Creaser Park

An Update

Coventry, Connecticut

Eastern Connecticut

Environmental Review Team

Report

Eastern Connecticut Resource Conservation & Development Area, Inc.

Creaser Park

An Update

Coventry, Connecticut

Environmental Review Team Report

Prepared by the Eastern Connecticut Environmental Review Team

of the Eastern Connecticut Resource Conservation & Development Area, Inc.

For the

Town Manager & Director of Plannning

Coventry, Connecticut

May 2014

#635

Acknowledgments

This report is an outgrowth of a request from the Coventry Town Manager and the Director of Planning to the North Central Conservation District (NCCD) and the Connecticut Environmental Review Team Subcommittee 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 Monday, May 20, 2013.

David Askew	Executive Director North Central Conservation District (860) 875-3881
Nicholas Bellantoni	State Archaeologist UCONN – Office of State Archaeology (860) 486-5248
Laurie Giannotti	Trails and Greenways Coordinator CT DEEP State Parks Division (860) 424-3578
Joe Hickey	Recreation Planner CT Greenways Council/Retired DEP (860) 529-4363
Elaine Hinsch	Program Specialist II Natural Diversity Data Base CTDEEP –Wildlife Division (860) 424-3011
Charlotte Pyle	Landscape Ecologist USDA – Natural Resources Conservation Service (860) 871-4066
Brian Murphy	Sr. Fisheries Habitat Biologist DEEP – Inland Fisheries Division Habitat Conservation & Enhancement Program (860) 295-9523

Sherwood Raymond*	Service Forester DEEP – Division of Forestry Goodwin Conservation Center (860) 455-0699

**Participated on field review, no report submitted yet.*

I would also like to thank Eric Trott, town planner, John Elesesson, town manager, Michael Antonellis, ZEo and planning technician and Wendy Rubin, parks and recreation director for their cooperation and assistance during this environmental review.

Prior to the review days, each Team member received a summary of the proposed project with various maps. During the field review and after Team members received additional information. Some Team members made separate or additional field visits to the sites. Following the reviews, 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 town. This report identifies the existing resource base and evaluates its significance to the proposed use, and also suggests considerations that should be of concern to the town. 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 and managing Creaser Park.

If you require additional information please contact:

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Haddam, CT 06438
Tel: (860) 345-3977 e-mail: connecticutert@aol.com

Table of Contents

Introduction

The Town of Coventry has requested an update to a 1996 ERT report for Creaser Park. The 57 acre parcel is being leased from the State Department of Environmental Protection for use as a passive town park. The history of the property includes use as a dairy farm and later a summer camp for the CT Department of Mental Retardation. The park is located on Case Road and is adjacent to and part of the larger Nathan Hale State Forest. The site contains five (5) buildings from the CT DMR summer camp, a picnic pavilion, 2 ponds, a handicapped accessible walkway and hiking trails. The property includes floodplain along the Skungamaug River, meadows and fields, two ponds, upland forests and vernal pools. The park is popular for dog walking and the buildings and pavilion may be rented.

Objectives

The town is requesting an update to the 1996 report since improvements have made to the property and there is still interest in developing a regional environmental education center at the park. The current lease is up in 2017 and the town is interested in securing a long term lease extension (25 years) from the state. The long term vision would be to gain the interest and support of the public school system to use the park for environmental education instead of going to “other” sites, and to study whether Creaser Park would be a better location for the town’s summer camp program. The town would also like to re-activate or move the beach area and use the pond for kayaking and sailing lessons. A site for community gardens is a need that has been identified and the possibility of locating a commercial kitchen/community kitchen on site has also been discussed. The site has adequate water supply but needs updating to its electrical system and the community septic system may need maintenance/repair.

The ERT Process

Through the efforts of the Town Manager and Director of Planning this environmental review and report was prepared for the Town of Coventry.

This report provides a natural resource inventory and a series of recommendations and guidelines which cover the topics requested by the town. Team members were able to review maps, plans and supporting documentation provided by the town.

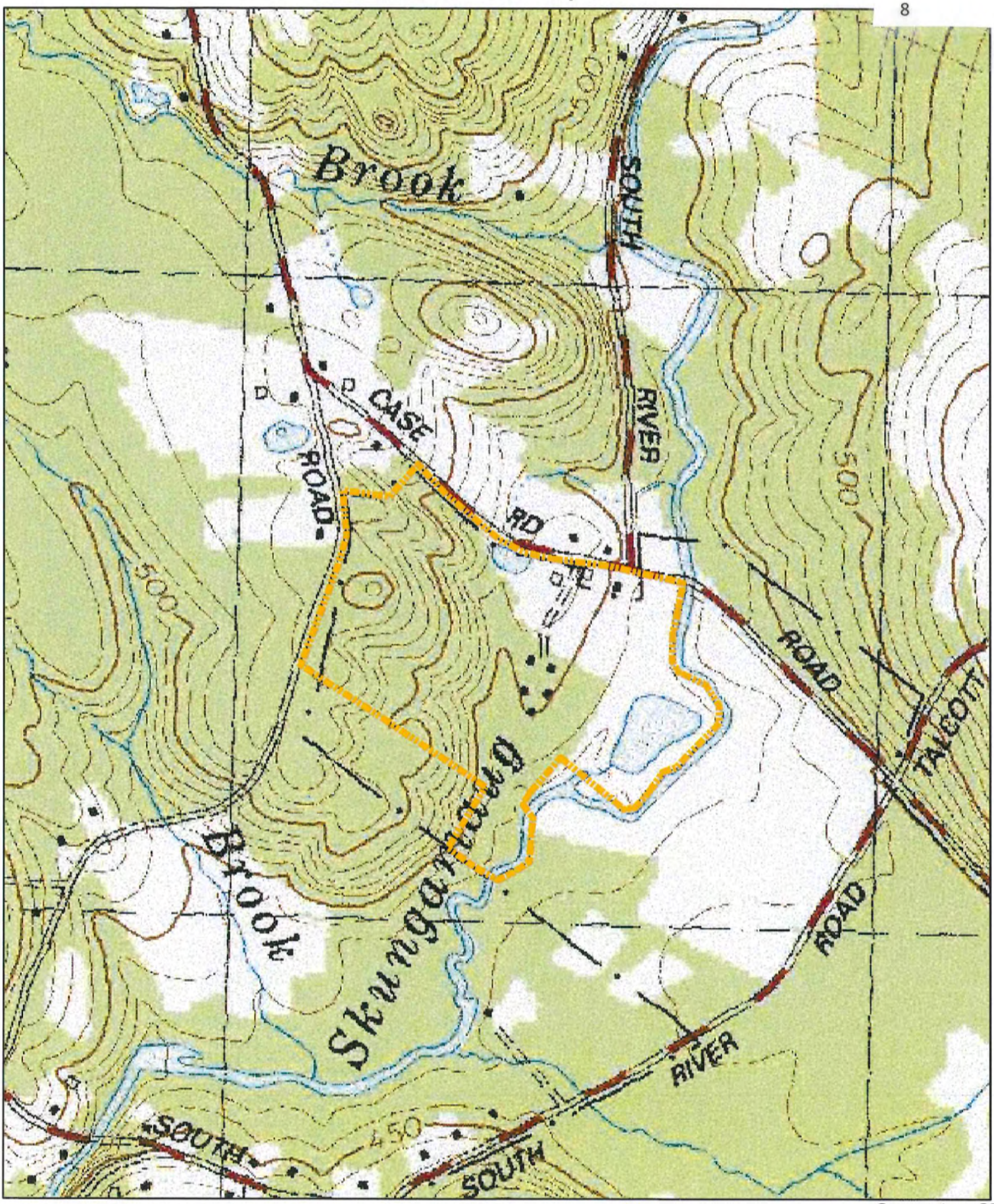
The review process consisted of four phases:

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 reviews were conducted on May 20, 2013. Some Team members made separate and additional field visits on their own. The field review 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.

Creaser Park Update



The Connecticut Environmental Review Team

This map was prepared by Amanda Fargo-Johnson for the Connecticut Environmental Review Team.
This map is for educational use only.
It contains no authoritative data.
May 2013.

Creaser Park Property Approximately

0 435 870 1,740 Feet

Coventry, CT

Creaser Park Update - Color Aerial

The Connecticut Environmental Review Team

This map was prepared by Amanda Fargo-Johnson for the Connecticut Environmental Review Team.
This map is for educational use only.
It contains no authoritative data.
May 2013.

Creaser Park Property Approximately

0 455 910 1,820 Feet

Coventry, CT

Creaser Park Update - Aerial

The Connecticut Environmental Review Team

This map was prepared by Amanda Fargo-Johnson for the Connecticut Environmental Review Team.
This map is for educational use only.
It contains no authoritative data.
May 2013.

Creaser Park Property Approximately

0 340 680 1,360 Feet

Coventry, CT

Trail Rules

⇒ Creaser Park Trails are surrounded on all sides by environmentally sensitive property so please be respectful and stay on the trail.

⇒ Dogs are welcome, but please keep them on leash for your pet's protection and the protection of others. Please pick up after your pet.

⇒ Please be respectful of others using the Park & Trail.

⇒ Trail is not suitable for equestrian use.

⇒ Fires, Hunting & Firearms are prohibited.

⇒ To enjoy the sounds of nature, please keep noise to a minimum.

⇒ Area is open from sunrise to sunset.

⇒ Please remember to carry out what you bring in.

Thank you!

For more information, visit www.coventryct.org, or call the Coventry Planning Office at 860-742-4062.

Nearby Attractions & Other Town Trails

Veteran's Memorial Park: Corner of High & Lake Streets. Check out the State of CT's Vietnam Memorial, along with other war memorials and statues relevant to Coventry.

Patriots Park: Lake Street. Has a variety of amenities such as a playscape, waterfront, sports courts, picnic areas & shelter.

Patriots Park Woods Trail: Cross Street

Mill Brook Park & Trail: Main Street. Beautiful scenery, brook & bridge and trail.

Riverview Park Trail: Merrow Road

Hop River Trail: Hop River & Kings Roads

Nathan Hale State Forest: South Street

Elizabeth Couch Preserve: Root Road

Nathan Hale Homestead & Strong Porter House: South Street

1712 Main Street
Coventry, CT 06238

Planning Phone: 860-742-4062
Recreation Phone: 860-742-4068

Creaser Park Trails

Coventry Conservation Commission
Case Road, Coventry CT 06238

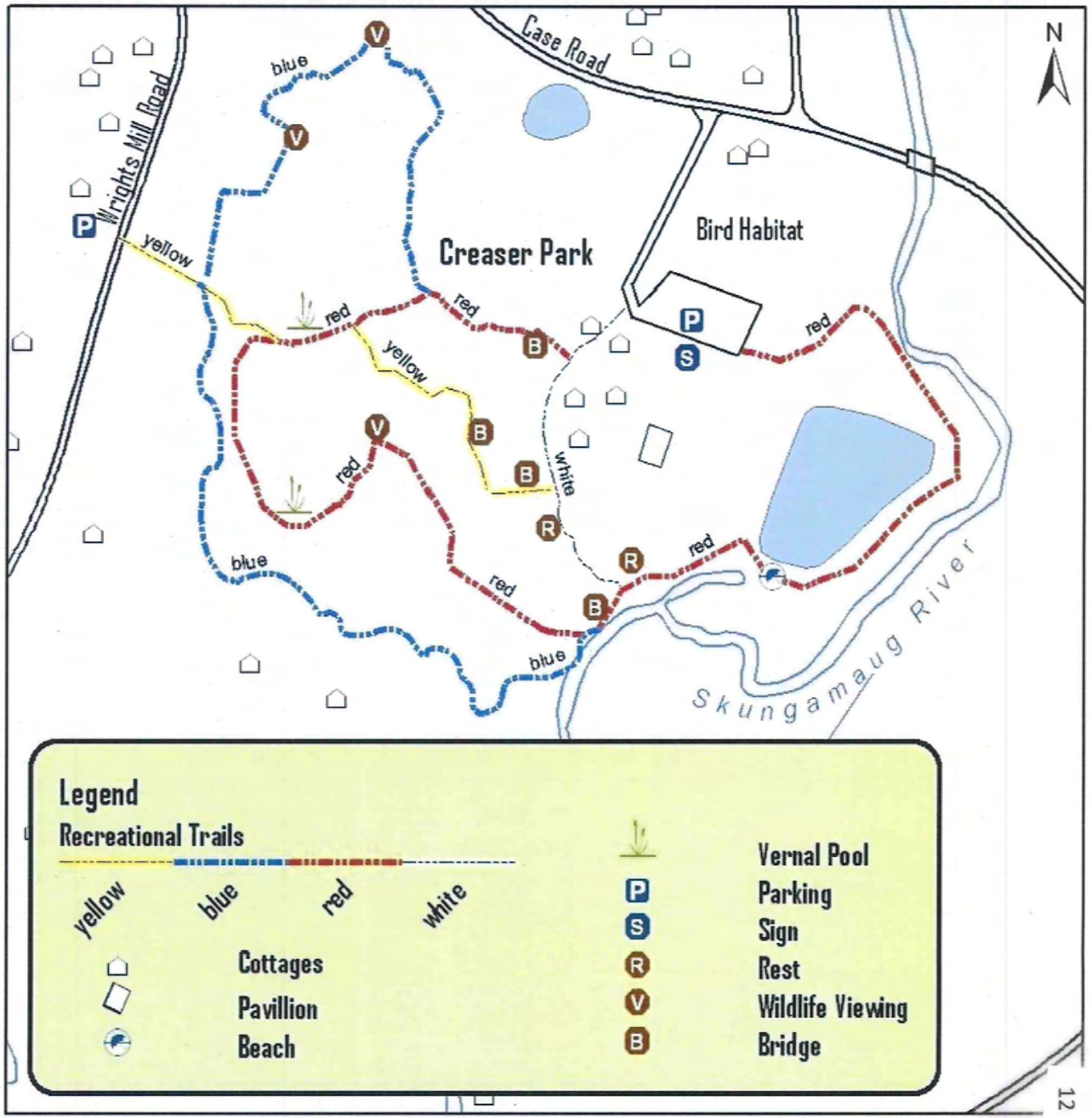
TRAIL MAP

Get the free mobile app at
http://gettag.mobi

About The Trail...

- ⇒ Creaser Park is a 57 acre parcel that was originally a dairy farm. The State previously ran a D.M.R. summer camp on site called Camp Creaser, which was named after a custodian who was employed for many years in Mansfield for D.M.R.
- ⇒ The Park supports a variety of passive recreation uses, such as: hiking, fishing, bird watching and biking. There are four differently marked trails that offer varying lengths and access to the overall property, but in total are approximately 2 miles in length.

- ⇒ A large pavilion with picnic tables is available on site. Two buildings are available for rental and contain many amenities for events.
- ⇒ The Park possesses frontage along the Skungamaug River, which is a major tributary to the Hop River is managed as a put-and-take coldwater fishery by DEEP, and serves as a great fishing for trout.
- ⇒ The Park also possesses a large pond with a diversity of deep and shallow water habitat including bass, pickerel, perch, sunfish, bullhead and shiner. A small beach area exists on the shore. A small pond is also present on site near Case Road that supports a warm water fish community.
- ⇒ The Park is in very close proximity to the Nathan Hale State Forest which also offers hiking and biking opportunities.



North Central Conservation District Review

A number of site improvements have been made since the original ERT in 1996, including the addition of a parking lot and trails, both of which provide much-improved public access. The North Central Conservation District's (NCCD) input with the planning process for this facility is generally limited to technical assistance to identify resource limitations. Most of those issues were addressed in the prior review and brief updates are provided below.

Soil mapping from the USDA has been updated since the last ERT and the mapping is much more refined for this parcel. The new mapping shows a band of wetland that was not previously identified west of the outbuildings. The upland soil mapping has also changed, and shows several smaller upland soil units that were not in the original mapping. The updated soil boundaries do not appear to affect any current uses. More detailed soil analysis can be conducted by NCCD if additional site alteration is proposed in the future. A variety of mapping features can be highlighted if future development is contemplated, including development limitations related to soil resources and susceptibility to erosion.

NCCD previously commented on riparian buffers along the river and pond. Based on our recent inspection, the riparian cover is sufficient and allows for a reasonable level of public access. Although much of the area adjacent to the river (but not along the banks) is maintained by mowing, the areas do not appear to be used in any way that alters water quality or other wetland functions. As noted by other ERT team members the buffer would benefit from additional width.

The beach area located on the south side of the pond is slowly becoming vegetated and will stabilize naturally over time. The pond is too shallow and vegetated to offer public swimming opportunities. The rest of the pond edge is vegetated with shrubs and small trees, which allow for somewhat limited viewing of the pond. As previously noted, large trees along the bank will be subject to tree-throw and should be removed.

Municipal staff indicated that they did not know exactly how the pond functions in terms of flow. It is assumed that the pond has some type of inlet and outlet to the river. An outlet stream is shown on the USGS topographic map. NCCD and several other team members attempted to find both an inlet and outflow but were unsuccessful. Locating flow structures would require additional investigation and possibly the use of a backhoe or other equipment. See the Fisheries Management section for recommendations on pond management.

The following comments are of a general nature and address various issues that were discussed during the ERT field inspection. The opinions expressed are not necessarily based on any particular technical issues, but draw on NCCD's experiences with several other efforts to utilize open space at the municipal level.

- The best use of the site continues to be relatively low impact passive recreation. The existence of several outbuildings provides some opportunity for education or general meeting space, but usage depends to some degree on the availability of other local meeting space options.
- Common natural features like the pond, river, vernal pools, wooded wetlands and forested land are all readily accessible and proximate to the facilities, which enhance ease-of-use for natural resource education.
- Based on several discussions with town staff and inspection of the facilities and grounds, use of the park for the existing town-run day camp is somewhat limited. Day trips could be organized to use the facilities for outings, but the facility does not have sufficient infrastructure, or recreational opportunities (like swimming) to support a day camp.
- Based on several experiences with open space facilities in other municipalities, usage is typically best defined by public demand. Most privately-run environmental interpretive/educational facilities have struggled to be financially self-supporting. The most successful models appear to be like Creaser Park, with town support and funding to maintain the basic facilities and infrastructure, while hosting a mix of municipal and "outside programs".
- A host of uses have been considered for the site including a community garden and community kitchen. None of the proposals currently being discussed (as related to participants during the ERT) are incompatible with the natural features of the park. However, careful siting of additional facilities is required to maintain existing conditions. To maintain existing water quality in the pond, river, and wetlands, any additional facilities should have sufficient separation from these natural features.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Connecticut

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

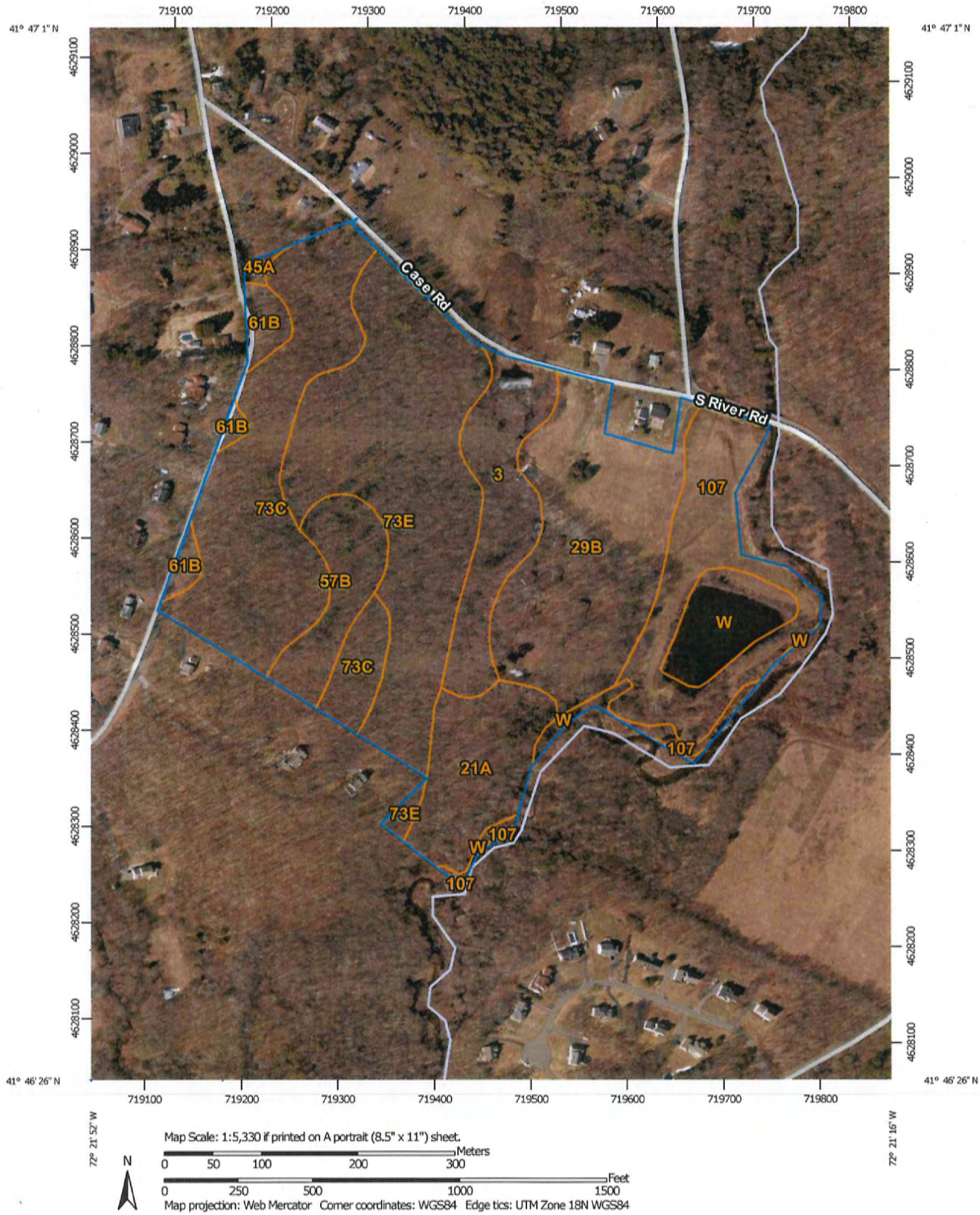
for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 10, Mar 31, 2011

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—May 12, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
3	Ridgebury, Leicester, and Whitman soils, extremely stony	4.9	8.0%
21A	Ninigret and Tisbury soils, 0 to 5 percent slopes	4.6	7.4%
29B	Agawam fine sandy loam, 3 to 8 percent slopes	11.0	17.9%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	0.2	0.3%
57B	Gloucester gravelly sandy loam, 3 to 8 percent slopes	3.0	4.9%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	1.4	2.2%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	11.9	19.2%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	14.4	23.3%
107	Limerick and Lim soils	6.7	10.9%
W	Water	3.6	5.8%
Totals for Area of Interest		**61.7**	**100.0%**

Fisheries Resources

The property borders the Skungamaug River, a major tributary of the Hop River. This river is managed as a put-and-take coldwater fishery by the DEEP Inland Fisheries Division being annually stocked with over 1,900 adult (9-12") brook, brown, and rainbow trout. The river at the Case Road crossing as well as a location on the Creaser Park property is annually stocked with trout.

Stream survey information has been collected in the Skungamaug River within stretches of the river both below and above the Case Road crossing. In addition to stocked trout, survey data indicate the river is known to support a small number of wild or naturally reproduced brown trout and a diverse and abundant mixture of fluvial dependent fish species that includes: blacknose dace, fallfish, white sucker and common shiner.

The main pond on the property appears to be somewhat shallow and no information is available relative to pond bathymetry and water depths. The pond is expected to support a warmwater fish population that may include: largemouth bass, chain pickerel, yellow perch, pumpkinseed, bluegill, brown bullhead and golden shiner.

Recommendations

1. The prior assessment of the pond in 1996 indicated that it was relatively free of nuisance levels of aquatic vegetation and that aquatic vegetation management was not an issue. This is the not situation in 2013. The pond has a rather extensive growth of watershield, a floating aquatic plant that covers more than 70% of the surface acreage of the pond. The Town should consider treatment of the vegetation with an aquatic herbicide to assist with vegetation control. The

application of an aquatic herbicide requires a permit from the DEEP Pesticide Management Division. For more information, contact the Pesticide Management Division at 860-424-3369 or weblink: http://www.ct.gov/deep/cwp/view.asp?a=2710&q=324266&deepNav_GID=1712

Also refer to the publication, "Nuisance Aquatic Vegetation Management: A Guidebook" that can be downloaded at:
http://www.ct.gov/deep/lib/deep/pesticide_certification/supervisor/aweeds.pdf

2. It is understood that the Creaser Park Pond was originally built as a "bypass pond" in which infrastructure was installed that periodically conveyed streamflow into the pond to enhance water quality conditions with overflow being conveyed back into the Skungamaug River. It is apparent that this infrastructure is no longer functioning and it appears that pond surface water levels are much lower than compared to prior pond conditions in 1996. The Town of Coventry should consider rehabilitating pond infrastructure to help periodically renovate water quality conditions in the pond and enhance overall aquatic health.

3. The Town may want to consider stocking coldwater species such as trout into the pond during early spring utilizing a "put-and-take" strategy in which most fish would be harvested from the pond before environmental conditions became unsuitable for summer survival. This management strategy will limit the number of fish living in the pond during the summer; hence, minimizing possible fish mortalities due to warm water temperatures. An initial total stocking of 100-150 adult rainbow and brown trout is recommended. Brown trout are better able to temporarily withstand warmwater pond habitats whereas rainbow trout are more easily caught by shoreline angling. Harvesting of fish can be enhanced by holding a children's fishing derby in the spring. Trout can be purchased at private commercial fish hatcheries. A list of fish hatcheries can be obtained at:
http://www.ct.gov/deep/lib/deep/fishing/general_information/hatcherylist.pdf

4. The Town should consider installing a fishing pier to enhance fishing access to the pond. More information relative to fishing pier guidelines can be obtained at:
http://www.ct.gov/deep/lib/deep/fishing/general_information/fishpierguidelines.pdf

5. The maintenance of a hayfield north of the pond and extending up to the Case Road crossing has resulted in the removal of streamside or riparian vegetation along the Skungamaug River leaving only a narrow strip of natural, undisturbed vegetation. It is the policy of the Inland Fisheries Division (IFD) that riparian corridors be protected with a 100 ft. wide undisturbed riparian buffer zone. A riparian wetland buffer is one of the most natural mitigation measures to protect the water quality and fisheries resources of watercourses.
This policy and supportive documentation can be viewed on the DEEP website at:
http://www.ct.gov/deep/lib/deep/fishing/general_information/fishpierguidelines.pdf
http://www.ct.gov/deep/lib/deep/fishing/restoration/riparianpositionstatement.pdf

The Town of Coventry should consider extending the width of the riparian vegetation along the Skungamaug River by limiting or eliminating mowing activities within the river's riparian area and floodplain. (A riparian corridor planting guide and list of trees, ferns, grasses and other herbaceous plants that are appropriate for riparian areas may be found in the Appendix.)

6. The Skungamaug River and Creaser Park Pond could serve as a valuable ecological study area. Aspects of stream ecology such as water quality and the aquatic macroinvertebrate community could be monitored in the river. Identification of streamside riparian vegetation and the important role riparian ecosystems play in protecting watercourses could also be studied. The pond also provides an opportunity to study pond eutrophication or aging process through water quality analysis. Identification, abundance and life history of aquatic vegetation, zooplankton, phytoplankton, and fish populations could also be investigated. Food web and trophic relationships could be identified. Water quality and aquatic community comparisons could be made between stream and pond habitats.

Landscape Ecologist Review

Creaser Park offers a diversity of opportunities for nature study. It has an existing trail system and a variety of habitats ranging from ponds (a large one in the middle of the property and a small one adjacent to Case Road), river, open field, moist forest near the river, drier forest on high points, and vernal pools. At the landscape scale, Creaser Park touches the Skungamaug River corridor and is quite close to the Nathan Hale State Forest.

A variety of plant species were observed, a high proportion of which are native to Connecticut. Refer to the following plant list (alphabetized by current scientific names from Arthur Haines, 2011, *Flora Novae Angliae*.)

The following invasive species were observed: Garlic Mustard (*Alliaria petiolata*), Japanese Barberry (*Berberis thunbergii*), Narrow-leaf Bittercress (*Cardamine impatiens*), Asiatic (Oriental) Bittersweet (*Celastrus orbiculatus*), Autumn-olive (*Elaeagnus umbellata* var. *parvifolia*), Winged Euonymus (aka Burning Bush – *Euonymus alatus*), non-native Honeysuckle (*Lonicera* sp., distinguished from native Honeysuckles by the hollow stems), Reed Canary Grass (*Phalaris arundinacea*), Phragmites (*Phragmites australis* var. *australis*), and Multiflora Rose (*Rosa multiflora*). Many fact sheets on invasive plant species may be found on the CT Invasive Plant Working Group website (http://www.cipwg.uconn.edu/factsheets.) Although previously reported, no Russian-olive (*Elaeagnus angustifolia*) was seen. It may be present, but note that some people use the common names Russian- and Autumn-Olive interchangeably. Botanically, the two species are distinct; and, Russian-olive is typical of Midwestern states, but not common in Connecticut as compared to Autumn-olive). A "bamboo-like" species was mentioned with the possible name of Japanese Knotweed. None was noted; and, perhaps what was meant was the bamboo-like Phragmites.

Potential for Nature Interpretation

The various habitats within the property are in close enough proximity that it is easy to use the existing trail system to design hikes that compare and contrast. The large pond, the Skungamaug River, and the vernal pools could be destinations in themselves.

The idea of hiring someone to produce some nature interpretation curriculum is worth considering. This could include materials for teachers as well as materials for a numbered guided nature trail with trail notes. In addition, or perhaps in lieu of paper, trail notes could be made available from the internet with a QR-code on a signboard that could be read by smart phones that link to the internet. Current use in Connecticut includes trails (Mattabesett Trail, Shenipsit Trail, Scovill Loop and Kettletown SP) managed by the Connecticut Forest and Park Association (CFPA). Keney Park in Hartford is working with the Hartford Public Library to install QR codes along its nature trails. Also, the Pratt Nature Center in Litchfield County has a QR code guided tour created

by volunteers led by a Boy Scout for his Eagle Scout project. The Shelton Conservation Commission has used QR codes on some of their trail maps. (See picture.)
Organized inventories of animal life or the solicitation and coordination of animal sighting records would contribute information for interpretation and enjoyment of the park. In addition, knowing what species are present would inform future habitat management decisions. In particular, the vernal pools should be inventoried in spring when there will be evidence of the presence or absence of vernal pool obligate species such as Fairy Shrimp (early spring), Wood Frogs, Spotted Salamanders, and Marbled Salamanders. (The larvae of Marbled Salamanders will be about 1" long when Spotted Salamander larvae are just beginning to emerge from their egg masses.)

Vegetative Buffers

Keeping a buffer of vegetation (shrubs, trees, herbaceous plants and grass/grass-like plants) along edges of the river and pond is recommended. Species that could be planted include Speckled Alder (picture below) (*Alnus incana* ssp. *rugosa*), Steeplebush (*Spiraea tomentosa*), and Sweet Pepperbush (*Clethra alnifolia*) which all are relatively deer-resistant (not deer-proof) species that like moist soils and tolerate some seasonal flooding. Gray Dogwood (*Swida*[*Cornus*]*racemosa*) and Common Elderberry (*Sambucus nigra* ssp. *canadensis*; formerly *S. canadensis*) are less deer resistant, but would be suited to the site.

The large pond currently is well protected in most places, although the buffer could be wider on the east side. Where invasive plant control is implemented, care should be taken to not disturb the native plants; and some shrub planting may be desirable.

North of the large pond, the buffer between the field and the river would benefit from additional width. The buffers could be widened by mowing less close to the edge and allowing the existing vegetation to spread.

Invasive Plant Management

In natural areas, the main point of invasive plant management is to improve habitat by removing invasive plants and replanting or allowing native plants to naturally regenerate. In some cases, invasives are controlled to prevent their spread to other sites. The initial removal of invasives is a small part of invasive plant management. Controlling re-sprouts, new seedlings from buried seeds, and new invasive species (whose seeds are likely to be brought into a newly opened area by birds, small mammals, wind, and water) requires a long-term commitment. Natural regeneration of native species in the presence of heavy deer browsing may be difficult, resulting in the need to replant and/or the need to fence to allow small plants to grow undisturbed.

Reed Canary Grass was observed at the west edge of the field. This grass does particularly well in wet soils, but it also can spread to drier soils. It is difficult to eradicate, but frequent mowing (treating it as a lawn) helps slow down its spread

Phragmites grows in the little pond by Case Road. Phragmites is a wetland species that is unlikely to creep beyond the pond. However, it will likely continue to spread within the pond. It has an extensive root system and is difficult to control. Cutting it will only stimulate the roots to sprout. Glyphosate is said to effective at killing Phragmites. Where there is concern with the potential for killing other species, the "clip and drip" technique (which is very time-consuming) is very good at restricting the herbicide to the target individuals. Each stem is separately treated by cutting the stem, removing it, and immediately using a drip bottle to apply glyphosate to the hollow stem. Note that the use of herbicides in aquatic situations requires a permit from the State and, further, a herbicide formulated for aquatic use must be used.

Garlic Mustard is present in the periphery of the large pond on both the west and the east side. This biennial herb may be controlled by hand pulling. Second year pulled plants (those bolting into a stalk) should be bagged rather than discarded because it is thought that viable seeds may be produced on pulled stems. The main point of pulling the Garlic Mustard next to the pond is to prevent its spread into the forest. Garlic Mustard out-competes native herbaceous plants and in laboratory experiments, it retarded the establishment of woody plants.

Narrow-leaf Bittercress was seen on the east side of the pond and by the beach area. It may be controlled by hand pulling. And, similar to Garlic Mustard, should be bagged once it begins shooting up its flower stalk. (The flowers are very tiny and may be overlooked.)

Woody invasives observed around the pond were Multiflora Rose, Autumn-olive, Winged Euonymus (Burning Bush), non-native Honeysuckle, Japanese Barberry, and the woody vine, Asiatic Bittersweet. To some degree the shrubs perform the service of holding the soil. Bittersweet seeds are thought to last but one year in the soil; thus, when vines are removed, the site does not have a long-term seed bank in the soil (though birds may bring in new seeds). When large Bittersweet vines are cut, if they are heavily entangled with native vegetation, they should be left and allowed to rot because wrestling them out will harm the fine twigs of desired plants. After cutting, the remaining stem may be pulled out of the ground or painted (immediately) with a herbicide. When removing Bittersweet and shrubs around the pond, first consider the trade-off between the soil holding value of the invasive plants and their undesirable characteristics (*e.g.*, they outcompete desired plants and reduce habitat diversity).

There are relative few invasive plants in the forested area and they tend to not be large. Bittersweet and shrubs such as Japanese Barberry, Winged Euonymus, Multiflora Rose, and non-native Honeysuckle may be hand pulled in many cases. The shrubs may be hand pulled or weed wrenched out in many cases in the spring when the soil is moist.

An important invasive plant management activity for the forest is monitoring for early detection of the presence of Garlic Mustard, Narrow-leaf Bittercress, and Japanese Stiltgrass (*Microstegium vimineum*) all of which grow well in the shade and outcompete wildflowers. If these plants are found in the forest, these should be pulled to prevent their spread.

Control of invasive plants in the large tangle of invasive plants south of the pond may be more of a job than is feasible particularly when the amount of follow-up control needed is considered. However, spot control in places where access to the river is desirable could be more readily accomplished.

To prevent the spread of invasive plants such as Garlic Mustard, Narrowleaf-Bittercress, and Japanese Stilt Grass (the latter not observed at Creaser Park), the wheels, undercarriage, and blades of mowing equipment should be washed on site prior to removing the equipment so that seeds are not spread to subsequent sites. If the equipment arrives at the site unwashed, it should be washed in a place where seeds will not be spread by water. This is inconvenient (though it is also noted that the many hours required for control of invasive plants also is inconvenient).

Trail Erosion Management

Steep portions of the trails (for example, the trail shortly after it leaves the river to head uphill) could benefit from being re-routed into a switchback path instead of straight up. Water bars also can be put in to route water across the trail rather than letting it run down the trail.

Connectivity to Nathan Hale Forest

In the large field on the east side of the Skungamaug River, the southern boundary could be allowed to spread out into the field a bit to provide additional habitat and cover for wildlife moving between Creaser Park and Nathan Hale Forest.

Plants Observed -- Creaser Park -- Charlotte Pyle & Patricia Bresnahan 6/19/2013					
Note: this is not an exhaustive list of all the plants present					
Form: **F** = Fern; **G** = Grass/Grass-like; **H** = Herbaceous; **V** = Vine; **W** = Woody (tree or shrub)					
Scientific name	**Common Name**	Form	Native	Non-native	Invasive
Acer rubrum	Red Maple	W	x		
Acer saccharum var. *saccharum*	Sugar Maple	W	x		
Achillea sp.	Yarrow species	H			
Alliaria petiolata	Garlic Mustard	H		X	x
Alnus sp.	Alder	W	x		
Amelanchier sp.	Shadbush species	W	x		
Anemone (formerly *Hepatica americana*	Blunt-lobed Hepatica	H	x		
Anemone quinquefolia var. *quinquefolia*	Wood Windflower	H	x		
Arisaema triphyllum ssp. ?	Jack-in-the-Pulpit	H	x		
Berberis thunbergii	Japanese Barberry	W		X	x
Betula sp.	Birch species	W	x		
Cardamine impatiens	Narrow-leaf Bittercress	H		X	x
Carex pensylvanica	Pennsylvania Sedge	G	x		
Carpinus caroliniana ssp. *virginiana*	Am. Hornbeam (aka Musclewood)	W	x		
Carya sp.	Hickory species	W	x		
Castanea dentata	Chestnut (sprout)	W	x		
Celastrus orbiculatus	Oriental (Asiatic) Bittersweet	V		X	x
Chelidonium majus	Celandine	H		X	
Chimaphila maculata	Spotted Wintergreen	H	x		
Clematis sp.	Virgin's Bower	V			
Clethra alnifolia	Coastal Sweet-pepperbush	W	x		
Collinsonia canadensis	Northern Horsebalm	H	x		
Crataegus sp.	Hawthorn	W		?	
Dichanthelium (formerly *Panicum*) *clandestinum*	Deer-tongue	G	x		
Elaeagnus umbellata var. *parvifolia*	Autumn-olive	W		X	x
Euonymus alatus	Winged Euonymus (Burning Bush)	W		X	x
Eurybia (formerly *Aster*) *divaricata*	White Wood-aster	H	x		
Eutrochium (formerly *Eupatorium*) sp.	Joe-Pye-weed	H	x		
Hamamelis virginiana	Witch-hazel	W	x		
Ilex verticillata	Winterberry	W	x		
Impatiens sp.	Jewelweed	H	x		
Juniperus virginiana var. *virginiana*	Eastern Red-cedar	W	x		
Lepidium virginicum var. *virginicum*	Poor-man's Pepperweed	H	x		
Leucanthemum vulgare	Ox-eye Daisy	H		X	
Lindera benzoin	Spicebush	W	x		
Lonicera sp. (hollow-stemmed shrub)	Honeysuckle (non-native shrubby)	W		X	x
Maianthemum canadense	Canada Mayflower	H	x		
Maianthemum (formerly *Smilacina*) *racemosum* ssp. *racemosum*	Feathery False Solomon's-seal	H	x		

Scientific name	Common Name	Form	Native	Non-native	Invasive
Medeola virginiana	Indian Cucumber-root	H	x		
Mitchella repens	Partridge-berry	H	x		
Morella caroliniensis (Myrica pensylvanica)	Bayberry (possibly planted)	W	x		
Onoclea sensibilis	Sensitive Fern	F	x		
Osmunda regalis var. *spectabilis*	Royal Fern	F	x		
Parathelypteris noveboracensis	New York Fern	F	x		
Parthenocissus sp.	Woodbine species	V	x		
Phalaris arundinacea	Reed Canary Grass	G		X	x
Phragmites australis var. *australis*	Phragmites (aka Common Reed)	G		X	x
Pinus strobus	White Pine	W	x		
Polystichum acrostichoides	Christmas Fern	F	x		
Pontederia cordata	Pickerelweed	H	x		
Populus grandidentata	Big-toothed Aspen	W	x		
Prunus serotina var. *serotina*	Black Cherry	W	x		
Pteridium aquilinum ssp. ?	Bracken Fern	F	x		
Pyrola americana	American Shinleaf	H	x		
Quercus alba	White Oak	W	x		
Quercus rubra	Northern Red Oak	W	x		
Quercus velutina	Black Oak	W	x		
Rosa multiflora	Multiflora Rose	W		X	x
Rubus hispidus	Swamp Dewberry	H	x		
Rubus sp.	Blackberry	H		?	
Sambucus nigra ssp. ?	Black Elderberry	W	x		
Sassafras albidum	Sassafras	W	x		
Smilax sp.	Catbrier	V	x		
Solidago sp.	Goldenrod species	H	x		
Spirea sp.	Meadowsweet species	W		?	
Stellaria graminea	Grass-leaved Stitchwort	H		X	
Swida (formerly *Cornus*) *racemosa*	Gray Dogwood	W	x		
Symplocarpus foetidus	Skunk Cabbage	H	x		
Toxicodendron (formerly *Rhus*) *radicans*	Poison Ivy	V	x		
Trifolium sp.	Clover (red flowered)	H		?	
Tsuga canadensis	Eastern Hemlock	W	x		
Ulmus americana	American Elm	W	x		
Vaccinium corymbosum	Highbush Blueberry	W	x		
Vaccinium sp.	Blueberry (low growing species)	W	x		
Verbascum sp.	Mullein	H		X	
Viburnum acerifolium	Maple-leaved Viburnum	W	x		
Viburnum dentatum var. *lucidum*	Arrowwood	W	x		
Vitis (labrusca ?)	Grape (Fox?)	V	x		
Vitis riparia	River Grape	V	x		
Scientific Names follow Arthur Haines, *Flora Novae Angliae*, 2011					

The Natural Diversity Data Base

A Natural Diversity Data Base (NDDB) Review of State Listed Species for Creaser Park in Coventry show records for this site indicating the following extant population of species within the vicinity of the site:

Bobolink (*Dolichonyx oryzivorus*) Protection Status: Species of Special Concern

Bobolink on grass/USFWS

Bobolinks require open grassy areas to forage, breed and nest. Unlike other grassland birds that require large tracts of grassland habitat, the bobolink can successfully breed in grasslands as small as five acres. Its breeding season is approximately May through August and it is during this period that this species is most susceptible to disturbances in its habitat. The May/June 2011 issue of *Connecticut Wildlife* had an article by Paul Fusco of the DEEP Wildlife Division.
http://www.ct.gov/deep/lib/deep/wildlife/pdf_files/outreach/connecticut_wildlife_magazine/cwmj11.pdf

Eastern meadowlark (*Sturnella magna*) Protection Status: Species of Special Concern

The eastern meadowlark is considered to be a grassland-obligate bird. It requires open fields of varying sizes to breed, nest and forage in. The breeding season for this species is approximately from 1 May through 15 August. It is during this period that the eastern meadowlark is most susceptible to disturbances in its feeding and nesting habitat.

Broad-winged Hawk (*Buteo platypterus*) Protection Status: Species of Special Concern

Broad-winged hawks are inconspicuous forest nesting hawks in deciduous forests. Their large bowl nests are often old crow or squirrel nests. The Broad-winged hawk breeding season is approximately from April through August and during this time this bird is most susceptible to disturbances in its feeding and nesting habitat.

Wood turtle (*Glyptemys insculpta*) Protection Status: Species of Special Concern

Wood turtles require riparian habitats bordered by floodplain, woodland or meadows. They hibernate in the banks of the river in submerged tree roots. Their summer habitat includes pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. This species has been negatively impacted by the loss of suitable habitat.

Eastern Ribbon Snake (*Thamnophis sauritus*) Protection Status: Species of Special Concern

Ribbon snakes are found statewide, but their distribution is very spotty. They are undergoing a long-term decline in the Connecticut. This may be correlated with a reduction of their preferred habitat, open-canopy wet sedge meadows in Connecticut over the last fifty to seventy-five years. This reduction is a result of both draining wet meadows and impounding marshy areas to make ponds and reservoirs.

Hoary bat (*Lasiurus cinereus*) Protection Status: Species of Special Concern

Hoary bats are found in Connecticut during the spring and summer seasons and migrate south to overwinter. Their diet primarily consists of moths and beetles. These bats will roost high in large coniferous and deciduous trees. They typically do not roost on buildings. Female hoary bats are solitary and give birth mid-May to late June. If forest clearing occurs outside this time frame, direct negative impacts to this species will be minimized. Long-term impacts can be minimized by retaining large diameter coniferous and deciduous trees whenever possible.

Red bat (*Lasiurus borealis*) Protection Status: Species of Special Concern

Red bats are considered to be "tree-roosting" bats. They roost out in the foliage of deciduous and coniferous trees, camouflaged as dead leaves or cones. Red bats are primarily solitary roosters. They can be found roosting and feeding around forest edges and clearings. Typically, larger diameter trees (12-inch DBH and larger) are more valuable to these bats. Additionally, trees with loose, rough bark such as maples, hickories, and oaks are more desirable than other tree species due to

the increased cover that the loose bark provides. Large trees with cavities are also utilized by this species. Retaining the above mentioned trees, wherever possible, may minimize the potential for negative impacts to this state-listed species.

Silver-haired bat (*Lasionycteris noctivagans*) Protection Status: Species of Special Concern

Silver-haired bats typical roost sites include tree foliage, tree hollows, and crevices behind loose bark, but they are most likely to be found near water. They will typically give birth to their young in June or July, and the young will stay in roost until August. Workers should be made aware of the possible presence of this bat, and if encountered, delineate a distance to avoid disturbing the animal.

The Natural Diversity Data Base includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, 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. If the project is not implemented within 12 months, then another Natural Diversity Data Base review should be requested for up-to-date information.

Please note this review is for land management planning purposes only, if other activities are planned for the property or should this project require any subsequent environmental permit applications submitted to the Department of Energy and Environmental Protection, another NDDB application should be submitted, for the proposed site. Should state involvement occur in some other manner, specific restrictions or conditions relating to the species discussed above may apply.

COMMON RIBBONSNAKE

Thamnophis sauritus

State Species of Special Concern

Background and Range: The slimmest and thinnest member of the *Thamnophis* genus (gartersnake group), the common ribbonsnake is less common than its relative, the common gartersnake. It is a species of special concern in Connecticut due to declining numbers and the loss and degradation of its wetland habitats.

Range: The common ribbonsnake occurs in southern New England down the Atlantic Coast to mid-Georgia, west to Mississippi, and a short range up the river valley into lower Indiana. The species is uncommon or localized in southern New England, where it appears to have declined or become extirpated in many areas. In Connecticut, the ribbonsnake has been documented throughout the state in wetland habitats, except in Fairfield County. Some of the largest concentrations of ribbonsnakes have been found in the Central Connecticut Lowland, in and near wetlands associated with basalt (trap rock) ridges.

Description: The small (typically 20-32 inches), slender, and striped ribbonsnake is most commonly confused with its relative, the common gartersnake. The ribbonsnake is boldly patterned with three yellow stripes on a reddish-brown to black background. A distinct dark band separates each side stripe from the belly. One stripe is centered on the body, while the other 2 stripes run down scale rows 3 and 4. The ribbonsnake also has keeled scales (a raised ridge is found along each scale) and a belly that is pale yellow to pale green. The tail generally accounts for one third or more of the ribbonsnake's total body length. The common ribbon snake also has two distinct parietal "spots" atop its head, which is unique to ribbonsnakes. The head is distinctly bicolored with the top portion black and the area below the eyes and under the chin pure white. Juvenile ribbonsnakes resemble adults.

In comparison, is the similar-looking gartersnake is more heavy-bodied; has a proportionately shorter tail (less than one fourth its total length); is less swift and agile; and has lateral stripes on scale rows 2 and 3. It also can be more variable in coloration and more blotched or patterned. Some individuals

have well-defined striping and head markings; however, the majority have poorly defined patterns when compared to ribbonsnakes. Gartersnakes are found in a wide variety of habitats, from dry to wet, whereas ribbonsnakes are usually found in and near shallow water.

Habitat and Diet: The ribbonsnake seldom ventures from shallow aquatic habitats, and favors open, grassy, or shrubby areas bordering ponds, streams, and wooded swamps. It may also be found in wet woodlands. Winter dens are underground, usually at higher in elevations and sometimes near trap rock systems.

This snake feeds on a variety of aquatic creatures, mainly amphibians such as frogs, toads, salamanders, and tadpoles. It also will consume small fish and some invertebrates. In turn, this snake is preyed upon by birds, mammals, fish, and large amphibians.

Life History: Ribbonsnakes are active from April through October, and generally mate in spring (April to May) after emerging from their winter dens. Mating also can take place in autumn. Females give birth to 10-12 live young in July or August. The young receive no parental care after birth. Sexual maturity is reached at 3 years of age.

Interesting Facts: Ribbonsnakes, like their relatives the gartersnakes, are more tolerant of cooler temperatures than other snake species. Both are Connecticut's earliest emerging snakes in spring. Ribbonsnakes tend to be most active during spring, but may become dormant in summer if their wetland habitat dries up. If habitat conditions improve, the snakes will become active again. This snake may be an indicator of high quality wetlands.

Comfortable both in and out of water, the ribbonsnake is an adept swimmer that prefers shallow water. Instead of diving to the bottom as a watersnake would, it swims rapidly along the shore and may disappear quickly into vegetation if threatened. In defense, a ribbonsnake may flatten its head, thrash about, and secrete a fowl-smelling musk to deter predators. This snake may often been seen basking on logs, hummocks, or muskrat lodges.

The common ribbonsnake is non-venomous and harmless to humans. It is an important predator in aquatic food webs.

Conservation Concerns: Populations of common ribbonsnakes are sporadic in abundance, leading to a general scarcity. Some sites may have large numbers of snakes while others have only a few individuals. Population declines appear to occur where there is reforestation of open, grassy areas. Populations also can fluctuate with the availability of prey (amphibians). The occurrence of ribbonsnakes in protected areas, such as state forests, wildlife management areas, powerline rights-of-way, and watershed properties should be taken into account when managing these sites.

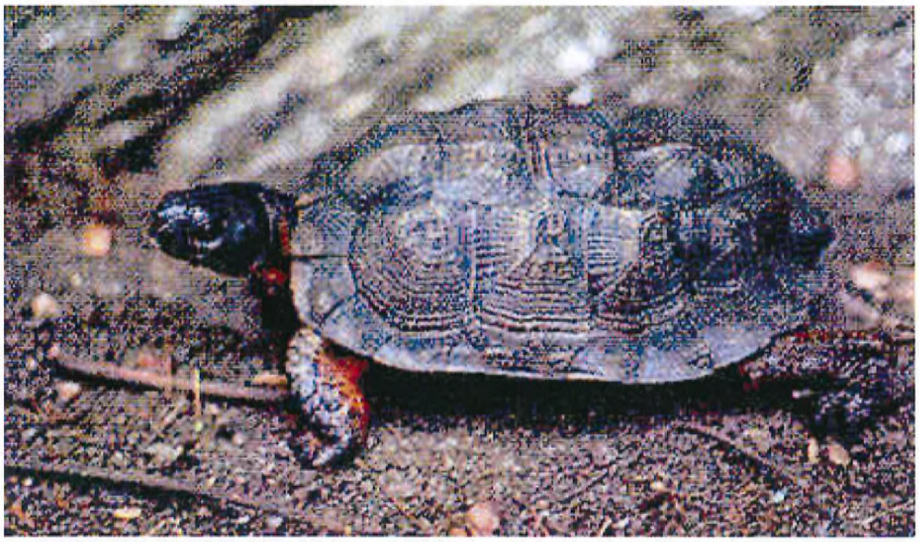
What You Can Do: If you encounter a ribbonsnake, observe it from a distance and allow it to go on its way. You should not try to agitate it by getting too close or handling it. It may try to bite or will release a musky odor. All snakes will retreat from humans if given a chance. The killing of any snake is strongly discouraged. Common ribbonsnakes are protected by Connecticut's Endangered Species Act and persons who kill or collect this special concern snake could be faced with fines or legal action.

If ribbonsnakes are found in wetland habitat on your property, consider appropriate wetlands management protocols. Any additional information and/or positive identification of ribbonsnake populations can be reported to deep.wildlife@ct.gov.

Content last updated on March 25, 2013.

Wood Turtle

(Clemmys insculpta)



IDENTIFICATION: A medium-sized turtle, readily distinguished by its sculptured, rough, moderately-domed carapace, black head, orange-red wash on its under limbs, and a yellow plastron with black squares along the edges. Adults 150-200 mm carapace length.

In contrast to Connecticut's other turtle species, the wood turtle is an animal of the northern forest biome, from the Great Lakes eastward through New England and northeastern Canada. Its southern range limit lies near Washington, DC. In Connecticut, the strongholds of wood turtle distribution are the eastern and western uplands. Although once quite common in the Central Connecticut Lowland, many populations have been reduced or even eliminated by habitat fragmentation. This species was never common in the coastal zone of the state. Wood turtles have extensive landscape-scale habitat requirements, requiring clean rivers and large streams with deeply undercut banks for hibernation, as well as extensive areas of floodplain, forest, and fields for summer foraging. Because of their extensive overland movements, they are very susceptible to road mortality. They take over a decade to reach sexual maturity, and have a low egg output, and limited juvenile survivorship. Loss of adults from breeding populations, whether from increased road mortality or by collection for the wildlife trade, is a major problem affecting the sustainability of wood turtle populations in Connecticut. Possession of any wood turtle is prohibited (Conn. Code Sec. 26-55-3-C) in Connecticut without regard to its origin, and collection within Connecticut is prohibited (Conn. Code Sec. 26-66-14-A). The wood turtle is a "Special Concern" species in Connecticut. International commerce in wood turtles posed such a threat that in 1992 this species was placed under international trade regulatory protection administered by CITES (Convention on International Trade in Endangered Species of Flora and Fauna). The wood turtle is of conservation concern throughout most of its range. Most states and provinces where it occurs afford it special status and/or some form of statutory protection.

Turtles | Amphibians and Reptiles in Connecticut

Recreation Planner Review

Background

Originally a dairy farm, Creaser Park was developed as a recreational facility by the CT Department of Mental Retardation as an adjunct to the now closed Mansfield Training School. Development included construction of five buildings serviced by a septic field and an excavated by-pass recreational pond. When the camp closed in 1992, the property was transferred to DEP.

Because of local interest in utilizing the former camp, DEP leased Camp Creaser to the Town of Coventry. Presumably because of the existing site development, a town or even regional environmental education center was proposed. To pursue this option, an ERT report was prepared in 1996, detailing the property's potential and limitations. The current lease will expire in 2017. Any process to extend the lease will be handled by DEEP Property Management.

Subsequently the town began operating the camp as a component of its municipal park system. A picnic pavilion was built, as well as a trail system maintained by Boy Scouts in the wooded upland portion of the property. Annual mowing also maintained the meadow character of the Skungamaug River floodplain and adjoining areas of fluvial soils.

Reportedly site use has consisted largely of dog walkers and some hikers. In addition, some fishing occurs at the pond either with or without canoe or kayak. Several buildings are available for rental for special events and two are used for storage. Furthermore, there has been some local talk of moving the existing day camp from Patriots Park on Lake Wangumbaug to Creaser Park.

Reviewer Recommendations

Site

- Although Creaser Park contains enough variety to be suitable as a site for an environmental education center, the local school system has shown little interest in such an involvement since completion of the 1996 ERT report. Furthermore, there have been no expressions of interest from neighboring towns in participating in a regional center. Thus, the likelihood of an environmental education center at Creaser Park in the foreseeable future seems remote, with any environmental education activity at this location likely limited to occasional school field trips. It is noted in the DEEP Forest Management Plan 2012-2022 that the Captain Nathan Hale Middle School studies vernal pools and the Coventry High School cross-country team holds competitive meets in the leased area.
- As swimmable water is the key component of a successful day camp, the existing day camp should remain at Patriots Park, providing access to Lake Wangumbaug's quality water and facilities. In contrast, the Creaser Park pond is weed choked and in the absence

of needed data on volume, turnover, etc., etc. it is questionable whether it could meet health standards in terms of servicing sizeable numbers of users.

- Operate Creaser Park basically as a low-key open space recreation facility as at present. Hiking trails in the wooded upland and mown lanes to and around the pond will be the major use generators, as well as some fishing in the pond and Skungamaug River. Special events, occasional school field trips and possibly community gardens in the existing meadow are all possible activities.
- Continue annual mowing of meadow in the absence of community gardens to maintain its agricultural land base potential.
- To reduce long term maintenance costs consider removing at least some of the existing buildings.

Miscellaneous

- Extend town ownership in a greenbelt along the Skungamaug River north and south of Creaser Park, especially along South River Road between Main Street and Case Road.
- Develop trail linkage to Nathan Hale State Forest and suggest a trail system within the state forest, perhaps linking to the Nathan Hale Homestead and the Strong House. There are no sanctioned DEEP trails within the Nathan Hale State Forest. Skid trails and interior forest roads exist and are open to the public for passive recreation. Creating access, parking areas or additional recreational trails is not a goal or objective of the DEEP Divisions of Forestry and Parks. http://www.ct.gov/deep/lib/deep/forestry/management_plans/hale_2012-2022.pdf
- Suggest restoration of active leasing of prime farmland on adjoining DEEP land to help maintain local agricultural land use.

Trails and Greenways

Site Visit and Observations

The site visit to Creaser Park began at the main entrance accessed from Case Road. This reviewer walked most of the site by way of the red trail with a few side trips on the white and yellow trails.


Figure 1 ADA Trail

The Recreational Trails Program would encourage the Town to consider:

- Update the kiosk map at main entrance to include the white trail, allowed uses and trail length and terrain information. A 'Your Are Here' note is useful to those less skilled with map reading. It is suggested to highlight the ADA trail (Figure 1). It is really great!

White trail

- Better define the entrance at the common area. The white blazes are not evident looking from the main kiosk toward the buildings.
- Add blazes south of the intersection with the yellow trail.

Red trail

- Better define the entrance at the common area. It is difficult to see the red blaze on the fence pole (figure 2) and unclear that the trail located is on the mowed area.
- Re-blazing is needed throughout.


Figure 2 Red Trail

Blue trail

- Where the trail intersects the Red, southwest of the pond, the blazing is confusing as there are red blazes on the blue trail.

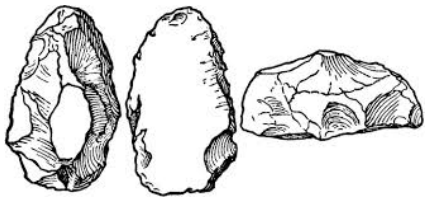
The park, in general, is a real pleasure to walk through. Benches are located in key places and trail surfaces are in good shape. The trails bring users to a variety of habitats which will facilitate utilization of the park as an interpretive environmental center. The addition of signage and noted upgrades to blazing should enhance the user experience.

The Recreational Trails & Greenways Program remains available upon request to assist The Town.

Archaeological and Historic Sensitivity

The Office of State Archaeology (OSA) checked Creaser Park for its archaeological and historic sensitivity and a review of the Office of State Archaeology's Site Files and Maps shows no known pre-Contact Native American archaeological sites within the boundaries of the project area.

However, the files do show eight Native American sites along the Skungamaug River in relatively close proximity. These archaeological components date from 4,000 to 1,000 years ago and represent hunting and gathering economies adapting to the interior riverine environment. Local informant information has suggested that Indian stone tools have been recovered from the camp property. Topographic and environmental features of the property suggest a high sensitivity for archaeological resources.



In contrast, the building structures located at Camp Creaser lack architectural distinction and therefore, are not eligible for the National or State Register of Historic Places. Extensive historic and architectural surveys undertaken by Historic Resource Consultants, Inc. for the various route 6 alternatives identified no structures as possessing architectural merit in the vicinity of Camp Creaser.

The Office of State Archaeology strongly recommends that any land use proposals for the Open Space area be reviewed by the OSA for potential archaeological sites. The high sensitivity for cultural resources suggests that any earth moving activities may impact below-ground historic resources. In terms of educational opportunities and interpretive signage, the OSA would need an archaeological survey of the property to be specific about the below-ground cultural resources which may exist there. Lacking subsurface testing, general wording about the use of the Skungamaug River by Native Americans could add to the park's interpretation. The OSA office would be happy to assist in the wording and possible graphics.

In this regard, the OSA would be pleased to work with the Town of Coventry to promote an educational awareness of their cultural resources, and they are prepared to review any proposed land use projects in the project area.

Appendix

Riparian Corridor Plants

RIPARIAN CORRIDOR PLANTS

What is a "Riparian Corridor?"
"Riparian" refers to the area by the banks of a river, stream, or other body of water. "Corridor" refers to a designated zone or strip of land of a specified width along the border of an area. So a "riparian corridor" is the natural vegetation and soil cover adjacent to a river, stream, or other body of water.

Riparian corridors provide multiple functions and values. They are the first line of defense against the impacts of impervious surfaces. Corridors slow runoff, protect shorelines from erosion, aid in flood control, and filter or trap pollutants. They also provide habitat for wildlife, as well as shade waters for fisheries enhancement. Additionally, riparian corridors may provide scenic value and privacy.

The following is a list of some of the plants native to Connecticut that can live in these riparian corridors – areas which may be wet at certain periods of the year, or which may be inundated at certain times or after heavy rain events. This is not an exhaustive list, but rather a sampling of some of the more common native plants that can grow under these conditions. There are numerous other plants that will do well in upland buffer areas to wetlands and watercourses in places that rarely if ever, are inundated. These plants are not addressed here. Instead this list focuses on plants that can withstand periodic inundation or consistently wet to moist soils.

Please contact Juliana Barrett (juliana.barrett@uconn.edu) for questions or comments.
Additions to this list are always welcomed.
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Sea Grant
Connecticut

TREES		
Latin name	**Common name**	**Notes**
Acer rubrum	Red maple	Wet to dry soils; sun to part shade; tolerates intermittent flooding and wet soils
Acer saccharinum	Silver maple	Rich, wet to moist soils; sun to shade; tolerates seasonal flooding
Betula lenta	Sweet birch	Rich, moist well-drained soils; sun to shade
Betula nigra	River birch	Moist soils; good for periodically wet areas; sun to part shade
Fraxinus americana	White ash	Deep, moist soils; sun to shade; tolerant of poorly drained soils
Fraxinus pennsylvanica	Green ash	Wet to dry soils; sun to part shade; tolerates seasonal flooding
Liquidambar styraciflua	Sweetgum	Deep, moist soils: sun to part shade (Natural populations are listed as of Special Concern in Connecticut)
Liriodendron tulipifera	Tulip tree, tulip poplar	Rich, moist soils; sun to part shade
Nyssa sylvatica	Black gum	Wide range of soils, best on moist well-drained deep soils; sun to part shade; will tolerate poorly drained soils
Platanus occidentalis	American Sycamore	Best on moist, well-drained soils; sun to part shade; tolerates seasonal flooding
Populus deltoides	Eastern cottonwood	Moist, well-drained soils; sun to part shade; can tolerate seasonally flooded soils
Quercus bicolor	Swamp white oak	Poorly drained to dry soils; sun to part shade; can tolerate occasional flooding
Quercus palustris	Pin oak	Wet to moist soils: sun to part shade; tolerates poorly drained soils
Salix nigra	Black willow	Wet to moist soils; sun to shade

SMALL TREES and SHRUBS		
Latin name	**Common name**	**Notes**
Alnus serrulata	Hazel alder	Wet to moist soils; sun, part shade, shade
Amelanchier arborea	Common serviceberry, Shadbush	Moist, well-drained soils; sun to part shade
Amelanchier canadensis	Canadian serviceberry	Wet to moist, well drained soils; prefers wet sites; sun to part shade
Amelanchier laevis	Allegheny serviceberry	Moist to dry soils; sun to part shade
Cephalanthus occidentalis	Common buttonbush	Wet to moist soils; part shade to shade
Clethra alnifolia	Coastal sweet pepperbush	Wet to moist soils; sun to part shade
Cornus alternifolia	Alternateleaf dogwood	Moist well drained soils; part shade to shade
Cornus amomum	Silky dogwood	Wet to moist soils; sun to shade
Cornus florida	Flowering dogwood	Moist to dry, well-drained soils; sun to part shade
Cornus racemosa	Gray dogwood	Tolerant of dry to wet soils; sun to shade
Cornus sericea	Redosier dogwood	Moist, well-drained soils; sun to partial shade

SMALL TREES and SHRUBS (continued)		
Latin name	**Common name**	**Notes**
Eubotrys racemosa (was Leucothoe)	Swamp doghobble	Wet to moist soils; part shade
Hamamelis virginiana	American witch hazel	Moist to dry soils, best on moister soils; sun to shade
Ilex verticillata	Common winterberry	Moist soils; sun to part shade; will tolerate poorly-drained soils; need male and female plants to produce fruits; Fruits are poisonous
Lindera benzoin	Northern spicebush	Prefers moist, well-drained soils but grows in wet to dry soils; sun to part shade
Photinia melanocarpa	Black chokeberry	Moist soils; sun to part shade; flood tolerant
Photinia pyrifolia	Red chokeberry	Moist, rich soils; sun
Rhododendron maximum	Great laurel	Wet to moist, well drained soils; Partial shade to shade Poisonous plants
Rhododendron viscosum	Swamp azalea	Wet soil; part shade; flood tolerant. All parts of plants are highly toxic.
Salix discolor	Pussy willow	Moist soils; sun
Salix sericea	Silky willow	Wet to moist soils; sun to shade
Sambucus nigra ssp. *canadensis*	American black elderberry	Wet to moist soils; sun to part shade. Parts of plant are toxic.
Spiraea alba	White meadowsweet	Wet to moist soils; sun to shade
Vaccinium corymbosum	Highbush blueberry	Wet to dry soils; sun to part shade
Vibernum dentatum	Southern arrowwood	Wet to dry soils; sun to part shade
Viburnum opulus var. *americana*	American cranberry bush	Wet to well drained, moist soils; flood tolerant; sun to partial shade

FERNS and FERN ALLIES		
Latin name	**Common name**	**Notes**
Equisetum fluviatile	Water horsetail	Wet to moist soils; sun to shade
Equisetum hyemale	Scouringrush horsetail	Wet to moist soils; sun to part shade
Onoclea sensibilis	Sensitive fern	Wet to moist soils; part shade to shade
Osmunda cinnamomea	Cinnamon fern	Wet to moist soils; sun to shade – depending on moisture conditions
Osmunda claytoniana	Interrupted fern	Moist to dry soils; Shade
Osmunda regalis	Royal fern	Wet to moist soils; part shade to shade
Thelypteris palustris	Eastern marsh fern	Wet soils; sun
Woodwardia virginica	Virginia chain fern	Wet to moist soils; part shade (can be aggressive)

GRASSES, SEDGES, REEDS		
Latin Name	**Common Name**	**Notes**
Calamagrostis canadensis	Bluejoint	Moist to wet soils; sun to shade; tolerates seasonal flooding
Carex crinita var. *crinita*	Long hair sedge	Wet, sun
Carex lupulina	Hop sedge	Moist to wet soils; part shade
Carex lurida	Sallow sedge	Wet to moist soils; sun to part shade; will tolerate temporary flooding
Carex scoparia	Broom sedge	Wet to dry soils; sun to part shade
Carex stipata	Awlfruit sedge	Wet to moist soils including standing water; sun
Carex stricta	Tussock sedge	Wet to moist soils; sun to part shade; will tolerate standing water
Carex vulpinoidea	Fox sedge	Wet to moist soils; sun to part shade
Dulichium arundinaceum	Threeway sedge	Wet; sun to part shade
Eleocharis palustris	Common spikerush	Wet to moist soils; part shade; areas with permanent or seasonal flooding
Elymus riparius	Riverbank wildrye	Moist soils; part shade to shade
Elymus virginicus	Virginia wildrye	Moist soils; sun to part shade
Glyceria canadensis	Rattlesnake mannagrass	Wet to moist soils; sun
Juncus canadensis	Canadian rush	Wet to moist; sun to part shade
Juncus effuses	Common rush	Wet to moist soils; sun
Leersia oryzoides	Rice cutgrass	Wet soil to standing water; sun

HERBACEOUS PLANTS		
Latin name	**Common name**	**Notes**
Arisaema triphyllum	Jack in the pulpit	Wet to moist soils; sun to shade
Asclepias incarnata	Swamp milkweed	Wet to moist soils; sun
Caltha palustris	Yellow marsh marigold	Wet to moist soils; part shade
Chelone glabra	White turtlehead	Wet to moist soils; sun to shade
Doellingeria umbellata (Aster umbellatus)	Parasol whitetop	Moist soils; sun to part shade
Eupatoriadelphus fistulosus (Eupatorium fistulosum)	Trumpetweed	Wet to moist soils; sun to part shade
Eupatoriadelphus maculatus var. *maculatus (Eupatorium maculatum)*	Spotted trumpetweed	Wet to moist soils; sun to part shade
Eupatorium perfoliatum	Common boneset	Wet to moist soils; sun to part shade
Helenium autumnale	Commmon Sneezeweed	Moist soils; sun; poisonous plant parts
Hibiscus moscheutos	Eastern rosemallow	
Iris prismatica	Slender blueflag	Moist soils; part shade; brackish to fresh coastal wetlands
Iris versicolor	Larger blueflag	Wet to moist soils; sun to part shade
Lilium superbum	Turk's cap lily	Moist but well-drained soil; sun
Lobelia cardinalis	Cardinal flower	Wet to moist soils; sun, part shade, shade; Lobelias contain toxins

HERBACEOUS PLANTS (continued)		
Latin name	**Common name**	**Notes**
Lobelia siphilitica	Great blue lobelia	Wet to moist soils; sun, part shade, shade; Lobelias contain toxins
Mimulus ringens	Monkey flower	Wet to moist soils; sun
Peltandra virginica	Arrow arum	Wet soils; sun to part shade
Pontederia cordata	Pickerel weed	Wet soils; sun to part shade
Rudbeckia laciniata	Green headed coneflower	Moist soils; sun to part shade
Sagittaria latifolia	Broadleaf arrowhead	Wet soils; sun to part shade
Symphotrichum novae-angliae (Aster novae-angliae)	New England aster	Moist soils; part shade
Symphotrichum novi-belgii (Aster novi-belgii)	New York aster	Moist well-drained soils; sun to part shade
Verbena hastata	Blue vervain	Moist to dry soils; sun to part shade
Vernonia noveboracensis	New York ironweed	Moist to dry soils; sun
Viola cucullata	Marsh blue violet	Wet to moist soils; sun, part shade, shade
Viola lanceolata	Lance-leaved violet	Wet to moist soils; part shade to shade

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, active adult, 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 and/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 Conservation District and the ERT Coordinator. A request form should be completely filled out and should include the required materials. When this request is reviewed by the local Conservation District and approved by the ERT Subcommittee, 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, e-mail: connecticutert@aol.com.

About the Eastern Connecticut RC&D Area

Resource Conservation and Development (RC&D) is a program of the United States Department of Agriculture (USDA). The Secretary of Agriculture gave the Natural Resources Conservation Service (NRCS) [formerly the Soil Conservation Service] responsibility for administering the program. RC&D is unique because it is led by local volunteer councils that help people care for and protect their natural resources in a way that improves the local economy, environment, and living standards. RC&D is a way for people to work together to plan and carry out activities that will make their area a better place in which to live.

Interest in creating the Eastern Connecticut RC&D Area first started in 1965. An application for assistance was prepared and submitted in June 1967 to the Secretary of Agriculture for planning authorization. This authorization was received in August 1968. In 1983, an application by the Eastern Connecticut RC&D's Executive Council was approved by USDA and NRCS to enlarge the area to an 86 town region.

The focus of the Eastern Connecticut RC&D Program is to help people care for and protect their natural resources, improve local economies, and sustain a high quality of life. The program derives its success from its ability to connect individuals, communities, government entities, and grassroots organizations. These connections and partnerships enable the development of shared visions and resource networks that work toward a healthy future for Connecticut. Current members on the RC&D Council represent the Working Lands Alliance, The Last Green Valley, CT Farmland Trust, Town of Mansfield, NECCOG, RiverCOG, NorthCentral Conservation District, Eastern Conservation District and the CT River and Estuary Conservation District.

For more information please visit their website at: www.easternrcd-ct.org.