Newington Walk

Open Space Residential Subdivision

Newington, Connecticut

Eastern Connecticut
Environmental Review Team Report

Eastern Connecticut
Resource Conservation & Development Area, Inc.

Newington Walk
Open Space Residential Subdivision

Newington, 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

Conservation Commission
Newington, Connecticut

August 2011

#629

Acknowledgments

This report is an outgrowth of a request from the Newington Conservation Commission to the Connecticut River and Coastal Conservation District (CRCCD) and the Eastern Connecticut Resource Conservation and Development Area (RC&D) 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 reviews took place on Thursday, June 30, and Wednesday, July 13, 2011

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Randolph Steinen	Geologist DEEP – State Geological & Natural History Survey UCONN – Geology (emeritus) (860) 418-5931
Robin Blum	Wildlife Technician DEP – Eastern District Headquarters (860) 295-9523
Neal Williams	Environmental Analyst III DEEP – Stormwater Management (860) 424-3356

Christopher Malik*	Watershed Coordinator DEEP – Water Resources (860) 424-3959
Tyler Kleykamp	Lead Planning Analyst CT Office of Policy and Management (860) 418-6302

*Report not yet received.

I would also like to thank Mark Pappa, chair of the Newington Conservation, Anthony Ferraro, town engineer, Eric Hinckley and Chris Greenlaw, Newington Engineering Department, Raymond Gradwell, BL Companies, Dan Rossi, Toll Brothers and Michael Camilleri, Brown Rudnick, 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 location and aerial photos. During the field reviews Team members received additional information, reports and plans. Following the field reviews the Team members received additional consultant reports and revised plans in electronic form. 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 and applicant. 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 reviewing the proposed plans for this open space subdivision.

If you require additional information please contact:

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Table of Contents

*Section not yet received.

Introduction

Introduction

The Newington Conservation Commission requested Environmental Review Team (ERT) assistance in reviewing a site proposed for an open space residential subdivision.

The 73.73 acre site is located in northeast Newington on the west side of Russell Road (SR424). The site is bounded by Russell Road to the east, the Connecticut Humane Society to the southeast, undeveloped forest to the south, property owned by the Town of Newington to the southwest, Mountain Road to the west, and property owned by the Balf Company and the State of Connecticut to the north.

The project site is currently undeveloped forest with wetlands and watercourses. Although privately owned there are numerous hiking trails that have been used by the public for many years.

The site is zoned for residential development and the applicant is proposing an Open Space Residential Development allowing a minimum lot size of 12,000 square feet with 80 feet of road frontage. The site will be served by public water and sewer.

The proposed project has been revised to include a 64 lot subdivision with four public roads that end in cul-de-sacs. One wetland is proposed to be filled and another wetland created as mitigation. The access to the project will be from Russell Road. A stormwater management system will be constructed with five detention basins. Approximately 50% of the site will be designated as town owned permanent open space.

Objectives of the ERT Study

The town is requesting an evaluation of the physical and biological characteristics of the project site so that town commissioners can make decisions based on adequate information regarding the environmental impacts and potential mitigation measures regarding the proposed development. Concerns included: site topography and geology, wetland assessments and impacts, stormwater management, erosion and sediment control, archaeological and cultural significance, wildlife habitat and impacts, and land use design.

The ERT Process

Through the efforts of the Newington Conservation Commission this environmental review and report was prepared for the Town of Newington.

This report provides an information base and a series of recommendations and guidelines which cover some of the issues of concern to the town. Team members were able to

review maps, plans and supporting documentation provided by the town and the applicant.

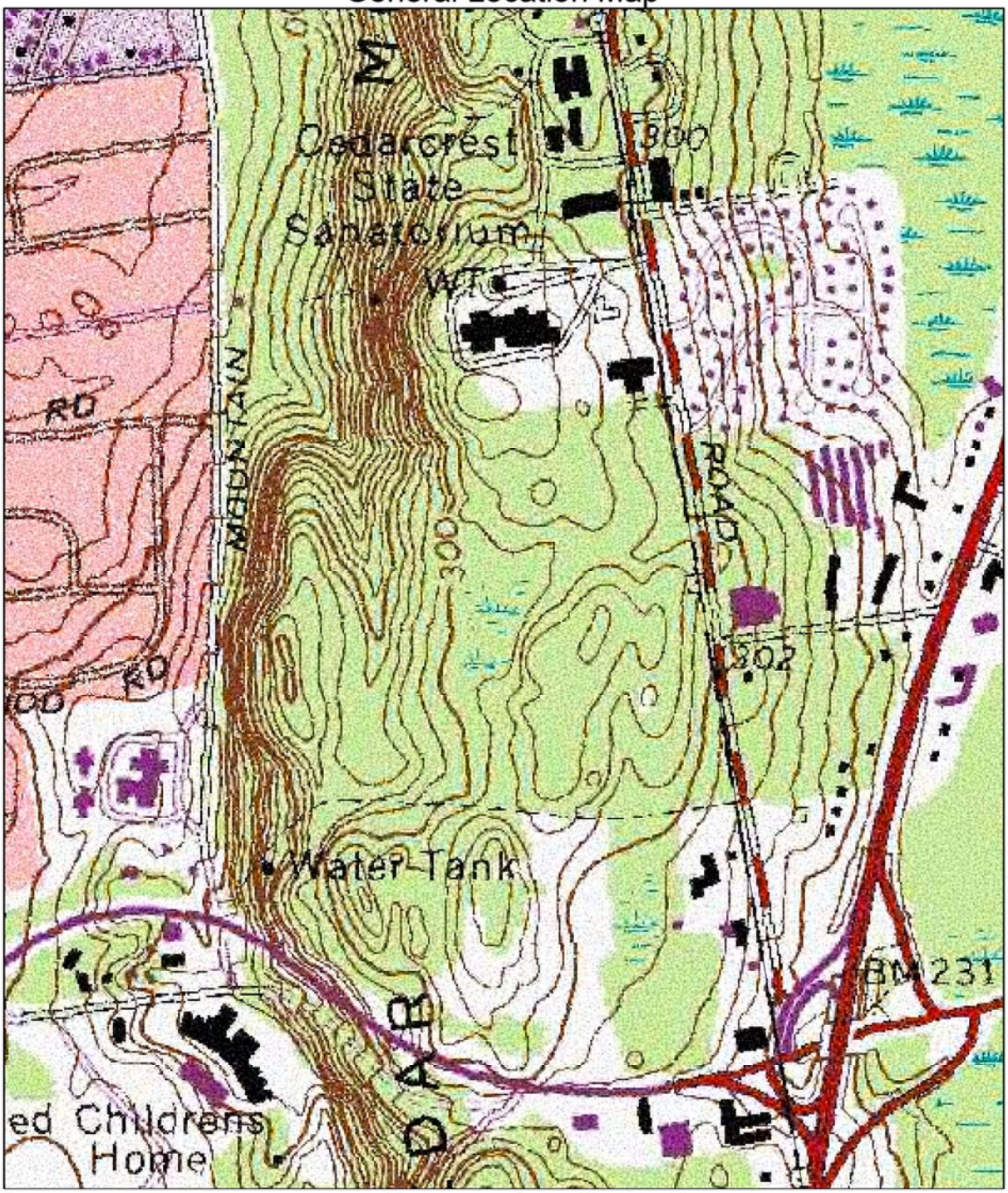
The review process consisted of four phases:

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 Thursday, June 30 and Wednesday, July 13, 2011. Team members also made individual field visits. 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.

Newington Walk Open Space Residential Subdivision
General Location Map



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.
June 2011

0 0.045 0.09 0.18 0.27 Miles

Newington, CT

Newington Walk Open Space Residential Subdivision
Color Aerial Map

The Connecticut Environmental Review Team

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June 2011.

0 0.045 0.09 0.18 0.27 Miles

Newington, CT

Newington Walk Open Space Residential Subdivision
Aerial Map

The Connecticut Environmental Review Team

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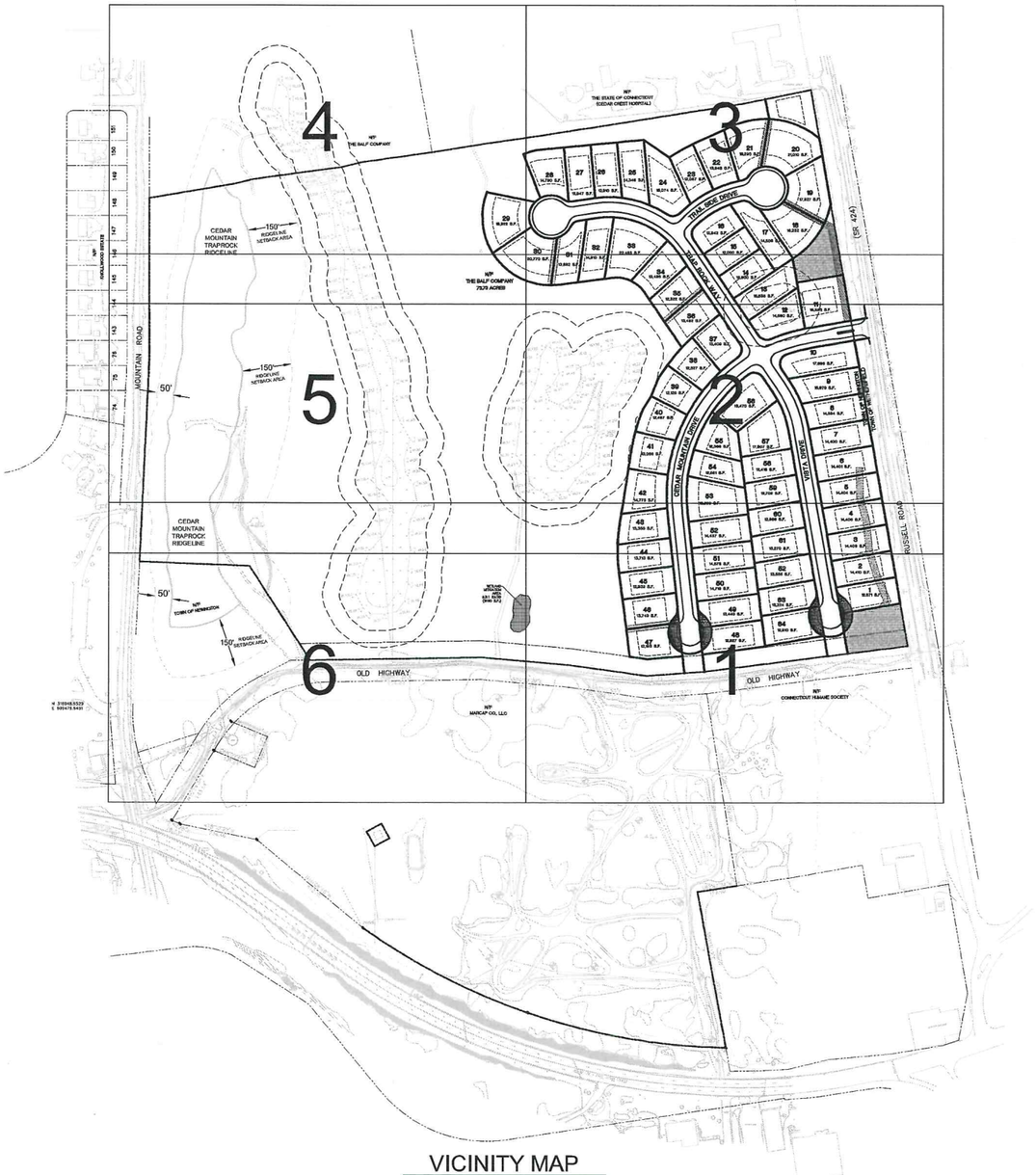
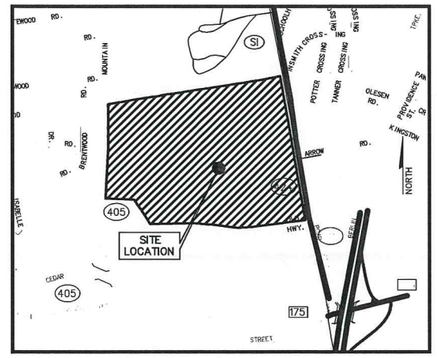
June 2011.

0 0.045 0.09 0.18 0.27 Miles

Newington, CT



VICINITY MAP



LOCATION MAP

SCALE: 1"=800'

ZONING INFORMATION

LOCATION:	NEWINGTON, CONNECTICUT			
ZONE:	R20 (OPEN SPACE SUBDIVISION TO CONFORM WITH LOT REQUIREMENTS FOR THE R-12 ZONE)			
USE:	OPEN SPACE SUBDIVISION			
ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE
1	MINIMUM LOT AREA	20,000 S.F.	> 12,000 S.F.	NO
2	MINIMUM LOT FRONTAGE	100 FEET	> 80 FEET	NO
3	MINIMUM FRONT SETBACK	35 FEET	> 35 FEET	NO
4	MINIMUM SIDE SETBACK	10 FEET	> 10 FEET	NO
5	MINIMUM REAR SETBACK	35 FEET	< 30 FEET	NO
6	MAXIMUM BUILDING HEIGHT	2.5 STORIES/35 FEET	2.5 STORIES/35 FEET	NO
7	MAXIMUM BUILDING COVERAGE	90 PERCENT	< 90 PERCENT	NO

MAXIMUM DENSITY

SITE AREA (X) - WETLANDS (Y)/ MINIMUM AREA FOR R-20 ZONE = (Z)

(3,211,817.48 S.F. - 164,693.46) / 20,000 S.F. = 150 UNITS ALLOWED
64 UNITS PROPOSED

MAXIMUM CUL-D-SAC LENGTH

CEDAR MOUNTAIN DRIVE = 1,311 L.F. TO RUSSELL ROAD

TRAP ROCK WAY = 1,240 L.F. TO RUSSELL ROAD

TRAIL SIDE DRIVE = 1,165 L.F. TO RUSSELL ROAD

SUMMIT DRIVE = 1,204 L.F. TO RUSSELL ROAD

MAXIMUM ALLOWABLE CUL-D-SAC LENGTH = 1,600 LINEAR FOOT FROM CENTERLINE INTERSECTION OF STREETS TO END OF CUL-D-SAC.

MAXIMUM OPEN SPACE

- MINIMUM OF 5 ACRES OR PERCENTAGE OF ENTIRE PARCEL WHICH EACH LOT WILL BE REDUCED 12,000/ 20,000 = 0.40 X 100 = 40%

- OPEN SPACE REQUIRED 0.4 X 3,211,817.48 S.F. = 1,284,726.99 S.F. (29.49 AC.)

- OPEN SPACE PROPOSED = 1,944,526.17 S.F. (44.64 AC.)

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- SETBACK LINE
- UTILITY EASEMENT (20' WIDE)
- DRAINAGE EASEMENT (WIDTH VARIES)
- DRIVEWAY AND SIDEWALK EASEMENT (WIDTH VARIES)
- PROPOSED BOUNDARY MONUMENT
- PROPOSED IRON PIN

CEDAR MOUNTAIN TRAPROCK RIDGELINE

CEDAR MOUNTAIN TRAPROCK RIDGELINE MEANS THE LINE ON THE CEDAR MOUNTAIN TRAPROCK RIDGE CREATED BY ALL POINTS AT THE TOP OF A FIFTY PER CENT SLOPE, WHICH IS MAINTAINED FOR A DISTANCE OF FIFTY HORIZONTAL FEET PERPENDICULAR TO THE SLOPE AND WHICH CONSISTS OF SURFICIAL BASALT GEOLOGY, IDENTIFIED ON THE MAP PREPARED BY STONE ET AL., UNITED STATES GEOLOGICAL SURVEY, ENTITLED "SURFICIAL MATERIALS MAP OF CONNECTICUT". THE BASE MAP FOR TRAPROCK RIDGELINE TOPOGRAPHIC DELINEATION SHALL BE THE CURRENT PUBLICLY AVAILABLE METROPOLITAN DISTRICT COMMISSION MAPS FOR THE TOWN OF NEWINGTON. (EFFECTIVE 5-20-05)

RIDGELINE SETBACK AREA: MEANS THE AREA BOUNDED BY (A) A LINE THAT PARALLELS THE RIDGELINE AT A DISTANCE OF ONE HUNDRED FIFTY FEET ON THE MORE WOODED AREA OF THE RIDGE, AND (B) THE CONTOUR LINE WHERE A RIDGE OF LESS THAN FIFTY PERCENT IS MAINTAINED FOR FIFTY FEET OR MORE ON THE ROCKIER SIDE OF THE SLOPE. MANMADE SLOPES OF 50% OR GREATER SHALL NOT BE CONSIDERED AS A PART OF ANY TRAPROCK RIDGELINE. THE BURDEN OF PROOF THAT SUCH A SLOPE AREA IS MANMADE SHALL BE ON AN APPLICANT WHO OWNS OR DESIRES TO USE THE PROPERTY CONTAINING SUCH SLOPES. (EFFECTIVE 5-20-05)

GRAPHIC SCALE
200 100 0 200
SCALE IN FEET

APPROVED BY THE TOWN OF NEWINGTON PLANNING AND ZONING COMMISSION | DATE

BL Companies
ARCHITECTURE
ENGINEERING
PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING
ENVIRONMENTAL SCIENCES

355 Research Parkway
Meriden, CT 06450
(203) 630-1406
(203) 630-2615 Fax

NEWINGTON WALK
RUSSELL ROAD
NEWINGTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1	04/05/11	IWWC SUBMISSION
2	06/03/11	PZC SUBMISSION
3	06/27/11	REVISED WETLAND LINE
4	07/25/11	REVISED PLANS & LOT LAYOUT

Designed	R.G.
Drawn	T.A.M.
Checked	
Approved	
Scale	1"=200'
Project No.	10C3641
Date	04/05/11

CAD File: RS10C364100

Title

RECORD SUBDIVISION PLAN

Sheet No.

RS-0

Jul 25, 2011 2:01pm TMartell K:\Jobs10\10C3641\DWG\RS10C364100.dwg
Layout: RS-0 24X36 2005C

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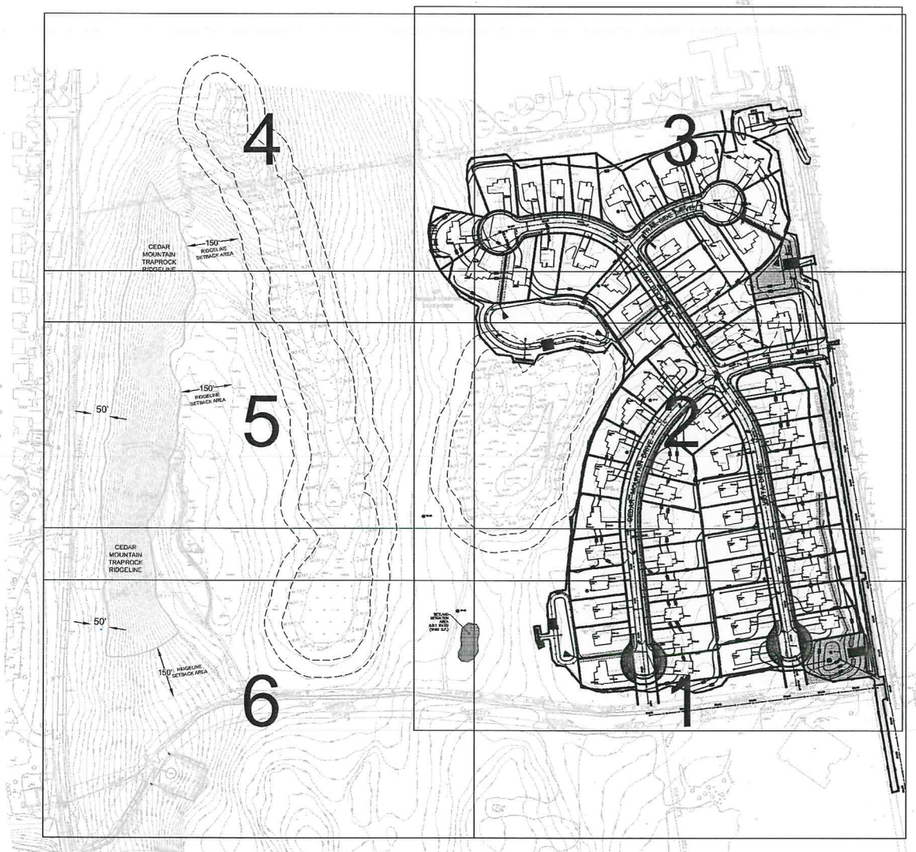

VICINITY MAP

LEGEND

- PROPOSED PROPERTY LINE
- STORM SEWER
- CONSTRUCTION LIMIT LINE — LOD —
- LIMITS OF CLEARING
- SANITARY SEWER
- WATER LINE
- TELECOMMUNICATIONS LINES
- DRAINAGE EASEMENT (WIDTH VARIES)
- DRIVEWAY AND SIDEWALK EASEMENT (WIDTH VARIES)
- STORM FLARED END SECTION
- STORM WATER QUALITY STRUCTURE
- STORM MANHOLE
- STORM CATCH BASIN
- EXISTING STORM CATCH BASIN
- FIRE HYDRANT
- ELECTRIC TRANSFORMER
- SANITARY MANHOLE
- EXISTING LIGHT POLE

LEGEND

WQ – WATER QUALITY UNIT TO REMOVE 80% TOTAL SUSPENDED SOLIDS ON AN ANNUAL BASIS

CB – CATCH BASIN TYPE "C" OR TYPE "C–L". ALL CB'S TO BE TYPE "C" UNLESS OTHERWISE NOTED.

MH – MANHOLE

ES – FLARED END SECTION

GRAPHIC SCALE
200 100 0 200
SCALE IN FEET

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NEWINGTON WALK
RUSSELL ROAD
NEWINGTON, CONNECTICUT

REVISIONS

No.	Date	Desc.
1	05/13/11	IWWC SUBMISSION
2	04/13/11	P&Z SUBMISSION
3	06/27/11	REVISED WETLAND LINE
4	07/25/11	REVISED PLANS & LOT LAYOUT

Designed	R.G.
Drawn	A.B.U.
Checked	
Approved	
Scale	1"=200'
Project No.	10C3641
Date	04/05/11

CAD File: GD10C364101

Title

GRADING AND DRAINAGE PLAN

Sheet No.

GD-0

Xref Ø: ; D10C364101 ; XZ10C364101 ; XZ10C364102 ; XZ10C364103 ; XC10C364101 ; tensflat1 ; BD10C364101 ; XC10C364103 ; XC10C364102 ; XC10C364104

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Layout: GD-0 24X36 20005

Topography and Geology of Cedar Mountain

The parcels (Marcap and Balf) straddle a trap-rock ridge underlain by the Holyoke Basalt near the center of the Connecticut Valley. The Holyoke Basalt (colloquially referred to as trap-rock) is gently tilted downward toward the east. Toward the east, the basalt layer gradually is covered by younger layers of sedimentary rock (East Berlin Formation) and glacial soils. Toward the west the basalt layer was eroded by glacial ice during the last Ice Age and forms a steep slope with local cliffs. The cliff-top at Cedar Mountain stands well above the tree height and provides a vista to the west-northwest (Figure 1).

Figure 1. Panorama of view from cliff-edge at top of Cedar Mountain (images by Amanda Fargo-Johnson). Skyline is made up of Metacomet Ridge (Bell, 1985, p.22; LeTourneau, 2008). Toward the northwest (right side of panorama) is Avon Mountain and Talcott Mountain. Toward the west (just to left of center) is Rattlesnake Mountain.

With exception to the steep western slopes, most of the property has gentle to moderate rolling hills, most of which are forested today. The ridge line has a maximum elevation at this locale of just over 340 feet whereas the valley bottom to the west has an elevation of about 100 feet (Figure 2). The slopes on the west are steep with over 200 feet of relief in a short horizontal distance (about 500 feet). Relief over most of the eastern halves of the parcels is only about 40 feet. A small north-northwest trending ravine cuts through the north-western third of the property. The ravine drains toward the northwest and ends rather abruptly in an amphitheater-shaped area near the boundary between the two parcels.

The geology of the area strongly controls the topography. Figure 3 is a geologic sketch map based on recent work by Drzewiecki, Schroeder and students at Eastern Connecticut State University. The map shows the area underlain by the Holyoke Basalt and faults that cut the basalt. Faults are formed when pressure causes the rock layers to break and shift. In this case, the layers west of the fault shifted downward relative to the layers east of the fault. The basalt forms a ridge because it was more resistant to glacial erosion than both older and younger layers of sedimentary rocks. Notice the correspondence of the shallow valley on the property and a fault that cuts the basalt layer. The valley formed because the pressure also caused numerous fractures (breaks in the rock layers) to form prior to

the fault movement. The fractured, broken-up rock is easier to erode than the rest of the rock.

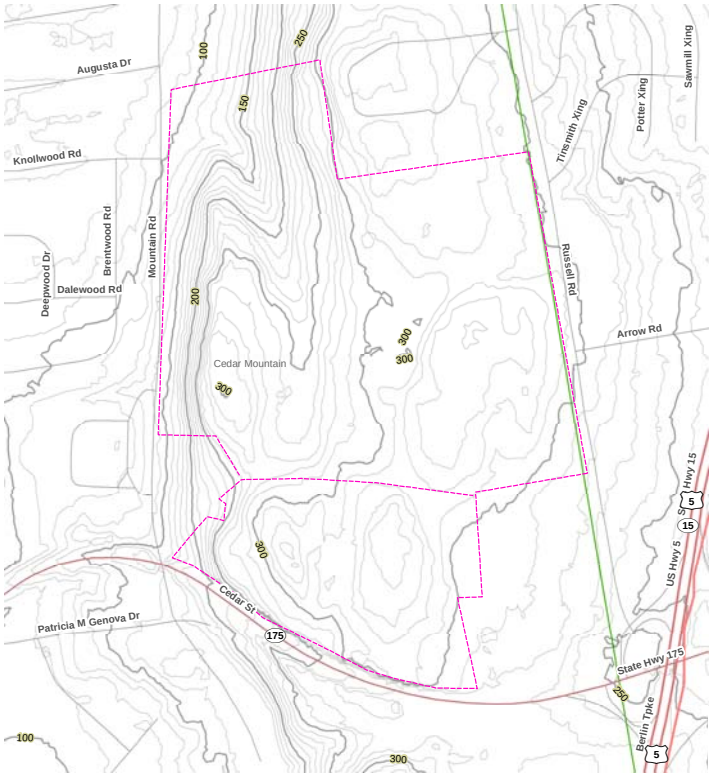


Figure 2. Topographic map of the immediate area with property boundary (pink dashed line) sketched in: i.e. property boundaries only approximate. Property is approximately 2200' in width. North is toward the top of the page. Note steep westerly-facing slopes that contain cliffs locally.

The Holyoke Basalt is gray, dark-gray and greenish gray on freshly broken surface, but it weathers to a tea-brown patina. It is composed of gray to black plagioclase feldspar laths up to 0.5 mm in length and dark gray to black stubby pyroxene crystals about 0.5 mm. in a gray groundmass. Neither base nor top exposed on the parcel, but base is exposed in the local quarry just to the north of the site. When crushed, basalt forms an excellent and economically valuable aggregate for both concrete and asphalt, and when processed and compacted, it makes a good road-base. The basalt is highly fractured, containing both cooling fractures and tectonic fractures (parallel to the faults shown in Figure 3). Some of the tectonic fractures have been mineralized with quartz, calcite and barite. The fractures form pore-space for groundwater and the basalt under eastern portions of the parcel may form an aquifer that could yield potable water for both domestic and agricultural use.

Glacial soils on the traprock ridges are generally thin, especially on the steeper slopes. Thin soils may require excavation into the bedrock in order to develop the parcels. Utility trenches and building basements, foundations, and footings may require blasting in order to achieve proper grade. Because the basalt is a valuable resource, this reviewer recommends that the town monitor removal of traprock from the site to ensure that a small-scale mining operation does not develop (unless specifically approved) to off-set some of the construction costs.

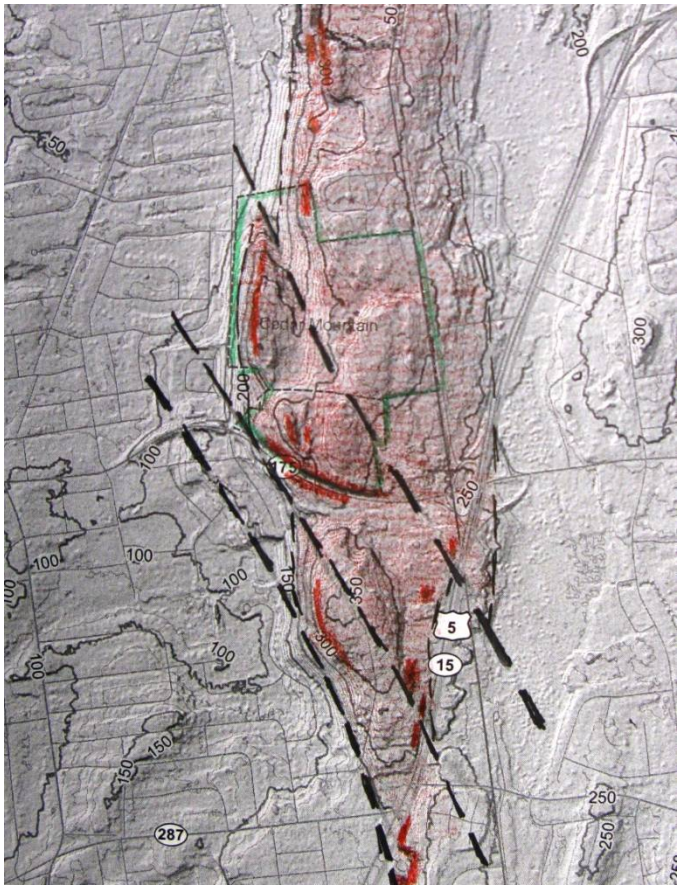
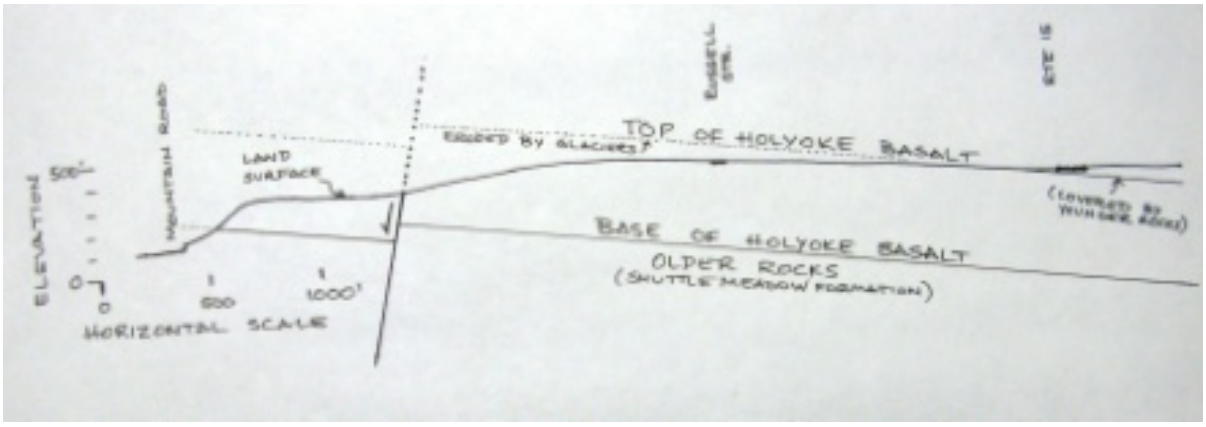


Figure 2. Geologic sketch map showing area (light red) underlain by Holyoke Basalt (dark red indicates areas of outcrop). Thin dashed likes mark top (on east) and base (on west) of Holyoke Basalt. Heavy dark lines indicate faults. The faults probably extend farther than shown but field evidence to make the extensions is covered by soil. Width of map about 1.5 miles.

Geologic cross section (below) showing Holyoke basalt tilted toward the east. This cross-section shows what the layers would look like if an imaginary E-W oriented trench were dug across the ridge through the middle of the parcel. The Holyoke Basalt layers has been cut by a fault causing the west side to drop downward. Notice that top of basalt has been eroded by Ice Age glaciers.



During the last Ice Age glaciers scraped across the surface of the basalt. Rocks frozen into the base of the glacial ice gouged the underlying bedrock and left glacial scratches on the rock. The scratches, called striations by geologists, record the direction of ice movement when it was thick enough to flow. In this area the ice moved toward the southwest (see Stone and others, 2005). Post glacial weathering has obliterated most of the glacial striations on the parcels, but faint striations may still be found (Figure 4).

Figure 4. Faint glacial striations tread diagonally across the rock. Image by Amanda Fargo-Johnson.

The amphitheater like valley (Figure 5) just north of the boundary between the Marcap and Balf parcels is interesting. Most of the valley has characteristics of modern stream valleys, but this one does not have a stream currently flowing through it that could have caused the erosion. The stream valley was likely excavated by a glacial melt-water stream. The head of the stream is abrupt at the amphitheater-like southern end. This reviewer suggests that meltwater flowing on the surface of the glacier found a fracture through the ice and fell through the ice. It therefore began eroding the underlying rock at by creating a plunge-pool at the amphitheater.

Figure 5. Amphitheater like area near boundary between two parcels, at head of unnamed, north-flowing stream. Stream flow is downward toward the left. This image shows only the eastern side of the amphitheater. Image by Amanda Fargo-Johnson.

References:

Bell, Michael, 1985, *The Face of Connecticut.* State Geological and Natural History Survey, Bull. 110, 196p.

Drzewiecki, P.A, Schroeder, T., Steinen, R.P., Thomas, M., Milardo, J., PePan, M., Beiler, K., and Dwyer,III, A. (in prep) The Bedrock Geology of the Hartford South Quadrangle. CT State Geol. Survey, Open File Rpt. #__.

LeTourneau, P.M., 2008, Traprock ridgelands: the environmental geography of threatened landscapes of the Connecticut Valley: Guidebook to Field Trips in MA and adjacent regions of CT and NY. 100th New England Intercollegiate Geological Conference, p.257-306.

Stone, J.R., Schafer, J.P., London, E.H., DiGiacomo-Cohen, M.L., Lewis, R.S., and Thompson, W.B., 2005, Quaternary Geologic Map of Connecticut and Long Island Sound Basin (1:125,000). U.S. Geol. Surv. Sci. Invest. Map # 2784.

Conservation District Review

The following are general comments and recommendations regarding the proposed 73.3 acre Newington Walk subdivision on Russell Road, Newington, CT. Activities proposed include the development of 64 residential building lots; four subdivision roads and cul-de-sacs; the filling and relocation of one vernal pool; five detention structures; a road drainage system including catch basin hoods, catch basin sumps and hydrodynamic separators; associated utilities; and the preservation of approximately 50% of the site as open space.

Comments in this report are based on a review of:

- a series of site plans (81 sheets) entitled "Town of Newington Planning & Zoning & Inland Wetlands & Watercourses Submission, Toll Brothers, Inc., Newington Walk, Russell Road, Newington, CT" prepared by B.L. Companies and dated April 5, 2011 rev. July 25, 2011
- an informational packet prepared by Connecticut Environmental Review Team Program dated June 24, 2011
- a narrative submitted to the Town of Newington Inland Wetland and Watercourse Commission prepared by B.L. Companies and dated April 5, 2011
- a wetland assessment prepared by Jodie Chase, Ecologist, and dated April 21, 2011
- a herpetological assessment prepared by Dru Associates, Inc. and dated July 2011
- a site visit conducted on June 30, 2011

The comments below are advisory in nature and are intended to assist municipal land use commissioners in their charge.

Current Site Conditions

The proposed development site consists entirely of undeveloped wooded uplands and wetlands. The upland woods are gently rolling with rock outcrops and contain a system of trails. The canopy is nearly fully closed leading to a sparse understory. Deer browse may also be inhibiting understory growth. Observed trees include red maple; white ash; pin, white and red oaks; shagbark hickory; and white pine. The understory contained sweet pepperbush, Japanese barberry, maple-leafed viburnum, poison ivy, highbush blueberry and jack-in-the-pulpit. To the western portion of the property is the Cedar Mountain Traprock Ridgeline. The term traprock mountain or ridge is used to describe elevated landscape features made of the rock known as basalt and its close relatives.

A portion of the runoff from the ridgeline is directed westerly and off the property while the eastern side of the ridgeline appears to drain into a watercourse and wetland system referred to as Wetland 1 in the wetlands assessment by Jodie Chase. The wetland is also fed by runoff from the western slope of the high elevations in the central portion of the property. Both the canopy and shrub layer is relatively open with low biodiversity.

Wetland 1 contained pockets of standing water several inches deep at the time of the site visit. The small defined watercourse was flowing at a depth of a few inches. The central wetland, Wetland 2, is similar in nature to Wetland 1 with a denser and more varied understory. Wetland 3 is a small, classic vernal pool to the northeast of the property.

The site consists of wooded upland, including traprock ridgeline, and wetlands with slopes ranging from 0-45%. Upland and wetland soils shown in the project area on the Soil Survey Maps for Middlesex County (USDA/Soil Conservation Service) are silt loams. These soil survey maps are at a 1:15,840 scale, which means that the smallest area delineated is approximately 2.5 acres. For this reason, much of the wetlands on site are listed as having upland soils.

Upland soils in the western portion of the parcel include Holyoke-Rock outcrop complex (HZE) which is comprised of approximately 50% Holyoke silt loam, 30% rock outcrop and 20% other soils; and Cheshire-Holyoke complex (CsC) which is comprised of approximately 45% Cheshire very stony silt loam, 30% Holyoke very stony silt loam and 25% other soils. To the east, the soils are Wethersfield loam. While the soil survey map shows the wetland soil Wilbraham silt loam on site, the mapped wetland soils' location does not correspond with the on the ground delineations.

Stormwater Management Recommendations

1. The site development plans call for seeding the detention basins with both an erosion control seed mix designed for slopes as well as a wetland seed mix. At the June 30, 2011 site visit, it was confirmed by the project engineer that the basins will have dry bottoms. For this reason, a wetland seed mix is not recommended. A seed mix such as the New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites from New England Wetland Plants (www.newp.com) is much more appropriate and could be used throughout the whole basin.
2. The proposed development is clustered in a manner consistent with Low Impact Development (LID) practices. If consistent with local regulations, additional LID techniques should be implemented. Appropriate BMPs may include pervious driveways; flush curbs directing runoff to bioswales or infiltration trenches; rain gardens, perhaps in the cul-de-sacs or in final landscaped yards; and tree box filters. Additionally, LID techniques can be used in the landscaping of the individual homes to manage roof, lawn and driveway runoff. Developments constructed in this manner generally sell for more and maintain their resale value better than traditional homes due to lower maintenance and improved aesthetics. It is frequently less expensive to develop land using LID techniques as fewer mechanical BMPs are required.
3. A detention basin is proposed directly adjacent to the central Wetland 2 with an outlet pipe discharging directly into the wetland which has been found to provide vernal pool and breeding habitat for a large amphibious population. Great attention should be paid to ensure that stormwater is appropriately treated, even during significant or intense storm event, to prevent sedimentation of the wetland as well

as the introduction of other contaminants like hydrocarbons, nitrogen and phosphorous. Nitrogen and phosphorous can encourage excessive vegetative and algal growth, thereby reducing the habitat available to amphibians that depend on the pools of open water to reproduce. Sediment can fill in portions of the wetland and also reduce the available breeding habitat. As opposed to a traditional dry-bottom detention basin, it may be beneficial to consider a constructed wetland in its place.

Erosion and Sediment Control Recommendations

The E&S control plan should be developed and implemented in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Controls (2002 Guidelines).

1. The amount and duration that land disturbed should be kept to a minimum during the construction of the subdivision road, driveways, stormwater management structures, and residential lots. Phasing should be used to divide the project into distinct sections each with its own construction sequence. Each phase should be relatively independent, and should be completed before the next phase is initiated.
2. A single silt fence encompassing the entire area to be developed is insufficient erosion and sedimentation control. Silt fence should be installed surrounding each distinct section of phasing.
3. Construction sequencing is provided for the roadways and stormwater facilities only. Construction sequencing should be provided for the development of individual building lots as well.
4. All wetlands flagging should be re-established prior to beginning clearing, grubbing, or grading activities.
5. Perpendicular wings should be specified for geotextile silt fence to break the velocity of water flowing along the fence where it crosses contours. In general, for slopes of 5:1 or flatter perpendicular wings are placed every 100 feet; for 3:1 to 5:1 slopes every 75 feet; and for 2:1 to 3:1 slopes every 50 feet (per 2002 Guidelines).
6. If the individual lots and driveways will be constructed after the subdivision road is completed (and sedimentation protection is removed from the road drainage system), construction entrance anti-tracking pads should be specified for each individual or shared driveway where they intersect with the subdivision road.
7. A method to intercept or divert potential erosive flows or sediment from driveways that grade towards the subdivision road should be evaluated. Measures should be provided to control material from the driveway construction from getting onto the subdivision road (especially after it is completed and sedimentation protection is removed from the road drainage system).
8. Sedimentation barriers or filters (geotextile silt fence or hay bales) should be used on the downslope sides of driveways, parking areas, and houses to protect undisturbed areas and remaining vegetation from sedimentation. Measures should be provided to control sediment until the area is stabilized.

9. The site development plans should detail the location, size, maintenance requirements and redevelopment strategies of the temporary sediment traps.
10. Temporary sediment traps (contributing drainage area < 5 acres) or basins (contributing drainage area > 5 acres) are shown on the site development plans in the same location as future permanent detention basins. Sediment traps should not be located in the same location as future detention basins as the sediment could clog and cement the underlying soils, leading to decreased infiltration and function. Stormwater management BMPs should be protected from sediment until they are ready to come on-line. If a sediment impounding trap or basin will be implemented in the same location as future detention basins, sediment removal and functional improvement strategies should be detailed for each structure.
11. The E&S control plan should specify:
    a) Temporary seeding or non-vegetated protection of all exposed soils and slopes will be initiated within the first 7-days of suspending work in any area that will be left longer than 30 days.
    b) Non-living soil protection measures to be used when conditions prohibit the use of vegetative establishment.
    c) Organic matter content of topsoil should be between 6-20%.
    d) Use of surface roughening as necessary to ensure topsoil bonds to disturbed ground.
    e) The appropriate location for disposing material removed during maintenance of sediment impoundments, barriers, or filters. Material should not be deposited in wetlands or in exposed areas.
    f) Dust control chemicals (other than water) should not be used in wetland crossing areas on in the 100-foot upland review buffer.
    g) Maintenance requirements of permanent E&S control measures. This should include some method of ensuring the Home Owners Association will be required to maintain the “soft” BMPs.
    h) The name and contact information of the person or organization responsible for maintaining the permanent E&S control measures.

Wetlands and Watercourses Recommendations

1. The herpetological assessment conducted by Dru Associates, Inc. on the vernal pool referred to as Wetland or Basin 3 states that “Very few aquatic invertebrates were observed in this wetland. Some fingernail clams were found in this wetland pocket.” On the June 30, 2011 site visit, fingernails clams were extremely abundant. While the report also states that no wood frog egg masses were observed, one juvenile wood frog, and one juvenile American toad, was observed within several hundred feet of the pool. A second juvenile wood frog was observed closer to the central wetland.
2. No information has been provided regarding the construction and maintenance of the mitigation vernal pool. Important factors and details omitted include: potential conflicts in use such as dirtbikes or vandals and techniques to protect pool; depth of

excavation and anticipated water depth; soil permeability; watershed size; groundwater elevation; methods to achieve an adequate wet-dry cycle to allow ponded water to hold during the wet season and to dry up in the summer. It is imperative that this information be provided or it is extremely unlikely that the vernal pool will succeed. A detailed plan for construction should be provided and thoroughly evaluated.

3. The proposed development plans call for the destruction of the vernal pool referred to as Wetland 3 and re-creation of said vernal pool in the south central portion of the property. This brings up several issues; the first of which is that vernal pool construction is still a nascent technique. While there are guides available (A Guide to Creating Vernal Pools, USDA Forest Service, http://herpcenter.ipfw.edu/outreach/VernalPonds/VernalPondGuide.pdf), research shows that the results are inconsistent (Vernal Pool Construction Monitoring Methods and Habitat Replacement Evaluation, U.S. Fish and Wildlife Service, http://www.vernalpools.org/proceedings/deweese.pdf). This may be due to varying construction techniques, poor siting considerations or amphibians' marked fidelity to their natal pool.
4. It appears that the proposed constructed vernal pool is not sited appropriately. It is to be located on a flatter portion of a slope. While the natural vernal pool's contributing watershed is relatively small, this location will provide for a significantly smaller watershed. This increases the likelihood that the pool will dry before the metamorphic amphibians have a chance to mature and exit the pool. No information has been provided on the size of the proposed watershed.
5. It is important to locate a constructed vernal pool in appropriate soils with low permeability or use a geotextile fabric to facilitate ponded water. No information has been provided on the soils at the proposed location.
6. As proposed, the replacement vernal pool is to be constructed on land to be deeded to the Town of Newington as open space. No information has been provided for a monitoring plan nor who will be responsible for said monitoring and improvements. Once again, it is imperative that this information be provided. A explicit monitoring plan should be submitted detailing everyone's responsibility. As this vernal pool is proposed as mitigation, the applicant should be responsible for the monitoring and any additional work required to ensure the pool is functioning properly. Constructed vernal pools can take upwards of five years to "heal" from construction. The suggested plan should require five years of monitoring or until data shows the site has stabilized and is functioning.
7. Some of the proposed lots extend all the way to the hundred foot buffer to the central Wetland 2. The applicant should provide some manner in which to prevent encroachment by the homeowners after the property is sold. One suggestion is to install permanent concrete bounds along the property line instead of solely in the corner.

Stormwater Management Review

Runoff from construction and post-construction activities has the potential to pollute wetlands and watercourses downstream of stormwater discharge locations. During the period of construction, the discharge of sediment, particularly during significant storm events, could occur even when non-structural and structural erosion and sediment controls are installed. Post construction, the increase in the quantity and peak flow of stormwater runoff, could contribute to downstream flooding and erosion problems. Additionally, the quality of stormwater runoff (post construction) could be degraded by the presence of pollutants such as total suspended solids, nutrients, and pesticides from streets and yards.

In order to minimize the pollution potential from stormwater, the following is a list of recommended management measures:

- Establish setback or buffer areas (50 feet, minimally, to 100 feet, preferably) within upland areas that are adjacent to wetlands or watercourses.
- Promote sheet flow to the maximum extent possible, by eliminating curbs, utilizing pervious pavement, installing vegetative swales, and employing level spreaders.
- Infiltrate stormwater discharges to the maximum extent possible to promote groundwater recharge and lessen the quantity of runoff needing treatment.
- Install structural stormwater management measures to treat stormwater runoff during construction. Such measures include, but are not limited to, earthen dikes/ diversions, sediment traps, check dams, level spreaders, gabions, temporary or permanent sediment basins and structures.
- Prepare a stormwater management plan, which considers both quantity and quality of runoff for the entire development site, rather than piecemeal during development of each lot.

The construction of the Toll Brothers Newington Subdivision, ("site") will be regulated by the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("the construction general permit"). In accordance with Sections 4(c) and 6(b)(6) of the construction general permit, respectively, a registration form must be filed and a Pollution Control Plan ("PCP") must be prepared and implemented. The following review comments are based upon the requirements of the construction general permit.

Prior to submitting a registration form to the DEP, a review to verify compliance with State and National Historic Preservation statutes, regulation and policies and Endangered and Threatened Species Statutes must be conducted. Please contact the Historic Commission at 860-566-3005 for the historic preservation review. Endangered & Threatened species Information is available online at http://www.dep.state.ct.us/cgnhs/nddb/nddbpdfs.asp. If endangered/ threatened species are present in the project area, please contact Dawn McKay of the DEEP Bureau of

Natural Resources at 860-424-3592. The project will not be permitted under the construction general permit until compliance with these regulations/ statues is achieved.

The owner or developer must register the site with the Department of Energy and Environmental Protection ("DEEP") thirty days prior to the commencement of construction activity. The Pollution Control Plan ("the PCP") must be prepared and kept on site during the entire life of the construction project for sites with soil disturbance between 5-10 acres. The PCP is required to be submitted to the DEEP with the registration form for sites with soil disturbance greater than 10 acres.

The PCP must include a site map as described in Section 6(b)(6)(A) of the construction general permit and a copy of the erosion and sedimentation (E & S) control plan for the site. An E & S plan which has been approved by the Town of Newington in conjunction with the DEEP Inland Water Resources Division (IWRD) and the local Soil and Water Conservation District may be included in the PCP. The PCP and site map must include specifics on controls that will be used during each phase of construction, pursuant to Section 6(b)(6)(B) of the construction general permit. Specific site maps and controls must be described in the PCP, as well as construction details for each control used. The construction general permit requires that the plan shall ensure and demonstrate compliance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control ("the guidelines"). The Plan must be flexible to account for adjustment of controls as necessary to meet field conditions.

In order to reduce erosion potential, DEEP recommends that construction activities be phased to the maximum extent possible so that unstable areas are minimized. The construction general permit also requires that any inactive area left disturbed for over 7 days be temporarily stabilized. Areas left disturbed over 30 days must be temporarily seeded. The PCP must specify a stabilization plan (within and outside of the seeding season) which includes such measures as seeding, applying hay/ mulch, and, for slopes 3:1 and steeper, installing an appropriate grade of erosion control matting or a spray-on "soil cement" type of armor mulch.

The PCP must demonstrate that the post-construction stormwater treatment system has been designed with a goal of 80% removal of total suspended solids, pursuant to Section 6(b)(6)(C)(iii)(1) of the construction general permit. Such measures may include, but are not limited to, stormwater detention basins, stormwater retention basins, swirl concentrator technology structures (such as Vortechnics, Downstream Defender, Stormceptor, Stormtreat, or similar), vegetated swales, deep catch basin sumps (4'+) and stormwater infiltration devices. The PCP must also discuss the installation of velocity dissipation devices at all discharge locations as a post construction stormwater management measure. A detail of proposed measures must be provided. If site conditions allow, DEEP recommends the installation of retention or detention basins because of maintenance, cost, and efficiency considerations. The elimination of point sources through the use of level spreaders or curb elimination is also recommended.

The construction general permit (Section 6(b)(6)(D)) requires inspections of all areas at least once every seven calendar days and after every storm of 0.1 inches or greater. The PCP must also allow for the inspector to require additional control measures if the inspection finds them necessary, and should note the qualifications of personnel doing the inspections. Additionally, the PCP must include monthly inspections of stabilized areas for at least three months following stabilization.

The following are comments specific to review of the erosion and sediment control plans for the site, and a site walk conducted on July 13, 2011:

- Special care should be used throughout the construction of the Subdivision. The site has some steep slopes and the soils are highly erodible. It is imperative that all applicable erosion and sediment controls be properly placed and maintained for the duration of the project and inspection schedules be strictly adhered to.

- During construction, a sediment trap and/ or a sediment basin with the ability to store 134 cubic yards of water storage per acre drained must be installed for drainage areas greater than 2 acres. For drainage areas where more than 5 acres is disturbed at any time, a sediment basin with an outlet engineered to remove sediment must be installed. The sediment forebays should be sized for 10% of the water quality volume with a 2:1 length to width ratio and designed in accordance with the guidelines specified in the 2004 CT Stormwater Quality Manual. In order to promote velocity reduction and solids settling, DEP recommends constructing the forebay berms with appropriate size of riprap with a core of stone (DOT #3).

- The detention basin on the western boundary of the subdivision, (detailed on sheet EC-5, “old plans”) shows a level spreader lip that discharges to a slope of greater than 10%. This is not consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control as those guidelines mandate that level spreaders discharge to a slope of no greater than 5%. DEEP is aware of instances where level spreaders discharging to slopes greater than 5% have failed causing erosive releases of sediments into wetlands and watercourses. A discharge of sediment to a wetland or watercourse without a permit would be a violation of Sections 22a-430 and 22a-42a(c)(1) of the Connecticut General Statutes and may require remedial action.

- Place all sediment clean outs from sumps, silt fencing and basins on upland soils.

In order to reduce the impact of development and address stormwater quality issues, the Department strongly encourages the use of Low Impact Development (LID) measures. LID is a site design strategy intended to maintain or replicate predevelopment hydrology through the use of small-scale controls integrated throughout the site to manage stormwater runoff as close to its source as possible. Infiltration of stormwater through LID helps to remove sediments, nutrients, heavy metals, and other types of pollutants from runoff.

Key strategies for effective LID include: infiltrating, filtering, and storing as much stormwater as feasible, managing stormwater close to where the rain/snow falls, managing stormwater at multiple locations throughout the landscape, conserving and restoring natural vegetation and soils, preserving open space and minimizing land disturbance, designing the site to minimize impervious surfaces, and providing for maintenance and education. Water quality and quantity benefits are maximized when multiple techniques are grouped together. In areas of compacted and/or possibly contaminated soils, soil suitability should be further investigated prior to selecting optimum treatment and/or remediation measures. Where soil conditions permit, we typically recommend the utilization of one, or a combination of, the following measures, some of which have been touched on previously:

- the use of pervious pavement or grid pavers, or impervious pavement without curbs or with notched curbs to direct runoff to properly designed and installed infiltration areas;
- the use of vegetated swales, tree box filters, and/or infiltration islands to infiltrate and treat stormwater runoff (from building roofs and roads);
- the minimization of access road widths and parking lot areas to the maximum extent possible to reduce the area of impervious surface;
- the use of dry wells to manage runoff from building roofs;
- the installation of rainwater harvesting systems to capture stormwater from building roofs for the purpose of reuse for irrigation (i.e. - rain barrels for residential use and cisterns for larger developments);
- the use of residential rain gardens to manage runoff from roofs and driveways;
- the use of vegetated roofs (green roofs) to detain, absorb, and reduce the volume of roof runoff; and
- providing for pollution prevention measures to reduce the introduction of pollutants to the environment.

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Watershed Perspective

(Report not yet received.)

Landscape Ecologist Review

Recommended Vernal Pool Best Development Practices for Obligate Vernal Pool Species

Background

- Obligate vernal pool species recognized in Connecticut are fairy shrimp and the following amphibians: wood frogs, spotted salamanders, marbled salamanders, Jefferson salamanders, and eastern spadefoot toads. While individuals of these species may successfully breed in other habitats, they are called *obligate* species because the long-term survival of their populations is considered dependent on having the safe habitat provided by vernal pools which dry up in the summer and thus protect the fairy shrimp and amphibian larvae from being eaten by predatory fish.

- The typical 50-100 ft. (15-30 meter) regulatory buffers around vernal pools protect water quality for amphibian breeding and for the aquatic larval stage, but they do not provide enough habitat to maintain healthy populations of obligate amphibians such as wood frogs and spotted salamanders that spend their adult lives in upland habitat

- In a study that looked at data for 32 amphibian species, the core terrestrial habitat (the area encompassing 95% of the adults in a population) extended on average 159-290 meters (522 – 951 ft.) from the breeding site (cited in Harper *et al.* 2008).

Generic Buffer Description

The following description and recommendations are taken from the technical paper by Aram J.K. Calhoun and Michael W. Klemens (2002) entitled "Best Development Practices: Conserving pool-breeding amphibian in residential and commercial developments in the northeastern United States."

Their description of amphibian conservation habitat involves a 750 ft. buffer zone going out from the edge of the breeding pool and including:

- **the "pool envelope" which is a 100 foot upland buffer** around the pool for the purpose of protecting water quality and providing undisturbed habitat for amphibians when they are first transformed from the aquatic larval stage to the terrestrial juvenile stage and when they later return to the pool as adults to breed
- **"critical terrestrial habitat" which is the additional upland buffer area between 100 ft. from the pool and 750 ft from the pool** that (along with the pool envelope) provides the adult salamanders and wood frogs a place to live when they are not breeding.

Buffer Recommendations for Northeastern Vernal Pools

Recognizing that development will happen in undeveloped areas regardless of whether or not vernal pools are present, Calhoun and Klemens (2002) recommend the following:

A - Vernal pool itself -- no disturbance; do not use for stormwater detention

B - Pool envelope (100 ft. buffer area) – no roads or development

C - Critical terrestrial habitat area (area beginning at the edge of the 100 ft. buffer and extending to 750 ft. from the pool edge)

1- no detention or biofiltration ponds within 750 ft. of a vernal pool (because they serve as "decoy wetlands" whose water quality and variations in quantity do not provide good breeding habitat).

2 - less than 25% of the area should be developed; and, development should be subject to a variety of limitations including:

a - maintain water inputs to the vernal pool watershed at pre-construction level. Avoid causing increases or decreases in water levels
b - do construction activities outside of times when amphibians are moving (avoid work during early spring breeding and late summer dispersal)
c - use elevated roadways over places that may be important amphibian migratory routes (e.g., low areas, streams, ravines)
d - cluster development to reduce amount of roadway needed and place housing as far from vernal pools as possible
e - no roads with projected traffic volumes exceeding 5-10 cars/hour
f - use Cape Cod-style curbing or no curbing
g - use oversize square box culverts (2 ft. wide * 3 ft high) near wetlands and known amphibian migration routes to facilitate amphibian movement under roads (spaced at 20 ft intervals with curbing used to channel amphibians toward the culverts)
h - minimize use of silt fencing; and where needed, stagger silt fencing with 20 ft. breaks so migrating amphibians can get through; and, remove silt fencing no later than 30 days following final stabilization
i - additional limitations listed in Calhoun and Klemens (2002) on pages 18-26.

Without limitations on development, Calhoun and Klemens (2002) report large population declines (53% loss and 40% loss, respectively) in spotted salamander and wood frog populations within four years following development of 25% of the area within 1000 ft. of a vernal pool. Calhoun and Klemens believe that the above suggested limitations within the critical terrestrial habitat area will likely lessen such losses.

Town-wide Vernal Pool Inventory to Help in Planning Conservation and Development

Calhoun and Klemens (2002) make the point that not all vernal pools are equal in conservation value and that it is not to be expected that a town protect every vernal pool. They recommend that towns inventory all their vernal pools and prioritize them, generally focusing conservation efforts on ecologically significant pools with intact critical terrestrial habitat and long-term conservation opportunities.

The ecological significance of a pool has two components:

1. Species found in the pool
2. The condition of the critical terrestrial habitat.

The large central wetland (Basin 2) in the July 2011 Herpetological Assessment ranks Tier I (highest) by the criteria of Calhoun and Klemens (2002). With 154 spotted salamander eggs masses and 23 wood frog egg masses, it presumably had a total 25 egg masses (regardless of species) present in the pool by the conclusion of the breeding season. It also presumably would meet the revised criteria for southern New England of 40-60 egg masses suggested by Calhoun, Miller, and Klemens (2004). In addition to meeting the within-pool biological criteria, the large central wetland far exceeds the Tier I terrestrial habitat criteria.

The reviewer does not know how Basin 2 compares to other areas within the Town, but it is clear that few undeveloped areas are large and also have the presence of traprock ridge habitat in the same tract. Some consideration should be given to acquisition of the parcel as Town open space if possible.

Comments on July 2011 Herpetological Assessment (Dru Associates)

Flawed discussion of conservation needs for spotted salamanders

In the July 2011 Herpetological Assessment, the discussion of conservation needs for spotted salamanders is inaccurate for several reasons. First, in Table 4 (Estimates of modeled conservation needs for spotted salamanders at Newington Walk, CT), the acreages for a given pond buffer radius appear to have been calculated using the formula for a circle (treating the pond as a point). This grossly underestimates the acreages that would be included within buffers beginning at the edge of the large central wetland complex.

Much more important is that the discussion of buffer distances and areas in relation to carrying capacities represents an inappropriate use of numbers that were task-specific to the population model of Harper et al. (2008). Therefore, the conclusions about (radii) buffer distances and carrying capacities at Newington Walk (pp. 4-5) are unwarranted.

Explanation of Harper et al. (2008)

Harper *et al.* (2008) is a scientific paper by E.B. Harper, T.A.G. Rittenhouse, and R.D. Semlitsch entitled "Demographic Consequences of Terrestrial Habitat Loss for Pool-breeding Amphibians: Predicting Extinction Risks Associated with Inadequate Size of Buffer Zones." It was published in 2008 in Conservation Biology, Vol. 22, No. 5, pp. 1205-1215.

The model described in Harper *et al.* is a computer simulation. It was designed to explore what happens to wood frog and spotted salamander population numbers after the population has lost different proportions of the habitat it needs for the adult stage to survive. The model provided data to look at the risk of extinction at a breeding site over a 10-20 generation time-span.

It is very important to realize that the information presented in Table 3 of Harper *et al.* involving radii and modeled carrying capacities does not represent one-size-fits-all "habitat requirements" for real populations. Rather, Table 3 is an explanation of the set of numbers Harper *et al.* put together specifically for use in the habitat part of their population simulation model.

In the computer simulation of Harper et al., the carrying capacities for distances less than 1000 meters are numbers that were calculated to make this particular model address the questions the authors were asking about what happens to the stability of a population when part of the population cannot survive (because it no longer has upland habitat). In the running of the model, they began with a set population number, and then after the buffer area is reduced to a given radius, the population is not allowed to exceed the estimated carrying capacity assigned to that distance. They then explored the differences in the long-term risk of pond population extinction under different scenarios.

Potential Conservation Property

Taking an alternative viewpoint, the 73 acre tract in which the Newington Walk subdivision is proposed represents an opportunity for the Town of Newington to take steps to acquire a pleasant and unusual piece of property. Not many tracts of this size and habitat diversity exist, and with continued development in the area, all opportunities are likely soon to be lost. Unlike the situation in some forests, this large, unfragmented forest tract does not have a highly fragmented ownership (which would make acquisition of unfragmented forest habitat difficult).

Although there are no rare species reported for the tract, it has good habitat values:
- comparatively large size
- not a lot of open edge relative to forest (which is good for forest interior birds)
- no inholdings
- it has been forested for a long time, so it does not have the old fields that will become invasive plant tangles when mowing stops or cattle are removed
- wildlife access to multiple habitat types without having to cross active roads
- very productive vernal pool in eastern half of property (investigated by ERT) which currently is bordered by a good buffer of upland habitat
- large wetland/stream headwaters well to the west of the proposed development (not specifically investigated by ERT)
- scattered large trees (raptor habitat and when dead provide habitat for cavity nesting birds)
- trap rock ridge habitat (one of Connecticut's 12 key habitat types in which unusual plants and animals are likely to be found)

Recreational values are high:
- existing trail network is more extensive than maps indicate.
- most trails are in fairly good shape

- view of Newington and beyond from Cedar Mountain trail
- the vegetation would benefit from a reduction in the deer population – bow hunting might be encouraged with access controlled during certain time periods

Invasive Plants

In a site walk through the eastern half of the property, no major infestations of invasive plants were observed. Japanese Barberry was present.

There are a variety of invasive plant species on the edge of the trail up Cedar Mountain, but they are not dominating the site. Someone might wish to remove them.

Of most concern is the presence of Garlic Mustard on Old Highway (mostly on the south side of the road) near its junction with Mountain Road. This is not within the proposed development area, but it has the potential to spread into the tract where it can grow in the shade and will outcompete native plants. To prevent impacts on the Cedar Mountain Trail and elsewhere, control efforts (perhaps spearheaded by a volunteer group with permission of the landowners) should begin as soon as possible.

Garlic Mustard usually is a biennial. It shoots up a flowering stalk in its second year and then dies after it sets seed. The foliage smells like garlic. For more information on identification:

ftp://ftp-fc.sc.egov.usda.gov/CT/invasives/GarlicMustardInvasora-10-14-10.pdf
ftp://ftp-fc.sc.egov.usda.gov/CT/invasives/garlic_mustard.pdf

Repeated hand-pulling is the best way to control small infestations (and prevent them from turning into large infestations). Plants may be pulled at any time of the year, though they come up easiest in spring when the ground is moist. It is important to get the kinked root out; otherwise, the plant will re-sprout. Plants that are flowering or that have seed pods should be bagged and disposed of as garbage, not put into mulch/compost. When flowering plants are pulled and left on the ground, they often have enough life left in them to go ahead and set seeds. The seeds are long-lived in the ground, so annual follow-up control should be planned for seven or more years after a population appears to be controlled.

Wildlife Resources Review

Background

The Newington Open Space proposed subdivision site is 73.73 acres, located west of Russell Road, east of Mountain Road and south of Cedar Crest Hospital and contains mature deciduous forest, wetlands, and traprock ridge. The development plan includes 64 housing lots proposed for the eastern half of the property, four streets, five detention ponds and public utilities including water and sewer.

The request for an environmental review came from the Town of Newington in order to assist decision making regarding the environmental impacts of the proposed development and potential mitigation.

A site walk was conducted on June 30, 2011 and included the forested portion, the eastern and central wetlands and the traprock ridgeline. The bulk of the property is mature deciduous forest dominated by oaks and maples, with a sparse to moderate understory. There are three wetlands on the property including a north-south running watercourse in the western portion of the property, a large pool in the central portion and a smaller pool in the northeastern portion, which is proposed to be filled. The traprock ridgeline is found west of the westernmost wetland and is to remain as open space.

Existing Wildlife Habitat

Forested Uplands:

The forested areas, located in the eastern portion of the property are dominated by oaks and maples. Throughout this area, the canopy is mostly closed and the understory sparse, with invasive barberry present. Footpath trails are found throughout this portion of the property. The forested area is low in vegetative diversity and the sparse understory does not provide much beneficial structural diversity. However, forested areas in general are valuable to wildlife, providing food (berries, buds, acorns, seeds, catkins), cover, nesting and roosting places, and denning sites. Trees, both living and dead, serve as a home for a variety of insects, which, in turn, are eaten by many species of birds, including woodpeckers, warblers and nuthatches. Other wildlife species found in this habitat type include barred owl, grey squirrel, eastern chipmunk, white-footed mouse, redback salamander and eastern garter snakes.

Wetlands:

There are three wetlands on the property; a north-south running watercourse that was not visited during the site walk, and two ponds found in the northeastern and central portion of the property. Many species of reptiles and amphibians, such as the gray tree frog and the spotted salamander use wetlands for breeding and spend the balance of their time in the adjacent forested uplands. Many bird species use forested wetlands at varying times of the year for breeding, feeding and shelter. Examples include northern water thrush,

common yellowthroat and eastern phoebe. Other wildlife likely utilizing this habitat for food and cover are raccoons, wood frogs, spring peepers and northern water snakes.

The northeastern wetland is an isolated vernal pool of approximately 1,720 square feet. Vernal pools are small, temporary bodies of standing fresh water that are typically filled in spring and dry out most years. There is no inlet or outlet, and therefore fish are not found in these pools. Vernal pools are important to the survival of many species of reptiles and amphibians that utilize wetlands for reproduction. For some species, such as the wood frog (during the site walk, an adult was observed in the pond and a juvenile was observed in the forest *(see photo below left)*) and the spotted salamander, vernal pools are critical because it is the only type of wetland in which they will successfully breed. These species are also dependent on the presence of healthy forested uplands surrounding the vernal pool, because, when not breeding, this is where they spend the balance of their life cycle. Spotted salamander egg masses have been reported for this pond (Dru Associates, Inc., Herpetological Assessment). The development plans call for this wetland to be filled in order to accommodate housing lots.

The central wetland is a broad, horseshoe-shaped, pond-type wetland with no apparent inlet or outlet for water. Shrubby vegetative growth is found within the standing water, including spicebush and highbush blueberry. Vegetative diversity such as this provides valuable cover, nesting sites, roosting sites and, in many cases, abundant food for wildlife. During the site visit, fingernail clams *(see photo above right)* were located in the soil at the edge of this wetland, indicating it may function as vernal pool habitat. Robust populations of spotted salamanders and large populations of wood frogs have been reported at this site (Dru Associates, Inc., Herpetological Assessment). Site plans show housing lots #39-42 to be built east of this wetland, with a 100 foot buffer between the edge of the wetland and the lots.

Traprock Ridge:

Traprock ridges were formed by a combination of volcanic activity and erosion. Multiple lava flows covered the Connecticut Valley floor, cooling and hardening into basalt, or traprock, each flow was then covered by eroding sand and mud. Groundwater eventually cemented the layer of sediment into brownstone, resulting in layers of traprock and

brownstone, which eventually fractured. After volcanic activity stopped, bedrock began to erode, washing away much of the brownstone, but traprock erodes much more slowly, leaving those layers as long ridgebacks above the surrounding area. Traprock ridges are important habitat for many reptile and amphibian species species including Jefferson salamander and wood turtle (species of Greatest Conservation Need) and spotted salamander, as well as species such as bobcat, and additional species of Greatest Conservation Need, including peregrine falcon (also see Natural Diversity Data Base section), yellow-rumped warbler, and common raven. The latter two species as well as an adult bald eagle have been observed on Cedar Mountain, as reported to the Connecticut Ornithological Association's listserve.

Impacts

The original site plan called for developing approximately 50% of the property, all in the eastern portion of the property, leaving the remaining western portion as open space. The revised plan reduces the number of housing lots from 71 to 64, with an additional 4-5 acres added to the open space for a total of 44.84 acres of open space. The plan proposes to fill the northeastern wetland and build housing lots, and to leave a 100 foot buffer between the eastern edge of the central wetland and proposed housing lots. The western wetland and the traprock ridgeline are not to be developed.

Development in the upland will result in outright habitat loss, affecting and changing the species composition of the upland area as lawn and pavement will replace the trees and shrubs that now serve as sources of food, cover and shelter.

Although the central and western wetlands are not to be developed and therefore will not be directly impacted, there will be significant indirect impacts to many wetland-dependent species, such as green frog, wood frog and spotted salamander, that also need adjacent upland to meet their habitat requirements. The adjacent upland habitat will be severely reduced and no longer be available for these species. Additionally, there will be degradation of the wetland area, due to runoff from the developed area, encroachment into the wetland area, and disturbance through human activity.

The proposed filling of the northeastern vernal pool will eliminate this outright as breeding and cover habitat for invertebrates and amphibians, and as a source of water for both upland and wetland species. At the time of this review, details are not available as to proposed mitigation of this loss.

Reducing Impacts

Currently, housing lots are planned for the eastern portion of the property. With the increased development in this area, the value of the entire site for wildlife will decrease. The only way to maintain the quality of the available habitat is to leave the property undeveloped. While any type of development will diminish the value of the habitat for

wildlife, changes in the layout and number of housing units can reduce these impacts. Filling the northeastern wetland can be avoided by shifting Traprock Way to the west, so that it runs NNW between the two wetlands, and the housing units proposed along the southern portion of this road (#11-15 and #85-87) should be removed from the plans. Additionally, lots 38-42 should remain undeveloped in order to increase the buffer along the eastern portion of the central wetland. Calhoun and Klemens (2002) recommend that the upland areas around breeding pools up to a distance of 750 feet be considered critical upland habitat, that at least 75% of that zone be kept undisturbed and that a partially closed-canopy stand be maintained.

Summary

The proposed project will replace approximately 50% of the existing upland habitat with residential housing, and require filling a functioning vernal pool, resulting in a direct loss of these habitat types. Development in the forested area will affect the number and composition of species found there. While no development is planned for the two western wetland areas, there are still potential impacts to the reptile and amphibian species that use the wetlands in conjunction with the adjacent uplands. Most reptile and amphibian species are not very mobile and cannot easily seek out suitable habitat elsewhere once disturbance has occurred. The Cedar Mountain Parcel is unique in that it contains traprock ridgeline, which is noted as one of Connecticut's 12 key habitat types in Connecticut's Comprehensive Wildlife Conservation Strategy. It is also surrounded by very highly developed areas and is therefore critical to wildlife as one of few local places that can still meet their cover, food and water needs, and may be important for birds as a resting stop during migration. The impacts to wildlife from the loss of approximately 50% of this habitat should be expected to be significant.

References

Calhoun, A.J.K. and M.W. Klemens. 2002. MCA Technical Paper No. 5. Best Development Practices (BDPs): Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States. Metropolitan Conservation Alliance, Wildlife Conservation Society. Bronx, New York.

Dru Associates, Inc. July, 2011. Herpetological Assessment. Glen Cove, New York.

The Natural Diversity Data Base

The Natural Diversity Data Base maps and files regarding the project area have been reviewed. According to our records the following extent population of species occurs within vicinity of the site:

Peregrine falcon (*Falco peregrinus)* – State listed threatened species

Though somewhat tolerable of human disturbance, the Peregrine falcon will be negatively affected if work occurs during their nesting season. If this species is present on the stie, the DEEP Wildlife Division recommends that work be done during the non-nesting season (June – March).

Natural Diversity Data Base information 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 & 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 populations of species and location of habits of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

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

Connecticut Department of Environmental Protection

Connecticut's Peregrine Falcon Story

The Fall and Rise of the Peregrine Falcon

The peregrine falcon was a regular nester in Connecticut through the early 1900s. Prior to the Migratory Bird Treaty Act of 1918 and the strengthening of collection regulations, hundreds of peregrine eggs and many adult specimens were collected in Connecticut and Massachusetts. Some live birds and eggs were collected for use in the sport of falconry. Many more eggs and specimens were added to private collections as part of a popular late nineteenth century hobby. Peregrine nesting activity in Connecticut declined through the 1920s and 1930s, and the last documented nesting occurred on the Travelers Tower in Hartford in the late 1940s.

Peregrine falcon populations declined rapidly between 1950 and 1965 throughout the United States and parts of Europe. In 1973, the American peregrine falcon was listed as endangered under the federal Endangered Species Act. By 1975, the entire population of peregrines in the eastern United States was considered to be extirpated (wiped out). This decline is directly attributed to the effects of organochlorine pesticides, particularly DDT, on breeding populations. The speed and global scale of this species' decline makes it one of the most remarkable events in recent environmental history. The most significant factor in the recovery of the peregrine falcon was the restriction placed on the use of organochlorine pesticides. Use of DDT was banned in the United States in 1972.

Recovery and Reclassification

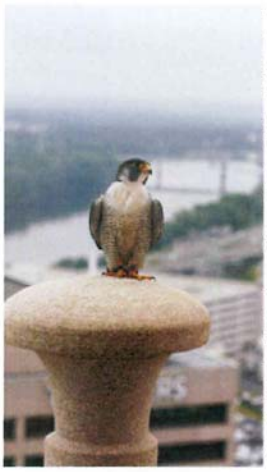
On August 25, 1999, the Federal Register announced the U. S. Fish and Wildlife Service's (USFWS) removal of the peregrine falcon from the federal list of endangered and threatened wildlife.

How did the eastern peregrine falcon population possibly recover enough to be delisted? While the peregrine was once considered extirpated from the eastern United States, successful reintroduction programs, using captive-bred birds, helped restore small breeding populations along the East Coast. From 1972 to 1992, the Peregrine Fund, a nonprofit organization dedicated to restoring peregrine populations, conducted a large captive breeding

program. Many birds raised in this program were successfully introduced into the wild at potential nesting sites. Because these introduced birds are the offspring of multiple subspecies, their protection as "mixed heritage" birds was the subject of conflicting legal opinions in 1978, 1983, and 1990. However, the last opinion and the final rule states that "the eastern peregrine falcon is being considered on a par with the American peregrine falcon."

The 1991 Peregrine Falcon Recovery Plan divided the eastern peregrine population into five recovery regions: 1) Mid-Atlantic Coast, 2) Northern New York and New England, 3) Southern Appalachians, 4) Great Lakes, and 5) Southern New England/Central Appalachians. One of the objectives of the plan was to reclassify the peregrine from endangered to threatened when a minimum of 20 to 25 nesting pairs was established in each region. A second objective of the plan also was set to reach an overall minimum of 175 to 200 pairs, demonstrating successful nesting in the five recovery regions. The USFWS believes that the intent of the recovery objectives has been satisfied and that recovery of the peregrine in the eastern United States is sufficiently established.

Recovery in Connecticut -- The Early Years



While Connecticut did not participate in any reintroduction programs, we have benefited from our neighbors' efforts. In 1997, a peregrine pair successfully nested on the Travelers Tower in Hartford. Leg bands revealed that the female of the pair came from a 1994 reintroduction project in Greece, New York, sponsored by Rochester Gas and Electric, in cooperation with the New York Department of Environmental Conservation Endangered Species Unit. Given the name "Amelia," this bird was last reported in the Syracuse, New York, area in early June 1996. Other young fledged from this reintroduction have nested in such faraway sites as Ohio and Nebraska.

The 1997 pair in Hartford produced three chicks, one male and two females. At approximately three-and-a-half weeks of age, each chick was fitted with a black aluminum USFWS band on one leg and a half-black, half-red band with letters and numbers on the other leg. The letters and numbers on the two-colored band, which can be identified through a spotting scope, have helped biologists track the movements of these young peregrines after they left the area.

After the chicks fledged (reached the flying stage) in July 1997, the adult peregrines were so defensive of these early flyers that the Travelers Tower was closed to public tours as the adults were swooping down and startling visitors.

One female chick caused quite a stir when she was seen and heard, about six days after fledging, on the roof of the building across from the Travelers Tower, calling for the adults to feed her. Thinking she was unable to fly, concerned Travelers employees called a Wildlife Division biologist. The bird, which was easily identified by her leg band, turned out to be in good health and flew off on her own by the next day. Unfortunately, at the end of July, the male chick was found dead on the edge of the sidewalk on Central Row, near the Travelers Tower. Biologists speculate that it may have hit a glass window while flying. During their first year, when peregrine chicks must perfect their hunting and flying skills, accidents, such as what happened to the male chick, are not uncommon. These young fliers, when raised in urban areas, must learn to maneuver around obstacles, such as tall buildings, bridges, and cars.

In 1998, the peregrine falcon pair on the Travelers Tower in Hartford was back in action and laid four

eggs at the end of April. Unfortunately, when a
Wildlife Division biologist went to check the nest, he discovered that the pair had chosen to nest at a new site on the Tower in a gutter and lost their eggs during a period of prolonged rainfall in May. At that time, there was still a chance that the pair would renest, hopefully in a drier spot, but the pair never did.

In 1999, the Wildlife Division, along with others at the Travelers Tower in Hartford, watched the progress of three male peregrine falcon chicks that hatched from the nest box located on the building. In mid-June, the then three-week-old chicks were banded and returned to the nest box. The birds fledged around July 4th. One of the young birds flew to an adjacent rooftop and became trapped in a gated area when it couldn't figure out how to escape. On July 7, Wildlife Division biologist Julie Victoria and Dave O'Shea of Trammel Crow Company (the facilities management company for the Travelers Tower) netted the trapped bird and transported it back to the ledge where it was born. The young peregrine flew off after being released and then quickly returned to the Travelers Tower. Another sibling from this trio was present on the Tower when this bird was released.

A second pair of peregrine falcons successfully nested in 1999 in Bridgeport. In mid-March, this peregrine pair was frequently seen on the Peoples Bank building, but nesting was not observed and the pair was not seen in the area after March. Wildlife Division biologists were alerted to this successful event at the end of June when one of the chicks was found walking on the ground in a factory parking lot and taken to a veterinarian. The chick, which was healthy and able to fly, was eventually taken to wildlife rehabilitator Marilyn Kappel. A query was sent to local birders asking if anyone knew the location of the peregrine nest. Dennis Varza of Fairfield eventually discovered the nest under Interstate 95 as it spans Bridgeport Harbor. Marilyn released the young bird at the site and it flew to its parents and sibling. Within a few days, both young chicks had flown from the area.

History of Nesting in Connecticut (1997-2010)

In the decade since peregrine falcons began nesting again in the state, additional pairs have successfully produced young in several Connecticut towns. Every year, a number of dedicated volunteers and Wildlife Division staff monitor the peregrine nests located in Connecticut throughout the nesting and fledging seasons. Division biologists also attempt to visit the nests (if they are accessible) to place identifying leg bands on the young before they fledge. This is an important management tool for monitoring this state threatened species.

Hartford*	1997 - First report of a successful nesting *Successful:* 1999, 2000, 2005, 2007, 2009, 2010 *Failed:* 2001, 2002, 2004, 2008, Not Active 1998, 2003, 2006
Bridgeport	1999 - First report of a successful nesting *Successful:* 2001, 2002, 2003 2005, 2006, 2007, 2008, 2009, 2010 *Failed:* 2004, 2008
Stamford	1996 - Peregrines present, but no nesting attempt *Successful:* 2003 *Failed:* 2004, 2006, 2007 *Not Active:* 2005, 2008, 2009, 2010
Hamden/ Woodbridge	2000 - Report of an unsuccessful nesting *Successful:* 2006, 2007 *Failed:* 2000, 2001, 2005, 2008, 2009, 2010 *Not Active:* 2002, 2003, 2004
	2002 – Peregrines present, but no nesting attempt

Milford	*Successful:* 2003, 2004, 2005, 2006, 2008, 2009, 2010 *Failed:* 2007
Middletown	*Successful:* 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010
Enfield	*Successful:* 2005, 2006, 2007, 2008, 2009, 2010
Waterford	*Successful:* 2008, 2009 *Failed:* 2007
Westport	*Successful:* 2007, 2008, 2009, 2010
Lyme	*Successful:* 2008 *Not Active:* 2009, 2010
New London	*Successful:* 2009, 2010
Waterbury	*Successful:* 2009 *Not Active:* 2010
New Haven	*Successful:* 2009, 2010

**Amelia hasn't nested on the Travelers Tower since 2005. The new female is from Lawrence, Massachusetts, and the male is from Golden Valley, Minnesota.*

Status of Peregrine Falcon in Connecticut Changed to Threatened in 2010

The peregrine falcon was originally listed as an endangered species when Connecticut's List of Endangered, Threatened, and Special Concern Species became official in 1992. When the list was recently updated in 2010, the peregrine's status was changed to threatened to reflect the continuing recovery of the population and increase in nesting pairs in the state. The peregrine falcon also is protected under the Migratory Bird Treaty Act of 1918.

Content last updated on April 4, 2011.

Cultural Resources Review

The Cedar Mountain project area has a high potential for archaeological resources, including pre-Contact Native American encampments and colonial era roads and paths. During the earliest Paleo-Indian Period, when the first inhabitants of the region entered after the recession of the glaciers 11,000 years ago, campsites were sought on high elevated ridges providing prominent views of surrounding areas. Herds of caribou and other large mammals of the post-glacial environment could be located in a relatively treeless landscape from high areas overlooking valleys. These were preferable site locations, especially, near wetland sources. Cedar Mountain provides environmental and topographic features of site preference, having the potential for some of the earliest archaeological sites in the state.

The high ridges were traversed by many Indian footpaths through the region. These footpaths were later widened into cart paths and eventually colonial roadways. Originally, Cedar Mountain was a part of western Wethersfield which would later become Newington, and the paths coming off the mountain would connect the two towns, as well as Hartford.

The Cedar Mountain has a high sensitivity for archaeological sites. The Connecticut Office of State Archaeology **strongly** recommends a Phase 1 reconnaissance survey of the project area. The recommended survey should be conducted in accordance with the State Historic Preservation Office's *Environmental Review Primer for Connecticut's Archaeological Resources.* In addition, this survey should be designed to locate any cultural resources which may exist on the project area and provide recommendations for avoidance or mitigation for preservation.

The Office of State Archaeology is available for any technical assistance in conducting this recommended archaeological survey, including the delineation of areas of high sensitivity, lists of qualified archaeological consultants and review of research designs.

OPM Planning Review

The Office of Policy and Management (OPM) has reviewed the proposed "Newington Walk" subdivision located on Russell Road in Newington. The developer proposes an "open-space" subdivision on the 73 acre parcel, creating 64 building lots and contributing approximately 44 acres of dedicated open space. The proposal would concentrate development in the eastern portion of the site with access to Russell Road, with the open space located in the western portion of the site. The site is zoned R-20 Residential and is entirely undeveloped woodlands containing 3.8 acres of wetlands and a trap rock ridgeline in the western portion of the site. The site would be served with public water and sewer service which exists near the site.

The proposed development is not required to be consistent with the State C&D Plan as there are no state actions involving funding for the proposal. However, the State C&D Plan does provide six Growth Management Principles and accompanying policies and guidelines which municipalities are required to consider when developing their own plans of conservation and development.

The site is located in a "Neighborhood Conservation" area on the Locational Guide Map of the State C&D Plan. These areas typically contain existing residential development and public utilities, and provide the opportunity for infill development. The proposed use for this site is consistent with the policy goals for these areas. The proposed subdivision appears to be similar in terms of the nature and density of development patterns in the surrounding area. The site design is relatively compact compared to what would be allowable under the current zoning, and utilizes existing infrastructure. The relatively compact nature of development provides for the preservation of open space in the western portion, including the trap rock ridgeline; consistent with policies contained in Growth Management Principle 4 in the State C&D Plan.

These comments represent the broad perspective from which OPM considers specific development proposals with respect to the C&D Plan. These comments should not be considered an endorsement of this project, and should not be considered a determination of consistency with the C&D Plan should State funding become associated with any aspect of this project.

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 Essex Land Trust, The Last Green Valley, the Green Valley Institute, the Thames River Basin Partnership, WINCOG, SECCCOG, NECCOG, CRERPA, 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.