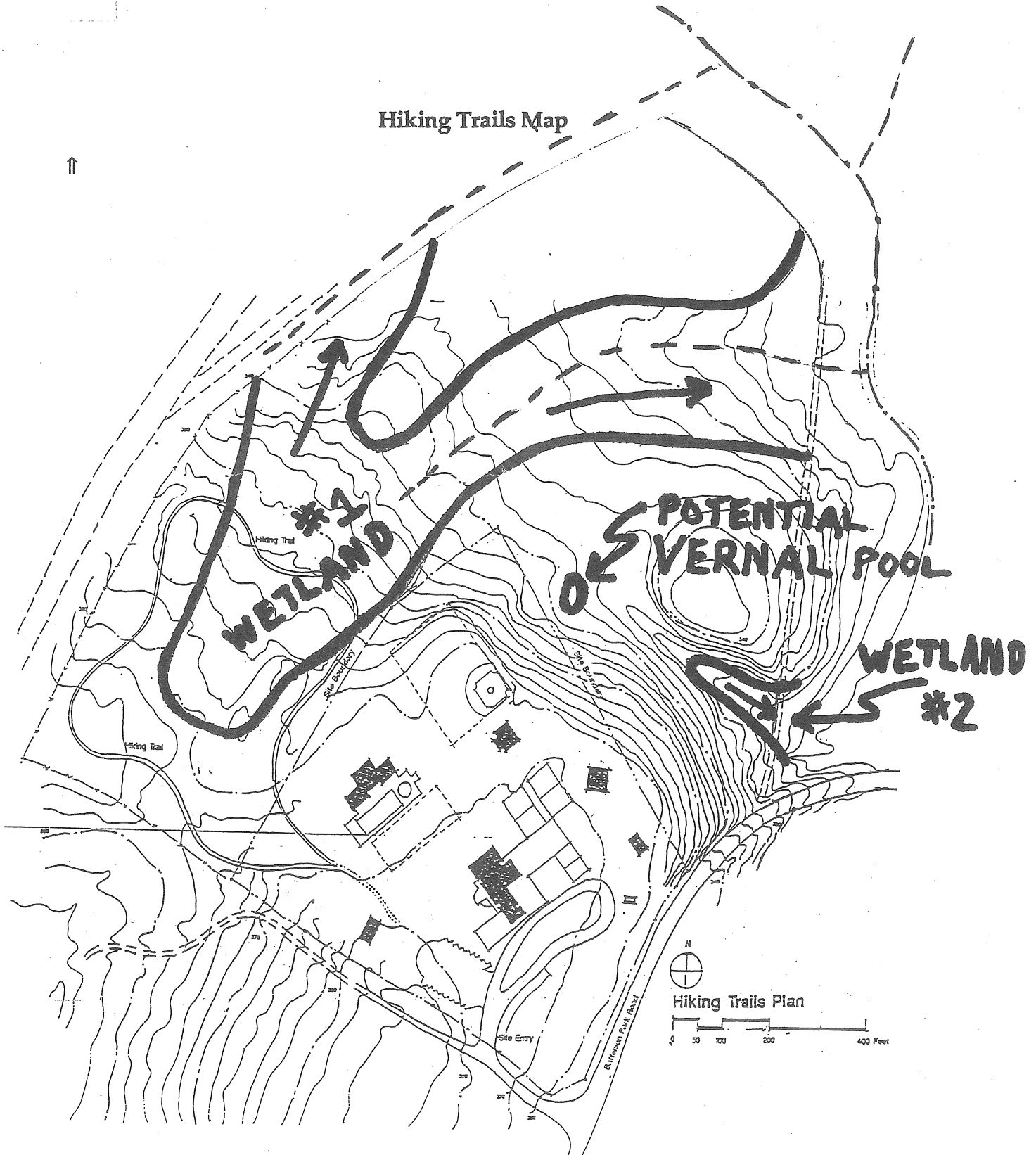
Trail construction within wetlands can be accomplished with elevated boardwalks or the introduction of fill material that would bring elevations up above the seasonal high water levels. The use of fill should be restricted to those marginal wetland areas where groundwater is at or below the surface of the ground and to where it would not restrict overland flows traveling through the wetlands. Elevated boardwalks are typically more expensive, requiring more equipment and materials than trails placed on fill, however, they create much less impact on the subject wetland area's vegetation and hydrology. However, the stony, mineral wetland soils present will make the digging of post holes more difficult had there been deep organic, mucky soils present. These activities should be reviewed by the Farmington Inland Wetlands and Watercourses Agency for permit need determination if they are to be initiated.

Figure 10.

Wetlands Map



Hiking Trails Map



The Natural Diversity Data Base

The Natural Diversity Data Base maps and files regarding the project area have been reviewed. According to our information, there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur 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 Environmental & Geographic Information 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. Consultations 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.

It is now possible for individuals to conduct an initial endangered species review using the "State and Federal Listed Species and Significant Natural Communities" maps available for viewing through each town's Town Hall. The Town Planner should have a copy of the map and instructions on how to use the maps. This map shows the generalized locations for listed species and communities as gray-shaded areas on a 1:24,000 scale map of the town.

Wildlife Review

This section will address the following: current conditions for wildlife, nature trail placement, recommendations for habitat management and enhancement, planning for wildlife, and other considerations.

Current Conditions

The 36 acre Camp Courant property is comprised of a forested area containing an oak/ hickory, red maple and white pine forest types. Buildings, outdoor pool and lawn area make up the remaining area. There are a variety of conditions and habitat types which provide habitat for an assortment of wildlife. Eastern hemlocks are infested with the woolly adelgid and are likely to die. Eastern hemlock does not make up a large component of the forested area, yet provides valuable winter cover in a predominantly deciduous forest.

A nature trail through the natural areas offers many opportunities for nature education and passive recreation. Qualitatively speaking, the property has significant wildlife value as a migratory bird stopover, as habitat for more adaptable resident wildlife and possibly a breeding site for amphibians (vernal pools and moist soil conditions).

Field Observations and Notes

Although November (field review conducted 11/30/99) is not the best time to do a wildlife census, the following wildlife were observed either directly or indirectly by identifying calls, tracks, scat or other sign: white tailed deer, black-capped chickadee, dark-eyed junco, American crow, and gray squirrel. A red-tailed hawk was seen and heard screeching overhead as the Environmental Review Team inspected the forested area. White-tailed deer sign was prevalent throughout the property. White-tail deer buck rubs were readily seen on trees and scrapes were found on the ground in the northeastern section of the property. Woodpecker activity and trees with natural cavities were

noted. With further observations and seasonal inspections one will find a diversity of birds, mammals, amphibians and invertebrates using the property. Further inspection of wet areas, including vernal pools, is recommended during the late winter and early spring amphibian breeding periods.

Wildlife Planning Considerations

It can be expected that a variety of wildlife will occupy suitable habitat on the Camp Courant property. A delicate balance needs to be maintained which encourages use but does not adversely affect wildlife. Development of a long range habitat management and recreational plan is needed to help provide a balance between the use and ecological integrity of the property. In general, as properties are developed, natural areas are divided into smaller, isolated pieces. Land that is in public ownership can be managed for wildlife habitat for the long term. In contrast, private land, which consists of nearly 88 percent of the land in Connecticut, usually changes ownership and is not likely managed for wildlife for the long term. Camp Courant can be a place where habitat can be improved and managed for wildlife for the enjoyment and nature education of campers and especially urban residents.

Nature Trail Development and Planning

A nature trail needs to be carefully planned so that it allows many of the important habitat features to be included, however, the trail size should be kept of a minimum so that not all the area is being traversed. A portion of the property should be reserved as refugia (see Figure 11) and not have a trail through it. Too many trails and excessive pedestrian traffic through a small area can have a negative impact on the wildlife especially the ones nesting on the property. The mixed hardwood forest on the east side of the property should be considered as a refuge area. Also, the trail through wet areas needs to be carefully designed to not cause excessive erosion in the streams. Specially designed trails (see Figure 11 for Trail A, Trail B, and Handicap Trail) can bring trail users along various habitats and point out the habitat components.

Wildlife habitat is made up of all the existing and managed components of the property. It is the collective summation all the environmental factors which provide food, water, cover and their spatial arrangement. The property can be utilized to teach camp users how to recognize the various habitat components and also have some "take home" messages. The Camp Courant property is well suited for nature trails, however, they should not be allowed to criss cross the entire property. Pets should not be allowed on the property especially during the nesting seasons (early spring to early fall). A strict leash law should be in place and enforced.

A trail system can serve to point out the varying habitat types and other points of interest on the property. The various habitat components such as:

Spring foods	Herbaceous plants and wildflowers
Summer foods	Nectar plants
Fall berries	Dead or dying trees
Winter persistent berries	Artificial nest boxes
Conifers and evergreens	Man-made brushpiles / rock piles
Nut /seed sources	Water sources (vernal pools, seeps, streams ...etc.)

Each identified habitat component contributes, in some way, to the ecology of the property. The various components can be identified by trail markers. Also, a trail guide can be developed which corresponds to numbers along the trail.

Hands-On Wildlife Activities

- Camp participants can build nest boxes and place them in appropriate habitats. Bluebird / tree swallow / house wren / chickadee / screech owl nestboxes (Team wildlife biologist can provide plans and specifications for nest boxes mentioned here) can be built and placed in field and/or woods edges. Squirrel nest boxes can be placed in oak trees. The Team wildlife biologist is available for further consultation.

- Planting a variety of native trees, shrubs and/or wildflowers in appropriate areas to diversify seasonal food availability and cover.

Suggested plants for landscaping or habitat enhancement:

Red maple (*Acer rubrum*)
 Black gum (*Nyssa sylvatica*)
 White oak (*Quercus alba*)
 Black oak (*Quercus velutina*)
 Black cherry (*Prunus serotina*)
 Serviceberry (*Amelanchier canadensis*)
 Staghorn sumac (*Rhus typhina*)
 Spicebush (*Lindera benzoin*)
 Winterberry (*Ilex verticillata*)
 Arrowwood viburnum (*Viburnum recognitum*)
 Pin oak (*Quercus palustris*)
 Red cedar (*Juniperus virginiana*)
 Hickory (*Carya* spp.)
 Sassafras (*Sassafras albidum*)
 Gray birch (*Betula populifolia*)
 Alder (*Alnus* spp.)
 Bayberry (*Myrica pensylvanica*)
 Highbush blueberry (*Vaccinium angustifolium*)
 Sweet pepperbush (*Clethra alnifolia*)
 Blackberry (*Rubus allegheniensis*),

Some habitat improvements can be established by planting native trees, shrubs or wild flowers to enhance or diversify food or cover. For example: Planting of winter persistent shrubs such as winterberry (*Ilex verticillata*) or high bush cranberry viburnum (*Viburnum trilobum*) can benefit wildlife in the winter months. Another example of an enhancement might be to plant some early summer food sources such as: red mulberry (*Morus rubra*) or high bush blueberry (*Vaccinium corymbosum*). Any plantings at Camp Courant should consist of native materials as much as possible. Plant materials should not include any invasive exotics which compete with native plants. The following invasive non-native trees, shrubs and vines should not be planted and, if present, should be removed:

Norway Maple (*Acer platanoides*)
 Tree of Heaven (*Ailanthus altissima*)
 Catalpa (*Calalpa spp.*)
 Autumn Olive (*Elaeagnus umbellata*)
 Winged Euonymus (*Euonymus alatus*)
 Privet (*Ligustrum spp.*)
 Amur Honeysuckle (*Lonicera mackii*)
 Morrow's Honeysuckle (*Lonicera morrowii*)

Planting of wild flowers or creating unmowed lawn areas can help attract butterflies, humming birds and grassland birds and mammals.

- Dead or dying wood is part of habitat for wildlife, especially woodpeckers and a whole host of secondary users such as screech owls, bluebirds and flying squirrels. Snags can be created by cutting two complete bands through the bark with a chainsaw or ax (type of trees and technique information is available from Team forester or wildlife biologist). A minimum of 3-5 snags (dead or dying trees) per acre should be present or created per acre of forested area. Each habitat component contributes, in some way, to the ecology of the property. The various components can be identified by trail markers or signs. Also, a trail guide can be developed which corresponds to numbers along the trail. This can reduce the maintenance of signage and requires trail users to pick up a guide from a centralized trail head or main building.

Practical Wildlife Censusing Techniques

Counting or documenting the presence or absence of wildlife along the nature trail can be both fun and educational for the students. It also teaches the importance of record keeping and identification of wildlife (directly and indirectly).

- Locate nests and other important wildlife occurrences
 - seasonally locate nests and plot locations on maps

- find den trees and natural cavities in trees and find out what animal is using it
- Owl hooting survey
 - play an owl hooting tape and listen for response
- Bird Count
 - learn to identify birds by sound and vision and document their presence in the spring, summer, fall and winter.
- Snow tracking (*if winter use of camp is allowed*)
- following a light snow (2-3 inches), animal tracks can be identified and followed to see where they are traveling to and from. Also, students may detect what the animal may be eating or doing.

Handicapped Access Trail

In Figure 11, the Handicap Access Trail proposed location is shown. This trail is short but follows fairly level terrain.

Other Wildlife Concerns

- Rabies

With the presence of rabies in Connecticut, it is important for camp participants to reduce their potential for exposure. Rabies affects primarily raccoons and skunks. Camp users should never discard food on the ground or leave food in places potentially accessible to raccoons or skunks. Improperly stored or discarded food can attract rabies vector animals into the camp. If wildlife are seen acting abnormally bold or sickly they should be reported to the nearest animal control officer (usually a local dog warden).

If house cats or dogs are allowed on the property, they should be properly vaccinated for rabies and not allowed to roam unleashed. Unvaccinated cats pose a significant danger to camp users because they may come in contact with rabid animals.

- **Ticks**

Camp users should use preventative measures against getting bitten by ticks during their stay at Camp Courant. Ticks are inevitably found throughout and it is important to inform them about their presence. Children and adults should be sure to check themselves after every outing. This includes visitation of lawn areas as well as wooded areas. Ticks are carried by a variety of wildlife including deer and birds. Tick repellents offer some protection when used according to the label instruction, however it is important for each person to be aware that they need to check themselves thoroughly to prevent their attachment.

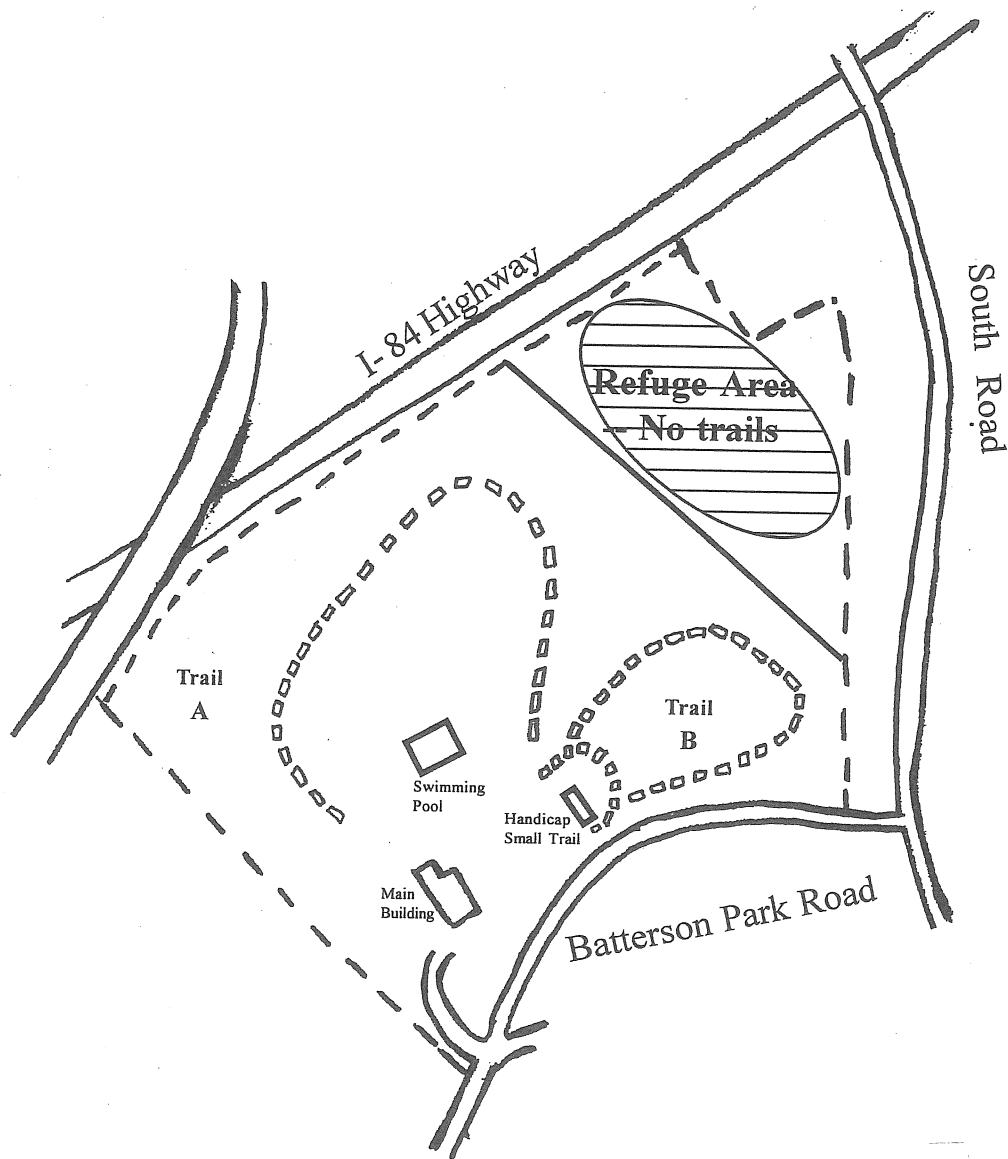
Summary and Conclusion

The Camp Courant property offers many opportunities to teach children about nature, habitat and wildlife. The property is well suited for the placement of two main trails and a small handicap access trail (See Figure 11). Although the property does not have high peaks and mountain vistas, it does have a diverse woodland environment with a variety of plants, animals and water sources. The proposed trails have many points of interest, habitat components and wildlife viewing opportunities. The Team wildlife biologist is available for consultation to locate the trails on the ground and developing a trail guide.

<p>Contact: Peter Picone Wildlife Biologist DEP Wildlife Division Sessions Woods Wildlife Management Area Route 69 Burlington, CT 06013 (860) 675-8130</p>
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Figure 11.

Hypothetical Layout of Nature Trails at Camp Courant



Forest and Vegetation Review

Overview

With its large expanse of woodland, varied mix of healthy, mature hardwoods and relative topographic flatness, this property provides excellent opportunities for the creation of outdoor classrooms and nature trails. However, there are features of the property that may put limitations on what can be done within the portion that is currently undeveloped and wooded. Chief among them are the frequent wet areas, the shallow soils, and the presence of poison ivy and other woodland nuisances. These features emphasize the importance of planning appropriately prior to the creation of any trails or outdoor classrooms, and the need to keep maintenance of these outdoor areas an ongoing priority.

Forest Conditions

Overall, the property consists of 36 acres. Thirteen (13) of these acres are currently developed. These acres include the ball field, swimming pool, buildings, lawn areas and other main components of the camp. This area is interesting in its own right, from an arboricultural perspective. Many of the trees within this area are in use, as supports for recreational equipment and/or as providers of shade to the summer campers. This includes several large conifers, apparently the result of previous plantings on this site.

The remaining 23 acres are undeveloped woodland. These woods consist almost entirely of a mix of hardwood trees, with red maple and the various species of oaks being predominant, but with a variety of other types of trees also present. These trees tend to be large, mature and healthy. Scattered patches of hemlocks and the occasional white and pitch pine add a coniferous component. With the exception of a white pine stand immediately adjacent to the eastern edge of the developed

portion of the camp, the trees in this section appear to have originated by natural regeneration.

The terrain varies from being largely flat and wet to the north and west of the developed area, to being higher and drier in the northeastern part of the property, to being somewhat sloped east of the developed area. The slope east of the developed area is the result of the land descending down into a drainage and back up to a rise that is of about the same elevation as the developed area. In addition, there is evidence of significant soil disturbance in the area immediately adjacent to the ball field and swimming pool.

These variations in terrain influence the kinds of trees that are found in the different parts of the property. For instance, in the wetter, more poorly drained areas, one is more apt to encounter such species as cottonwood, swamp white oak and American elm. Along the drainage ways, one is more apt to see elm, shagbark hickory and the occasional butternut. Beech, sugar maples and tulip trees are much more likely to be found in the higher and drier areas, as are the patches of hemlock.

It is the oaks, though, that are the most remarkable trees in these woods. On this property there are several species of oaks, including swamp white oak and pin oak in the wet areas, and black, white, chestnut and red oak on the drier sites. These oaks are fairly numerous and, due to their size, are likely the predominate type of tree in terms of woody volume. Many of these oaks fall into the 21 - 30 inch diameter class, based on dbh (diameter at breast height). There are also some very large beech, sugar maple and tulip trees; however, these are not nearly as numerous as the oaks.

In terms of numbers of individuals, red maple and black birch are also very common. These tend to be smaller trees, in the 11 - 20 inch diameter class, with a fairly even distribution about the property.

Overall, these woods can be considered a mature woodland, dominated by hardwoods, with an excellent mix of species, good stocking and high potential. The size of the trees, both in terms of diameter and height, particularly in the northeastern and eastern parts of the property, are indicative of very good growing conditions and high soil fertility.

One readily noticeable difference in the distribution of the vegetation throughout the property is the relative openness of the understory in the drier areas, as opposed to the tangle of shrubs and vines that exists in the wetter areas. In the wetter areas, there is quite a bit of multiflora rose, oriental bittersweet, grape vine and spice bush, while in the drier areas arrowwood and other viburnums, blueberry and small black cherries are common. Poison ivy, unfortunately, is found throughout.

The health of the trees about the property appears to be generally good. Even the larger trees are, for the most part, relatively sound. As in most unmanaged woodlands, there are a number of hollow trees, dead trees, and trees that are in the advanced stages of decline and decay. It is important to note the presence of these trees, as their location relative to the proposed uses of this area would be a safety issue. Also, many trees have persistent dead wood in their crowns. No sign of the butternut canker was noted, but the hemlocks are showing the effects of the insect problems that are currently decimating that species.

The most significant health concern throughout the property is the shallow soil depth to bedrock, particularly in the flatter, wetter areas. Wind thrown trees, the result of poor root anchorage, are common. This problem is noteworthy for two reasons. First, it is likely that dealing with wind throws will be an ongoing maintenance issue in the woods. Second, openings within the woods, whether natural or man-made, are apt to encourage additional wind throwing of trees, as openings in the canopy layer direct the wind into the crowns of trees that are now more isolated and without the support from their neighbors that they had previously.

At the same time, the results of such a dramatic forest event as a wind throw would provide a great setting for outdoor learning. As the forest floor vegetation responds to the localized increase in sunlight, and as the seedling trees develop into thickets of saplings and then young trees, the campers would be given a vivid illustration of basic forest processes. Incidentally, the large blow down in the north central part of the property is not due to uprooting, but rather to the tree snapping off due to advanced trunk decay. Distinctions such as these might be capture the interest of youngsters in the forest.

The evidence is not clear as to the nature of the past human uses of these woods. No stumps were encountered, indicating that harvesting has not occurred in the current forest. There is a stone wall in the eastern part of the woods, implying an agricultural history to the land. The absence of chestnut sprouts may be indicative of the time frame since the last agricultural use, and the absence of eastern juniper may tell something about how the land was used while in agriculture. The spatial arrangement of some of the larger oaks is also suggestive of past human influence. The only clear evidence of past human activities is the white pine stand. As noted earlier, these trees immediately adjacent to the eastern edge of the developed portion of the camp are the result of planting efforts.

Specific Suggestions

The following suggestions are offered, in scattershot manner, regarding both concerns about the trees on the property and how the forest resources might best be used as part of a trail and outdoor classroom system:

- Some of the trees in the developed area are being used as supports for recreational equipment. Where it is necessary to have cables attached to trees, through-bolts have been threaded through the trunks of the trees. This is an acceptable method of attaching cables to trees, provided the trees are closely monitored. As the installation of the through-bolt exposes the interior of the tree to air and external moisture, the introduction of decay is always a possibility. The spread of decay into the wood of the tree can lead to failure of the bolt attachment, if the wood at the point of attachment fails to hold the bolt, or failure of the tree, if it hollows out and snaps due to decay. These trees should be watched carefully for signs that something along these lines might be occurring.
- In some cases, cables for the recreational equipment are attached using both through-bolts and cable wrapped around the trunk of the tree. This is of much greater concern. These cables can damage the tree at the point at which they are wrapped around the trunk, leading either to death within the canopy of the tree or, more insidiously, a weak point in the tree trunk. This weakness might not be readily visible until the

tree suddenly snaps at that point. As these trees are in the area of the camp that is most actively used, this presents a significant safety concern.

- A day-use horse corral is proposed for one section within the developed area of the camp. Also in this area are several large oaks, including one spreading red oak that is over 30 inches in dbh. Efforts should be made to save such trees during the process of creating the corral.
- As mentioned earlier, wind-thrown trees and other blow-downs can provide an excellent tool for demonstrating forest processes. There is ample opportunity to make use of such trees in the northwestern portion of the undeveloped woods.
- However, as much of the northwestern portion of the woods is wet, the ability to use this area may be somewhat limited. Extending the trail out into the drier part of the property to the east and northeast would also provide an opportunity to show woodland variation.
- As greater use of the woods will lead to greater disturbance and additional impacts, maintainers should be on guard against the introduction of such invasive exotics as glossy buckthorn, Norway maple or Japanese barberry. Many of these plants are opportunistic, and quite capable of taking advantage of activities such as those proposed. Additional information on these and other potential problem plants is available from the Department of Environmental Protection.
- Poison ivy control is possible, but difficult. The advice of a licensed pesticide applicator who is knowledgeable in the woodland use of herbicides and in both the chemical and cultural control of poison ivy may be very useful.
- Deadwood in the canopy of forest trees is inevitable. However, the presence of dead limbs in the crowns of trees in the vicinity of high use areas, such as trails and outdoor classrooms, can be a hazard. Trees may also be unsound due to other causes, such as advanced trunk decay. It may be necessary to move use areas or to remove hazardous limbs or trees to protect those who will use these areas.

• It has been suggested that a handicap-accessible trail be created through the woods in the vicinity of the planted pine stand, to the east of the developed area. Although in this vicinity the ground slopes, it may be an excellent site for this use. Among the features that could be incorporated into the trail's path are a possible vernal pool and, near to the pool, one of the larger trees on the property - a red oak over 40 inches in diameter. This tree is just outside the boundaries of the pine stand.

A Partial List of Plants Found in the Camp Courant Woodlands*

Trees

red maple	<i>Acer Rubrum</i>
sugar maple	<i>A. saccharum</i>
yellow birch	<i>Betula alleghaniensis</i>
black birch	<i>B. lenta</i>
shagbark hickory	<i>Carya ovata</i>
beech	<i>Fagus grandifolia</i>
white ash	<i>Fraxinus americana</i>
butternut	<i>Juglans cinera</i>
tulip tree	<i>Liriodendron tulipifera</i>
pitch pine	<i>Pinus rigida</i>
eastern white pine	<i>P. strobus</i>
cottonwood	<i>Populus deltoides</i>
black cherry	<i>Prunus serotina</i>
white oak	<i>Quercus alba</i>
swamp white oak	<i>Q. bicolor</i>
pin oak	<i>Q. palustris</i>
chestnut oak	<i>Q. prinus</i>
red oak	<i>Q. rubra</i>
black oak	<i>Q. velutina</i>
hemlock	<i>Tsuga canadensis</i>
American elm	<i>Ulmus americana</i>

Shrubs and Vines

Oriental bittersweet
spicebush
poison ivy
multiflora rose
highbush blueberry
arrowwood viburnum
grape

Celastrus orbiculatus
Lindera benzoin
Rhus toxicodendron
Rosa multiflora
Vaccinium corymbosum
Viburnum recognitum
Vitis sp.

* Largely a list of observed plants; not intended to be an exhaustive list.

Archaeological Review

A review of the State of Connecticut archaeological site files and maps shows no known archaeological sites in the Camp Courant parcel nor does the Office of State Archaeology believe that there is a high potential for undiscovered archaeological sites in the project area. However, Batterson Park Pond and some of the environmental resources in the area could be used as an educational facility for teaching of archaeology and Native American history.

Although the pond itself is artificially dammed, the network of streams associated with it has yielded Indian artifacts in the Greater Farmington and New Britain areas. As a result the park is nicely situated to synthesize the regional site information and provide for outdoor educational opportunities associated with them. As an example, reconstructed archaeological excavations could occur and the stories of prehistoric lifeways associated with the wetland systems in the highland areas can be told.

The Office of State Archaeology has available educational curriculums as well as exhibit materials to assist the City of Hartford in utilizing the development of an outdoor classroom associated with Camp Courant and archaeological materials from the surrounding area.

Contact: Nicholas Bellantoni
State Archaeologist
Office of State Archaeology
3107 Horsebarn Hill Road, U-214
Storrs, CT 06269-4214
(860) 486-5248
e-mail: nbell.@uconnvm.uconn.edu

Park and Recreation Review

Introduction

Found in Appendix B is a brochure that the Team park and recreation specialist helped develop along with the Farmington Garden Club and Jay Kaplan from Roaring Brook Nature Center in Canton. The trail this brochure describes is at the Shade Swamp Wildlife Area in Farmington so much of the general tree and plant life along with the wildlife will be the same. This brochure will also help to give you an idea of how to select and set up stations along a trail that will educate the children the most, without destroying what the children are there to be educated about.

Camp Courant presently has an excellent program, but there is a definite need for an environmental program or session. Everyone needs to know how to relate to their environment to better understand why it is so important to do things like recycle. Children have to be taught that the environment is a chain where if a link is removed the results can be catastrophic. The relationship of plant life and the oxygen that we breathe is one example and the greenhouse effect would be another example. Nature can also be a lot of fun for children when it is done properly. The program/special program sheet that the Team was supplied with by Camp Courant had very little by the way of environmental programs listed and the Team park and recreation specialist would like to see a whole program develop around this nature trail.

The Team park and recreation specialist feels that this camp has an urgent need for a nature trail and is happy to see it listed in phase 2 of the camp capital improvement plan. He offers to come back at a later date with the Team wildlife biologist to assist with the actual layout of the trail.

Site Location

The site location is in Farmington, just to the west of Hartford. This is an area that is close for the children to get to but far enough that the children can experience a change in the environment. This area is also across from Batterson Pond which can offer a whole additional area of recreation and nature education possibilities. This pond always has waterfowl and other bird populations that can spill over to Camp Courant and offers identification and banding possibilities at Batterson Park. The camp is close to Interstate 84 which is both good and bad. This highway makes it easy to get to the camp but also causes substantial noise pollution to part of the land that can be used for the trail.

Site Conditions - Terrain

The general terrain conditions are good for a trail. The land is gently sloping and dry near the camp main recreation area. This creates the opportunity to establish a handicapped trail that can also be used by very young children. The land in the pine grove is close to level with just a very slight slope where the pines change to hardwoods. From this point the land has some small hills that can be used to keep the trail from becoming boring. As the land continues north the land becomes wet and the noise from Interstate 84 increases. There are seasonal streams that pass through the area that offer educational opportunities. There is a possible vernal pool and several other small depressions full of water that will offer some wetlands educational possibilities. One main missing environmental community is meadow. There is an area behind the pool house that is flat and open that can be managed for a meadow where wildflowers and other meadow plants can thrive. There was also discussion about locating a horse corral in this area. There is a flat area just up hill from the pool that could be used for that purpose. The corral at this location would keep the horses away from the main group of children until they are supposed to be there. It would also not interfere with the new nature trail if it was put at this location.

The proposed trail area has dozen or so holes that were dug for unknown reasons in the recent past. It does not diminish the impressive possibilities for a nature trail in this area, but it is still a mystery.

Site Conditions - Plants

The area for the trail has at least four plant communities. There is the area of conifers, the oak forest, the vernal pool and wet areas, and the meadow. Most of the area is covered with white and red oaks. There are also shagbark hickories, maples, and many other trees. It has to be remembered that different plants grow at different times of the year and the trail has to be located taking this into consideration. Growing trees and plants are not the only possibility for education stations. There is a large downed tree that offers a tremendous amount of opportunity for environmental education. When this tree came down it opened up the canopy and other plants have come in to take advantage of the additional light. This station also can demonstrate the relationship between insects and the trees as this huge tree was caused to fall due to carpenter ants.

The oak trees in the site area offer a great many acorns that are a stable forest food used by deer, wild turkeys, and etc.. A another station can be established to educate about the relationship between plants and animals and how they affect each other. Going a step further the children can learn how the plants and animals affect us all.

Site Conditions - Wildlife

The most impressive evidence of wildlife was the recent deer rubs in the small trees throughout the site area. It is obvious that there is a deer population in the area. This can be talked about, but a deer will not stay in an area with 800 children looking for him. A small nature center should be established to show items from the area along with pictures and illustrations. At the site meeting the Team saw deer rubs, collected a bird nest made from material from the immediate area, observed crow nests, and squirrel nests. These items could be put in separate displays to show why these things came into being. Although this is a

relatively small area in acreage there is an abundance of opportunities to observe not only the larger mammals, but insects and birds as well.

Trail Development Considerations

One of the most important considerations is the safety issue. This is the safety of the children and advisors and the safety of the habitat they are visiting.

The idea of teaching trail safety is a good one and should be pursued. Children need to be able to identify poison Ivy which was present on site. They need to identify bees, especially ones that live in the ground, such as yellow jackets. Bees, like the white faced hornets that live in paper nests that are sometimes very close to the ground, should be discussed. What clothing to wear on a trail, hypothermia, first aid, and how to act on a trail are all good topics for teaching. (The Team coordinator has included in Appendix C several pages from the *SNAP Manual: Developing and Using a School Nature Area* which discuss taking a class outside and planning worksheets for trail and program development.)

There will be close to 2000 children with additional advisors using the trail regularly. Care has to be taken not to destroy the delicate habitat you are showing. This means the children will have to stay on the trail and be taught not to pick anything or harm anything. When the trail is under construction care has to be taken not to trample anything, and to use construction techniques appropriate to the area. For example you would use a small boardwalk to cross a wet area rather than fill it in and destroy that habitat.

It is very important to plan out the trail first. First decide on paper where all the stations should be and what you want to show and talk about. Be sure to take into consideration the grade, slope, soil, and effort needed to put the trail where you want it. In this particular area the Team felt two loops would be best. A short loop starting at the pavilion, looping through the pine grove and coming out of the pines by the basketball court, being sure to follow the edge of the bank so it would not be too steep for handicapped or the very young to use. A second larger loop would also start at the pavilion and leave the pine grove to

go into the oaks, over the rise, to the wet area and coming back to near the playing field, perhaps ending where a meadow could be put in. It should also be remembered that space will be needed at each station for the children to stand while the interpretive information is being presented.

Another decision to make is the type of surface the trail should have. In this case it will probably be a combination of wood chips, stone dust or millings, and board walk. It is not a good idea to put a trail in and walk in a path. The result usually is a gully that continues to get worse as time goes on. There will also be substantial soil compaction that will injure the tree roots over a period of time. There also could be erosion as water will follow this gully.

A question that was asked during the field walk about finding a spot on the trail for a camp for the older members has to be addressed. This idea is OK but it is felt that it should not be tied to the nature trail in any way. The reason is that the two uses are not compatible. The campout can become a rowdy event with some children and damage can be done as they search for wood for a campfire, or hide in the woods from each other, and the like. Part of the Team park and recreation specialist's position is managing Black Rock State Park which has a 100 site campground and they close off the trails at night for safety considerations for both the campers and for the safety of the park.

Conclusion

There is a definite and urgent need for a nature trail at this location and it should be put in. Because of heavy use soil erosion devices such as water bars should be used and the proper surface needs to be installed to prevent erosion. Even after the trail has been designed and put in it should be monitored for over use. Attention will have to be given to preventing new unauthorized short cut trails appearing to prevent damage to the educational value of the area. The Team park and recreation specialist's office is in Farmington close to Camp Courant and he has to check Batterson Park State Boat Launch regularly so he is available for stop by visits or may be called with questions anytime.

Contact: Daniel Dickinson
Park and Recreation Supervisor
DEP - Farmington Headquarters
178 Scott Swamp Road
Farmington, CT 06032
(860) 677-1819

Environmental Education Review

Trail Planning

Use of the Proposed Trail System

The trail system should be kept strictly for nature study, teach environmental education and other educational activities. It would not be advisable to use the trail for horseback riding. An additional riding trail could possibly be planned adjacent to the nature trail system.

The Trail System

- **Activities**

The trail can be used for a number of activities such as such play ground area, arts and crafts, exercise and discovery area for early child education, jogging, running and exercising, nature learning and discovery, science education, camping and hiking and much more.

- **Trail Size**

The trail should be designed to hold comfortably 30 children at a time, possibly 4 feet across and having two loops. Loop one, a short one for young children and a second loop to be .5 to 1 mile long. The trail should have large outdoor amphitheaters and learning areas for groups to gather and work on projects.

- **Habitats**

The trail should go by as many different habitat types as possible. To include a number of areas of natural history interest such as red oak forests, white pine forests, beech forest, wetlands, vernal pools, and intermittent streams. In addition a small open field should be added by opening a forested area adjacent to the existing ball field.

- **Trail Protection**

Some of the wet areas will have to be protected by using a board walk system. There are several good board walk systems in the state and design plans can be obtained from the organizations where the board walks are located. It is recommended that the small trail system constructed behind Kennedy High School in Waterbury, or the board walk used at DEP Session Woods in Burlington or the board walk used around the little pond at the White Memorial Foundation in Litchfield be viewed.

- **Noise pollution**

A nature area is an area for contemplation and the high way system will produce enough noise to disturb the planned activities. It is recommended that the trail keep away from the highway system as much as possible.

- **Camp Area**

For future use, the trail should include a small camping area. This camping area should have tent sites and a campfire ring. This area will provide teachers/counselors with the opportunity to introduce students to conservation, nature skills, and camping skills.

- **Signs**

Identification of particular features along the trail can be of some use, especially for the teachers/counselors, but in addition to that, the identification of animal homes and signs by a wildlife biologist would be of great help to the non-biologist. The use of numbers along the trail with an accompanying written key will be sufficient for the teachers/counselors and difficult to vandalize.

- **Trail building**

Building the trail system can be accomplished with the aid of a local Boy Scout group. Eagle Scouts are some times looking for projects such as this. Materials can be obtained/donated by local construction

companies. For example, gravel can be obtained by contacting any of the gravel and sand operations in the state. Wood could be obtained by contacting one of the lumberyards in the area and so on. In addition and during the first one or two years, children attending the camp can contribute to the building of the trail system.

Nature Building

The trail program should be implemented by also having an enclosed building or nature center where teachers and students can work on projects, keep live specimens and start a small museum. This building should have water and electricity and the use of one or more computers. It should include work tables and chairs for all the children, a writing board, and field collecting equipment such as nets, jars, aquarium, magnifying glasses and so on. During rainy days this area will be an asset to the camp programs as it can be used to work with the children without interference from other programs.

Environmental Education Plan and Curriculum Guides

Group Size

According to the camp director, Camp Courant is a very busy camp during the summer. It is the Team environmental educator's concern that the quality of care and education will be jeopardized when working with such large numbers. The size of the camp may be able to hold large numbers of children, but to work outdoors in a nature education curriculum, it is important to take a close look at the maximum number of participants that can be accepted to maintain program quality. The maximum number of students per teacher should not exceed 10.

Curriculum Areas

The Environmental Education program should concentrate in three areas; To provide inner city children with an outdoor nature

experience; to provide the children with basic awareness and appreciation of environmental issues; and to provide the children with an opportunity to improve their education in the areas of math, science, technology and social studies.

Environmental Education Instructors

Here we have a great opportunity to work and improve the knowledge of children who have deficiencies in the areas of reading, writing, math and science. This work can be accomplished through environmental education, as it is an interdisciplinary discipline. Children can learn math skills, reading skills and much more by doing environmental education activities.

Considering the past scores for Hartford in all the state proficiency tests, there is here a great opportunity to improve the situation. The Hartford Board of Education should be contacted and a plan should be developed to provide quality education to all the children during the summer and at the same time recreation.

It would be of great help if the summer nature instructors would be certified teachers pre-trained prior to the start of the program. Science teachers and elementary education teachers will be adequate for this job. It is important to emphasize the use of the outdoor area in their educational process.

Learning Through Projects

Environmental Education methods use pedagogy ideas where students are guided from early childhood into becoming aware of the environment, and learning to appreciate what it offers. By providing creative discovery and learning opportunities for the student and providing a forum for the student to act and improve their way of life without destroying the environment we can improve their general basic education skills in writing, reading and math.

Environmental Education integrates all the principles of math, biology, chemistry, earth sciences, geology, language arts, reading, art and social studies into a fluid and realistic concept we call everyday life. By

learning these subjects and applying the concepts our society functions every day doing all kinds of normal things, such as shopping, driving, going to work and sleeping. We are part of the inter-connectiveness of all biotic and abiotic things on the earth. Therefore, the use of Environmental Education as a way to improve our knowledge on everything else is the way to go.

Children need relevant and real life experiences; therefore teaching theory is not the way to gain their undivided attention. Learning through projects will immerse the children in activities that will be interesting, realistic, and relevant. The children will want to come back the next day.

The nature trail and nature center should be used as a laboratory of life, where children are given certain tasks, and as if they were on a treasure hunt, they will look for the solutions and truth of these tasks. The teachers should be teaching by doing, by providing the children with experiences and hoping that they will come back for more. Scientific method should be applied where ever is possible.

The Camp should provide the children with the tools and opportunities to learn how to think, and not what to think. Issues in Environmental Education should be treated carefully, and provide for each child an opportunity for them to make up their mind and make their own decisions.

Curriculum Recommendations

It is recommended for the camp to adopt one or more of the exiting curriculum guides that are available through the DEP office of Communications and Environmental Education. The following curriculums are available:

Project Learning Tree
Project Wild
Project Wild Aquatics

Project Wet
Project Food, Land and People
The Wonders of Wetland

In addition DEP also offers a number of workshops on field methods and techniques through our three education facilities, Goodwin Conservation Center (Richard Haley), Kellog Environmental Center (Diane Joy) and Bethany Technical Training Center (Alberto Mimo).

Professional Training and Environmental Education Workshops

The Team environmental educator recommends that a special two or three day training sessions for the councilors and teachers in charge of the program be established. During these days, DEP can provide training on a number of curriculum guides, field technique methods and other education components that will make the children's experience a meaningful one.

Contact:	Alberto Mimo DEP - Communications and Environmental Education Bethany Technical Training Center 627 Amity Road Bethany, CT 06528 (203) 393-2705
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Appendix A

Soils Information

For Appendix Information A-C Please
Contact the ERT Office at (860)345-3977

ABOUT THE TEAM

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state and regional agencies. Specialists on the Team include geologists, biologists, foresters, soil specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area — an 86 town region.

**The services of the Team are available as a public service
at no cost to Connecticut towns.**

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, landfills, commercial and industrial developments, sand and gravel excavations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

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 project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected official of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the chairman of your local Soil and Water Conservation District and the ERT Coordinator. A request form should be completely filled out and should include the required materials. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information and request forms regarding the Environmental Review Team please contact the ERT Coordinator: 860-345-3977, Eastern Connecticut RC&D Area, P.O. Box 70, Haddam, Connecticut 06438.