

AGENDA
Mansfield Conservation Commission
Regular Meeting
Wednesday, July 18, 2012
Audrey P. Beck Building
CONFERENCE ROOM B
7:30 PM

1. **Call to Order**
2. **Roll Call**
3. **Opportunity for Public Comment**
4. **Minutes**
 - a. June 20, 2012
5. **New Business**
 - a. PZC Referral: Beacon Hill Estates Section II, PZC File #1214-3
 - b. Review of Town's 7/12/12 Water Workshop
 - c. Other
6. **Continuing Business**
 - a. Protecting Dark Skies in the Last Green Valley
 - b. Water Source Study for the Four Corners Area/Environmental Impact Evaluation (EIE)
 - c. Swan Lake Discharge Mirror Lake Dredging and other UConn Drainage Issues
 - d. UConn Agronomy Farm Irrigation Project
 - e. Eagleville Brook Impervious Surface TMDL Project
 - f. UConn Hazardous Waste Transfer Station
 - g. Ponde Place Student Housing Project
 - h. CL&P "Interstate Reliability Project"
 - i. Other
7. **Communications**
 - a. Minutes
 - Open Space (None available) PZC (6/18/12) IWA (None since last C.C. Meeting)
 - b. Inland Wetlands Agent Monthly Activity Report: (None since last C.C. Meeting)
 - c. 7/10/12 Notification of UConn Stage IA Water Conservation Alert
 - d. 2011 UConn Water Quality Report
 - e. Other
8. **Other**
9. **Future Agendas**
10. **Adjournment**

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Town of Mansfield
CONSERVATION COMMISSION
Meeting of 20 June 2012
Conference B, Audrey P. Beck Building
(draft) MINUTES

Members present: Aline Booth (Alt.), Joan Buck (Alt.), Robert Dahn, Neil Facchinetti, Quentin Kessel, Scott Lehmann, John Silander. *Members absent:* Peter Drzewiecki, Frank Trainor.
Others present: Grant Meitzler (Wetlands Agent).

1. The meeting was called to order at 7:33p by Chair Quentin Kessel. Alternates Aline Booth and Joan Buck were designated voting members for this meeting.

2. The draft minutes of the 16 May 2012 meeting, with correction of a typo, were approved.

3. **IWA Referral: W1498 (Town of Mansfield, N. Eagleville Rd.).** A bike & pedestrian path is proposed along the north side of North Eagleville Rd. from Northwood Rd. to Hunting Lodge Rd. The 6 ft. wide path would be separated from the road by at least 4 ft. of grass, in some places more, as the path curves away from the road around trees. The north side of the road was chosen over the south side to reduce impacts and expense – and because most prospective users of the path live on the north side. Some filling of wetlands would be required between Meadowood and Hunting Lodge Rds., where wetlands lie too close to N. Eagleville Rd.; ‘mitigation’ in the form of an artificial wetland just west of the west branch of Meadowood Rd. is proposed. After some discussion, in which several members noted that efforts to ‘mitigate’ impacts on wetlands by creating new wetlands have often been unsuccessful, the Commission agreed unanimously on the following motion (Silander, Buck):

The Commission notes that there will be some impact on wetlands from this project. However, the trade-off for pedestrian and bicycle safety seems acceptable, and the ‘mitigation’ proposed could offset the loss of wetlands if the created wetland actually functions as a wetland (e.g., as a vernal pool). The Commission suggests that the Town contact the Departments of Ecology & Evolutionary Biology (EEB) and Natural Resources Management & Engineering (NRME) at UConn for advice on constructing functional wetlands.

{Lehmann participated in the IWA Field Trip to this site on 12 June; his report is attached.}

4. **Water Issues.** The Environmental Impact Evaluation (EIE) of options in the **Water Source Study for the Four Corners Area** was to have been completed by now, but it has been delayed by inclusion of yet another possible source: Hartford’s MDC has indicated interest in supplying water. A Public Scoping Hearing on the additional source study will be held at 5:30p tomorrow (21 June) in the Council Chambers in conjunction with the Water and Wastewater Policy Advisory Committee meeting.

The Town Council is sponsoring a **Workshop on Water Supply Issues** (including “regulation of public water supply, water quality, aquifer protection, land use and governance”) at 6:00p, 12 July in the Council Chambers.

5. **Hazardous Waste Transfer Station.** The Committee responsible for siting UConn’s Hazardous Waste Transfer Station in a better location – it currently resides behind Horsebarn Hill, in a public water supply watershed – has held its first meeting. Kessel hopes to be informed

of future meetings before they occur so that he can attend. There will eventually be an EIE, on which the public may comment.

6. Adjourned at 8:09p.

Scott Lehmann, Secretary, 23 June 2012.

Attachment: Lehmann's report on the 6/12 IWA Field Trip

The only IWA site on the IWA/PZC 6/12/12 field trip was N. Eagleville Rd, where a sidewalk/bike path is proposed for the north side of the road between Northwood Apartments and Hunting Lodge Rd. The path would be 5-8 ft wide, separated from the road by a grassy strip at least 4 ft wide; it would meander a bit to bypass large trees, as does the new path along Hunting Lodge Rd. The north side of N. Eagleville was chosen primarily to minimize impact (and secondarily to make it easy for residents too lazy to cross to a sidewalk on the other side). The land on the north side is essentially level, while on the south side there is a steep slope up to a house at one point. Wetlands occur just off N. Eagleville on both sides between Northwood and Hunting Lodge, so some wetland impact is unavoidable, if there is to be a walk- & bike-way. By way of mitigation, an artificial wetland is proposed off N. Eagleville just west of the west arm of Meadowood.

TOWN OF MANSFIELD
DEPARTMENT OF PLANNING AND DEVELOPMENT

LINDA M. PAINTER, AICP, DIRECTOR

Memo to: Conservation Commission
Open Space Preservation Committee
Design Review Panel
Fran Raiola, Deputy Fire Marshal
Grant Meitzler, Assistant Town Engineer
Geoffrey Havens, Eastern Highlands Health District

From: Linda M. Painter, AICP, Director of Planning and Development 

Date: Wednesday, July 11, 2012

Subject: Beacon Hill Estates Section 2
Eagleville Development Group LLC
Subdivision Design Process Submission

In March 2011, the PZC adopted a new design process that is mandatory for proposed subdivisions that include 4 or more lots or a street. In accordance with the requirements of Section 5.2.b of the Subdivision Regulations, Eagleville Development Group LLC has submitted a Conceptual Yield Plan and a Conceptual Layout Plan for review.

Pursuant to Section 5.2.b, these plans are to be reviewed by town staff and referred to the Conservation Commission, Open Space Preservation Committee and Design Review Panel for review and comment. The PZC is required to be notified in writing and provided with an opportunity to review and comment.

Based on discussions with the applicant and the meeting schedules of the various committees, I have agreed to provide comments by August 7, 2012, which involves a short extension of the normal 45 day time limit. The purpose of this extension is to allow the Commission to have the benefit of comments from each of the advisory committees before providing comments to me. As such, comments are due to the Planning Office by July 31, 2012 so that they can be reviewed by the Commission at their August 6, 2012 meeting. The chairs of each advisory committee are invited to attend the PZC meeting to address the Commission and answer any questions regarding the basis for their recommendations.

The following items are attached to assist you in your review:

- Section 5 of the Subdivision Regulations
- Comments provided in response to the Off-Site & Neighborhood Influences Inventory Plan and Site Analysis Plan submitted as part of the first step in the process
- Conceptual Yield Plan (used to identify the maximum number of lots that could be developed using conventional subdivision design) and Conceptual Layout Plan (the preferred design using conservation subdivision design principles)
- Test results (well and septic suitability)

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Section 5.0 Subdivision Design Objectives/Design Process

5.1 Design Objectives

Subdivisions shall be designed in a manner that protects the public's health and safety, promotes goals, policies and recommendations contained in Mansfield's Plan of Conservation and Development, addresses the provisions of Section 1 of these Regulations (Purpose and Authority) and complies with all specific requirements contained or referenced in these regulations. To address these objectives, primary considerations in designing streets, walkways/bikeways and other public improvements, lot layouts, proposed locations for houses, driveways, sanitary systems and other site work and identifying appropriate open space preservation areas shall be:

- a. The protection and enhancement of vehicular and pedestrian safety through the appropriate siting of streets, driveways, walkways, bikeways and trails;
- b. The protection and enhancement of existing and potential public water supply wells and ground water and surface water quality through appropriate design and installation of sanitary systems, roadways, drainage facilities, house sites and other site improvements;
- c. The protection and enhancement of natural and manmade features, including wetlands, watercourses, aquifer areas, agricultural lands, hilltops or ridges, historic sites and features, expanses of valley floors, interior forests, significant trees and scenic views and vistas on and adjacent to the subdivision site. Wherever appropriate, site features shall be protected through a clustering of streets and house sites and the identification and preservation of significant open space areas including agricultural lands, interior forests and other land without physical limitations.
- d. The utilization of a site's natural terrain, avoiding unnecessary re-grading, filling and removal activities.
- e. The promotion of energy efficient patterns of development and land use, energy conservation and the use of solar and renewable forms of energy through the appropriate siting of streets, driveways and house sites and, whenever appropriate, bikeway and walkway/trail connections to neighboring streets and neighborhoods; existing and planned commercial areas; schools, parks, and other public facilities and town designated walkway or bicycle routes.

5.2 Design Process

All prospective subdividers are encouraged to meet with the Director of Planning and Development and Development or other Planning Office Staff to review zoning and subdivision approval criteria and application submission requirements.

To help achieve the design objectives of Section 5.1, to expedite application reviews, to help reduce application submission costs and to help ensure compliance with all applicable provisions of Mansfield's Zoning and Subdivision Regulations, Mansfield has established a comprehensive pre-application design process. This design process, which is recommended for all subdivisions, includes mandatory pre-application submissions for all subdivisions with new streets or four (4) or more lots. The process has the following steps:

- Step 1 Preparation of an Off-Site and Neighborhood Influences Inventory Plan and preparation of a Site Analysis Plan (see Section 5.2.a)
- Step 2 Preparation of a Conceptual Yield Plan and a Conceptual Layout Plan (see Section 5.2.b)
- Step 3 Testing and Preparation of Final Subdivision Plans (See Section 5.2.c and Section 6)

It is important to note that any pre-application comments and/or recommendations provided to a prospective subdivider by Mansfield's Director of Planning and Development and Development,

other staff member or Mansfield Commission or Committee member, shall not be binding on the applicant, the Planning and Zoning Commission or any other authority, agency or official having jurisdiction to review and act upon the subject subdivision.

a. Off-Site and Neighborhood Influences Inventory Plan and Site Analysis Plan

1. Off Site and Neighborhood Influences Inventory Plan

Regional, town-wide and neighborhood characteristics and influences shall be inventoried and considered with respect to the subject subdivision site and the Design Objectives of Section 5.1. State and regional land use plans, Mansfield's Plan of Conservation and Development, local knowledge and other sources of information should be considered in conducting this inventory of off-site influences.

While all prospective applicants are encouraged to submit and review with the Planning Staff an inventory of off-site and neighborhood influences, whenever a subdivision proposal includes new streets or four (4) or more lots, this inventory is mandatory and shall be submitted by a Connecticut Licensed Landscape Architect in association with the Site Analysis Plan requirements of Section 5.2.b. Where required, this inventory shall be presented in the form of a plan showing the location of the project site, area factors such as roads and transportation networks, noteworthy topographical and natural resource features, proximate commercial, recreational, educational and cultural land uses and any other external site features that could influence development on the project site. This plan may be displayed as a cover sheet for the set of final subdivision plans.

2. Site Analysis Plan

Natural and man-made features on or adjacent to a potential subdivision site shall be inventoried and considered in association with the design objectives of Section 5.1 and other provisions of these regulations. While all prospective applicants are encouraged to submit and review with Planning Staff a Site Analysis Plan (as described below), whenever a subdivision proposal includes new streets or four (4) or more lots, the submittal of a Site Analysis Plan is mandatory. Where required, a Connecticut Licensed Landscape Architect shall prepare and submit to the Director of Planning and Development and Development five (5) copies of a Site Analysis Plan containing the information listed below as applicable to the subject site. This plan shall be submitted in association with an Off-Site and Neighborhood Influences Inventory Plan as per Section 5.2.a.1.

The submitted Off-Site and Neighborhood Influences Inventory Plan and the Site Analysis Plan shall be reviewed by Mansfield staff members and shall be referred to the Conservation Commission and the Open Space Preservation Committee. As deemed appropriate by the Director of Planning and Development and Development, the above referenced plans also may be referred to other advisory committees for review and comment. Additionally, the Planning and Zoning Commission shall be informed in writing and provided with an opportunity to receive the submitted information for review and comment. The Director of Planning and Development and Development shall within forty-five (45) days of receipt provide review comments on the submitted plans to both the applicant and the Planning and Zoning Commission and any reviewer who provided comments to the Director. No final subdivision plan involving new streets or four (4) or more lots shall be considered complete and approvable by the Commission unless the Off-Site and Neighborhood Influences Inventory Plan and the Site Analysis Plan requirements have been met.

The following information shall be included, as applicable to the subject site, on all required Site Analysis Plans:

1. North arrow, date and scale. All plans shall be drawn at a scale of one (1) inch equals forty (40) feet (1" = 40') or less. The Director of Planning and Development and Development shall have the right to permit different scales for larger parcels provided the scale used shall also be used for the final subdivision plan. Use of the same scale will facilitate a transfer of information.
2. Name of subdivider and subdivision and the name and seal of the Landscape Architect who prepared the plan.
3. Boundaries of tract to be subdivided.
4. Existing contours at two (2) foot intervals. All slopes over 20 percent and watershed divides should be indicated.
5. Existing streets, easements, fences, walkways, bikeways, trails, structures both onsite and immediately adjacent to the site.
6. Wetlands and watercourses including intermittent streams both onsite and immediately adjacent to the site.
7. One Hundred (100) year flood plains, including base flood information on any portion of the land being subdivided which is within flood hazard areas as shown on the Zoning Map and in greater detail in the flood insurance study dated July 1980, and the most current Federal Emergency Management "Floodway" and Flood Insurance Rate Maps.
8. Aquifer areas and public drinking water wells on or within 500 feet of a site.
9. Soil type classifications as per the current U.S.D.A. Natural Resource Conservation Service Soil Survey for Tolland County, CT.
10. On-site and adjacent historic features including: all structures, wells and other utility features, walls and fences regardless of their condition, existing or former walks, paths, drives, trails, etc., curbs and pavement, man-made elements inserted into the ground such as hitching posts, garden or enclosed areas, significant vegetation, remains of old foundations, rip-rapping, arbors, trellises, etc., and any other historic features observed.
11. On-site and adjacent agricultural land with existing uses identified.
12. Areas with potential State and Federally-listed endangered, threatened or special concern species as per the current State and Federal Listed Species and Natural Communities Map published by the Connecticut Geological and Natural History Survey of the Connecticut Department of Environmental Protection; and significant natural flora and fauna communities as per Mansfield's Plan of Conservation and Development mapping.
13. Other natural and man-made features, including rock ledges and rock outcropping, significant trees, tree or shrub groves or masses of groundcover and obvious wildlife habitats.
14. Desirable scenic and/or historic views and vistas into or out of the site, desirable internal vistas and views and any undesirable views and vistas both off and on-site.
15. On-site and adjacent open space and recreational land with existing uses identified.
16. Off-site nuisances to be screened.

17. Negative site conditions such as dangerous and dilapidated buildings, dead and falling trees, diseased plants, infestation of invasive species, areas of stripped top soil, deposits or junk and refuse.
18. Objectionable noises or odors and their sources both on and off site.
19. Particular micro-climatic conditions that may affect development.
20. Directions of prevailing winter winds and summer breezes.
21. Horizontal angles of the sun (azimuth) on December 21 and June 21.
22. Primary directions of off-site traffic flow and relative volumes; points of connection of site with sidewalks, bikeways and trails, if any.
23. Logical points of ingress and egress to the site; sight lines of possible driveway to road; locations of all trees over 9 inches in diameter (d.b.h.) within sight lines.
24. Tentative notations of possible preservation and conservation areas (areas where development should be discouraged).
25. Tentative identification of areas that are better suited for development.

An example of a site analysis plan is contained in Appendix A of these regulations.

In situations where the Director of Planning and Development and Development becomes aware of a planned subdivision but the mandatory submittal of an Off-Site and Neighborhood Influences Inventory Plan and a Site Analysis Plan are not required, the Director is encouraged (subject to privacy considerations or other factors) to notify other staff members, the Conservation Commission, the Open Space Preservation Committee and, as appropriate, other advisory committees that a subdivision is being considered for the subject property. This notification provision is designed to facilitate the communication of useful information to a potential applicant at an early stage of the subdivision design process.

In situations where an Off-Site and Neighborhood Influences Inventory Plan and Site Analysis Plan have not been submitted but the Director of Planning and Development and Development has notified staff and advisory committees of a potential subdivision application, the Planning and Zoning Commission shall be informed in writing and provided an opportunity to comment. Any pre-application review comments from staff members, commission or committee members shall be incorporated into a report from the Director of Planning and Development and Development, which shall be submitted to the applicant, the Planning and Zoning Commission and any reviewer who provided comments to the Director. Any comments from the Commission shall not be binding on the applicant, the Commission or any other authority, agency or official having jurisdiction to review and act upon the subject subdivision.

b. Conceptual Yield Plan and Conceptual Layout Plan

Following the analysis and review of off-site and neighborhood influences and site features, the next step in designing a Mansfield Subdivision shall be the preparation of a Conceptual Yield Plan and a Conceptual Layout Plan. These plans shall take into account all comments received in association with the initial step as described in Section 5.2.a.

All applicants are encouraged to submit to the Planning Office a Conceptual Yield Plan and Conceptual Layout Plan for review prior to the submittal of final plans. However, whenever a subdivision proposal includes new streets or four (4) or more lots, a Connecticut Licensed

Landscape Architect shall prepare and submit to the Director of Planning and Development and Development five (5) copies of a Conceptual Yield Plan and a Conceptual Layout Plan. Several concept plans may be submitted concurrently. The submitted plans shall be reviewed by Mansfield staff members and, shall be referred to the Conservation Commission, the Open Space Preservation Committee and the Design Review Panel. As deemed appropriate by the Director of Planning and Development and Development, the plans also may be referred to other advisory committees for review and comment. Additionally, the Planning and Zoning Commission shall be informed in writing and provided with an opportunity to receive the submitted plans for review and comment. The Director of Planning and Development and Development shall within forty-five (45) days of receipt provide review comments on the submitted plans to both the applicant and the Planning and Zoning Commission and any reviewer who provided comments to the Director. No final subdivision plan involving new streets or four (4) or more lots shall be considered complete and approvable by the Planning and Zoning Commission unless these conceptual plan requirements have been met. All review comments on conceptual plans shall not be considered as a commitment to approve final plans which are subject to independent review and approval pursuant to Section 6 and compliance with all applicable approval criteria contained in these regulations.

The Conceptual Yield Plan, which shall be drawn to a scale best suited to the site and allows appropriate review, shall identify potential streets (where applicable), potential lots and potential open space areas that could be developed with standard frontages and lot sizes pursuant to all applicable zoning and subdivision approval criteria. Mansfield's Subdivision Regulations require a yield plan to determine the maximum number of lots that could be developed on a subject site (see Section 6.10.a.6 for yield plan provisions).

The Conceptual Layout Plan, which shall be drawn to a scale best suited to the site and allows appropriate review, shall identify potential streets (where applicable), potential lots and potential open space areas that could be developed pursuant to all applicable zoning and subdivision approval criteria, including Mansfield's "Cluster Development" provisions. Section 7.4 of the Subdivision Regulations authorizes the Commission to require new subdivisions to be clustered with reduced lot sizes and larger areas of preserved open space. Section 7.6 includes provisions to reduce or waive lot frontage and setback requirements. A submitted Conceptual Layout Plan should reflect an applicant's intended final plan submission subject to soil testing and obtaining more specific site information.

c. Testing/Preparation of Final Subdivision Plans

Following the receipt of review comments on all submitted conceptual plans, applicants shall conduct all required testing pursuant to State Health Code requirements and permits issued by Eastern Highlands Health District. Following on-site testing and further analysis, applicants can elect to resubmit conceptual plans pursuant to Section 5.2.b. or prepare final plans pursuant to Section 6. The final plan shall take into account all information obtained through Mansfield's design process.

Final Subdivision plans shall depict proposed streets, lot lines, building and development area envelopes, house locations, well and septic system locations, open space areas, natural and manmade resources and other details required by Section 6 and other provisions of these Regulations. The final subdivision plan shall address the minimum lot size provisions of the Zoning Regulations, and the number of proposed lots shall be no greater than the number depicted on a finalized yield plan prepared pursuant to Section 6.10.a.6.

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TOWN OF MANSFIELD
DEPARTMENT OF PLANNING AND DEVELOPMENT

LINDA M. PAINTER, AICP, DIRECTOR

Memo to: Planning and Zoning Commission
From: Linda M. Painter, AICP, Director of Planning and Development 
Date: May 3, 2012
Subject: Beacon Estates Section 2 Subdivision Design Process Submission (PZC File 1214-3)

Project Overview

In accordance with Section 5.2 of the Mansfield Subdivision Regulations, Eagleville Development Group LLC has submitted the following plans as part of Step 1 in the required design process for subdivisions containing over 4 lots or a street:

- Off-Site and Neighborhood Influences Inventory Plan
- Site Analysis Plan

The subject property is comprised of a 60.5 acre parcel located on the south side of Mansfield City Road, west of Beacon Hill Drive. The property has approximately 770 feet of frontage along Mansfield City Road, as well as a 50 foot potential right-of-way extending from Beacon Hill Estates Section 1, which connects to the subject property along the southeast boundary.

Preliminary Comments

The following comments and recommendations are based on the submitted materials and site visits made by the PZC on April 10, 2012 and the Open Space Preservation Committee on April 21, 2012, both of which I attended. A copy of the recommendations from the Open Space Preservation Committee and Conservation Commission are attached.

In accordance with Section 5.1 of the Subdivision Regulations, primary considerations in designing streets, walkways/bikeways and other public improvements, lot layouts, proposed locations for houses, driveways, sanitary systems and other site work and identifying open space preservation areas shall be:

The protection and enhancement of vehicular and pedestrian safety through the appropriate siting of streets, driveways, walkways, bikeways and trails.

The subject property has approximately 770 feet of frontage on Mansfield City Road as well as 50 foot stub that was reserved for a future road connection as part of the design of Beacon Hill Estates Section 1. The site analysis plan indicates two potential access points from Mansfield City Road. Of the two potential connections, it appears that the potential western access point would have been sight visibility, though no detail was provided. While the easternmost potential access point would line up with a historic farm lane, its location near the curve in Mansfield City Road would limit sight distance. No detailed information on sight visibility was provided. The site analysis plan recommends a scenic conservation easement along the entire frontage of Mansfield City Road; this recommendation is

supported by the Open Space Preservation Committee. However, vehicular access may be needed to meet emergency access requirements depending on the number of homes proposed. This is an issue that will need to be reviewed more fully with the Fire Marshal during the conceptual design process.

With regard to pedestrian access, there is an existing trail developed as part of Beacon Hill Section 1 that runs along the south side of the property, which connects to a ±51 acre open space dedicated to the town as part of Section 1. This trail leads to and across Coventry Road and connects to Chatham Hill Drive. As noted in the OSPC memo, there is also town open space located on the north side of Mansfield City Road, across from the northwest corner of the subject property. While there is currently no existing trail on this property, the addition of a trail from Mansfield City to Dunhamtown Forest and UConn is a future goal. As such, it is recommended that the design of the new subdivision incorporate a trail connection from the town open space south of Beacon Hill Drive through the property to the northwest corner at Mansfield City Road, where it could connect with a future trail on the north side of Mansfield City Road.

The protection and enhancement of existing and potential public water supply wells and ground water and surface water quality through appropriate design and installation of sanitary systems, roadways, drainage facilities, house sites and other site improvements.

There are no public water supply wells located in close proximity to the property; nor is the property located in an area of stratified drift aquifer. However, the use of Low Impact Development (LID) techniques in road and other site improvement designs should be used to maintain pre-development hydrology.

The protection and enhancement of natural and manmade features, including wetlands, watercourses, aquifer areas, agricultural lands, hilltops or ridges, historic sites and features, expanses of valley floors, interior forests, significant trees and scenic views and vistas on and adjacent to the subdivision site. Wherever appropriate, site features shall be protected through a clustering of streets and house sites and the identification and preservation of significant open space areas including agricultural lands, interior forests and other land without physical limitations.

The following summary of existing conditions was provided by the Open Space Preservation Committee in their April 24, 2012 memo:

- The property is part of a large interior forest tract (250-500 acres). Other adjacent protected lands in this tract include the ±51 acre town open space dedicated as part of Beacon Hill Estates Section 1 along the southeastern boundary and a 64 acre tract owned by the Department of Energy and Environmental Protection (DEEP) along the western boundary. Other significant land in this forest tract includes a tree farm located immediately to the south of the subject property, between the town open space and the DEEP land.
- There is also existing town open space on the north side of Mansfield City Road across from the northeast corner of the property. As noted above, a future trail is planned for this area to connect to the Dunhamtown forest and UConn.
- The site itself is bisected by a wetland-red maple swamp with blueberry and spicebush, and possibly a fringed orchid. There has been significant infestation of barberry in the wetland and adjoining area.

- The site has several significant historic features related to an old farm that was on the property, including: a cellar hole near Mansfield City Road with a well, old machinery, metal debris and a concrete area; a farm lane with double stone wall from the barn area to the wetland; an old barn foundation and well near the farm lane; many stone walls in good condition (often 4 feet high), including enclosures in the eastern half of the property and a continuous wall along the eastern boundary of the wetland. The farm appears to date from the mid 18th to mid 20th century.

Based on the existing natural and historic site features, use of a cluster design to preserve significant open space is recommended for this property. Given the location of the wetland bisecting the property from northwest to southeast, and the adjacent DEEP land to the west of the property, a design that concentrates development on the east side of the wetland and eliminates the need for a wetland crossing is preferred. Preservation of the forest area west of the wetland would link the town open space located south of the wetland to the DEEP property and would create a larger protected forest habitat.

Use of the cluster provisions contained in Section 7.4 of the Subdivision Regulations would allow minimum lot sizes of 40,000 square feet. The Commission is also authorized to reduce minimum frontage requirements pursuant to Section 7.6 of the Subdivision Regulations.

As noted above, the eastern portion of the property contains an extensive stone wall complex, including a historic farm lane bounded by double stone wall, a continuous wall along the east side of the wetland, and various enclosures. These walls should be preserved to the maximum extent possible, particularly along the farm lane and the wetland boundary. Where encroachments are necessary due to the request to concentrate development on this portion of the property, the applicant shall develop a plan to reuse the stones to repair and extend existing walls.

The utilization of a site's natural terrain, avoiding unnecessary re-grading, filling and removal activities.

The property has gentle slopes from 5-6% on most of the property with some locations at a 10% slope. House and driveway placement should be situated to minimize need for grading.

The promotion of energy efficient patterns of development and land use, energy conservation and the use of solar and renewable forms of energy through the appropriate siting of streets, driveways and house sites, and wherever appropriate, bikeway and walkway/trail connections to neighboring streets and neighborhoods; existing and planned commercial areas; schools, parks and other public facilities and town designated walkway or bicycle routes.

As described above, the recommended trail, open space, and cluster designs would promote a more efficient pattern of development that preserves the natural features of the site and offers significant amenities to subdivision and neighborhood residents.

Summary/Recommendations

Based on the above analysis, staff would recommend the following as the developer proceeds to the next stage of the design process, development of a conceptual yield and layout plan(s):

- Include a trail connection between existing town open space and trail located southeast of the property to the northwest corner of the property where it can connect to a future trail on the north side of Mansfield City Road.
- Use cluster development to limit development to east of the wetland, thereby eliminating the need for a wetland crossing, preserving the area west of the wetland as open space, and connecting the existing town open space south of the property with the DEEP land west of the property. In accordance with Section 7.4 of the Subdivision Regulations, the minimum lot size using this approach would be 40,000 square feet. The Commission also has the ability to reduce frontage requirements pursuant to Section 7.6 of the Subdivision Regulations.
- Preserve the farm lane as part of the open space network or as part of property access that preserves the 'lane' view and character.
- Preserve stone walls wherever possible, particularly along the farm lane and along the eastern boundary of the wetland. Where stone walls must be impacted, provide a plan for reuse of the stones in accordance with Section 7.7 of the Subdivision Regulations.
- Preserve scenic views along Mansfield City Road.
- Work with Fire Marshall to determine whether vehicular access to Mansfield City Road is needed.

Memorandum

May 2, 2012

To: Planning & Zoning Commission
From: Grant Meitzler, Assistant Town Engineer
Re: Preliminary Subdivision Reviews

Bovino Property Subdivision

I have an initial concern over the available sight distance from the easterly Puddin Lane driveway access. Cars approaching up the hill have quite short sight distance - about 180' giving between 3 and 4 seconds of sight time. The visibility is limited by a combination of trees, boulders, raised elevations back from the road edge, and a downhill curve to the south that makes visibility necessary off the paved edge of Puddin Lane. The applicant needs to specifically address improvements to this sight distance.

Sight distance looking to the west from this easterly drive is ample.

The westerly driveway showed very good (8 to 9 seconds) visibility in each direction.

I also note the Nipmuck Trail meets Puddin Lane directly opposite this easterly drive location. This trail shows very evident wear indicating considerable recreational use.

Beacon Hill 2

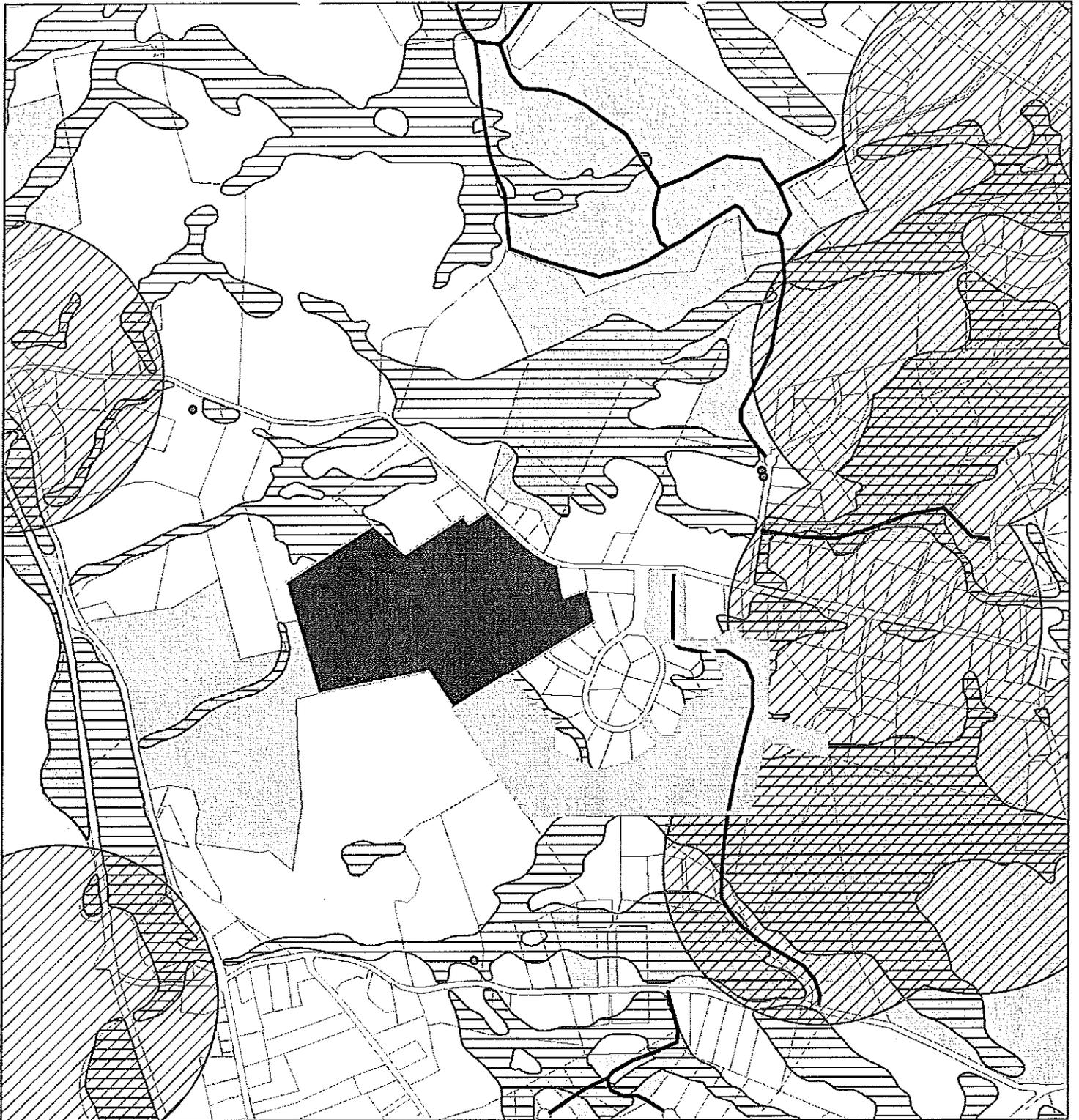
This subdivision proposes access via a strip left between lots in the Beacon Hill 1 subdivision. The existing road measures 26.5 feet wide at the intersection location. I believe this extra road width (over the usual subdivision road width of 24') should mean that as many as 24 new houses might be built in this subdivision.

The surveyor working on the plans has indicated that no direct new road access to Mansfield City Rd is intended.

Present traffic on beacon Hill Rd is extremely light. During a weekday afternoon count I found only two vehicles in an hour - and in a count including 430 PM I found only 6 vehicles per hour. Visibility to and from the to be proposed intersection is excellent.

The very uniform and gently sloping grades that we saw on the field trip may result in extra care needed for yard and drive grading to avoid local drainage problems.

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Beacon Hill Estates Section 2 Location Map

-  Subject Property
-  Wetlands
-  Natural Diversity Database Area
-  Open Space
-  Trails



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April 24, 2012

To: Linda Painter, Director of Planning

From: Open Space Preservation Committee

Re: Beacon Estates Section 2 Site Analysis Assessment

At their April 24, 2012, meeting the Open Space Preservation Committee reviewed the Beacon Estates Section 2 Site Analysis Assessment. Developer Tom Boyle was present. The committee toured most of the property on April 21, 2012. Noted features and recommendations:

Off-Site and Neighborhood Influences

1. Property is part of large interior forest tract (250-500 acres).
2. Protected land in this tract: Ct. DEEP land along west boundary of property. Town open space along south boundary.
3. Other significant land in this tract: A tree farm's natural forest area along south boundary.
4. Entrance to Town Land (formerly Dunnack) on Mansfield City Road across from northwest corner of property. No existing trail on this Town land. Potential for future trail connection through this land to Dunhamtown Forest and on to UConn to the north.
5. Town open space along south boundary has a trail leading to and across Coventry Road to Chatham Hill Drive.

Site Analysis

Natural features: 60.5- acre property 1. area east of wetland is maple woods with many beech saplings 2. west of wetland is drier oak hillside, which was logged within last 10 years. A few large pines and hemlocks. Wetland crosses the property – red maple swamp with blueberry and spicebush. Possibly a fringed orchid. Significant barberry infestation of wetland and adjoining area.

Historical features: Old farm 1. Cellar hole near MC Road with a well, old machinery, metal debris, concrete area. 2. Old barn foundation and well near farm lane. 3. Farm lane with double stone wall from barn area to wetland. 4. Many stone walls in good condition (often 4 feet high), including enclosures in east half of property and a continuous wall along east side of wetland. Dates of farm appear to be from 18th century to mid-20th century.

Recommendations

First priority: Expand preservation of a large interior forest tract by designating the forest area west of wetland as open space. It links adjacent to Town open space to Ct. DEEP property and would create a larger protected forest habitat.

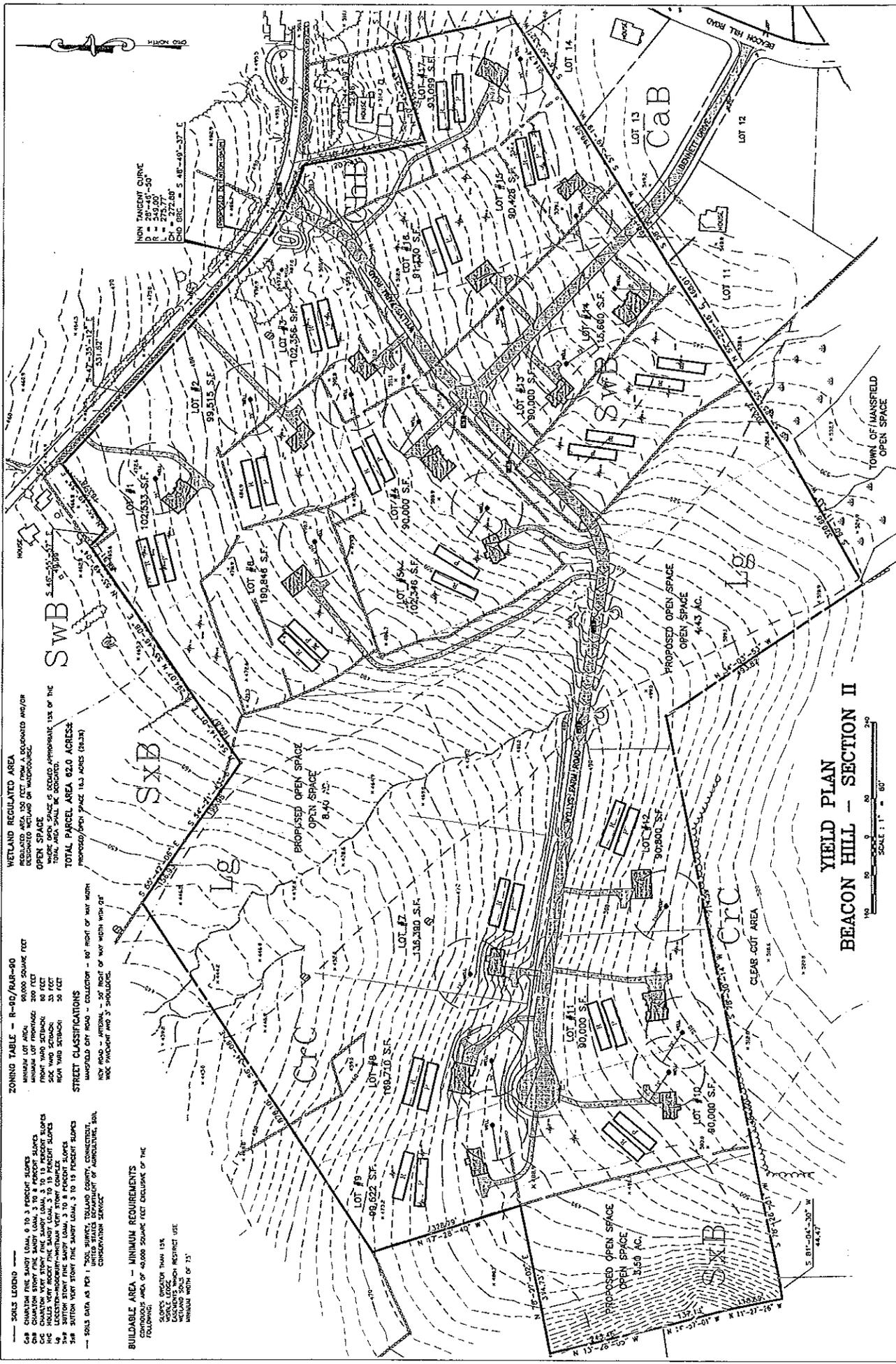
Second priority: Create a trail connection from Town open space south of Beacon Hill Drive to Town open space north of Mansfield City Road (formerly Dunnack).

Priority recommendation: conservation subdivision with house lots east of wetland and designation of Town open space to include farm lane, wetland and forest area west of wetland.

Secondary recommendations: If the priority recommendation is not followed, the committee recommends a conservation subdivision with the following items:

1. Town-owned open-space buffer along the west and south boundaries to increase preserved area of forest and to provide a trail corridor between Town open space and DEEP land.
2. trail access to this buffer area via farm lane from subdivision road
3. open space buffer along Mansfield City Road preserved with a conservation easement rather than Town ownership. Support cul-de-sac access from Beacon Hill Drive rather than from Mansfield City Road.

Other recommendations: 1. Trail access from potential cul-de-sac to Mansfield City Road at a point across from Town land (formerly Dunnack). 2. Preservation of stone walls and designated large trees when possible.



SOILS LEGEND

CaB CHALKY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
 CbB CHALKY STONY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
 CcB CHALKY MEDIUM FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
 CcC CHALKY MEDIUM FINE SANDY LOAM, 3 TO 10 PERCENT SLOPES
 Lg LIGNITE-HUMIC-INDURATED WITHIN VERY STONY COMPLEX
 SxB SANDY STONY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES
 SWB SANDY STONY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES

— SOILS DATA AS PER 1 UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE

WETLAND REGULATED AREA
 REGULATED AREA 100 FEET FROM A DECORATED ANY/OH OPEN SPACE
 WHERE OPEN SPACE IS DECORATED APPROPRIATE USE OF THE TOTAL AREA SHALL BE DECORATED.

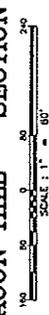
TOTAL PARCEL AREA 92.0 ACRES±
 PROPOSED OPEN SPACE 18.3 ACRES (20.3%)

ZONING TABLE - R-90/RAR-90
 MINIMUM LOT AREA 90,000 SQUARE FEET
 MINIMUM LOT FRONTAGE 200 FEET
 FRONT YARD SETBACK 35 FEET
 REAR YARD SETBACK 35 FEET

STREET CLASSIFICATIONS
 WINDUP DIRT ROAD - COLLECTION - 60' RIGHT OF WAY WITH 10' SIDEWALK AND 3' SHOULDER
 NEW ROAD - ARTERIAL - 50' RIGHT OF WAY WITH 10' SIDEWALK AND 3' SHOULDER

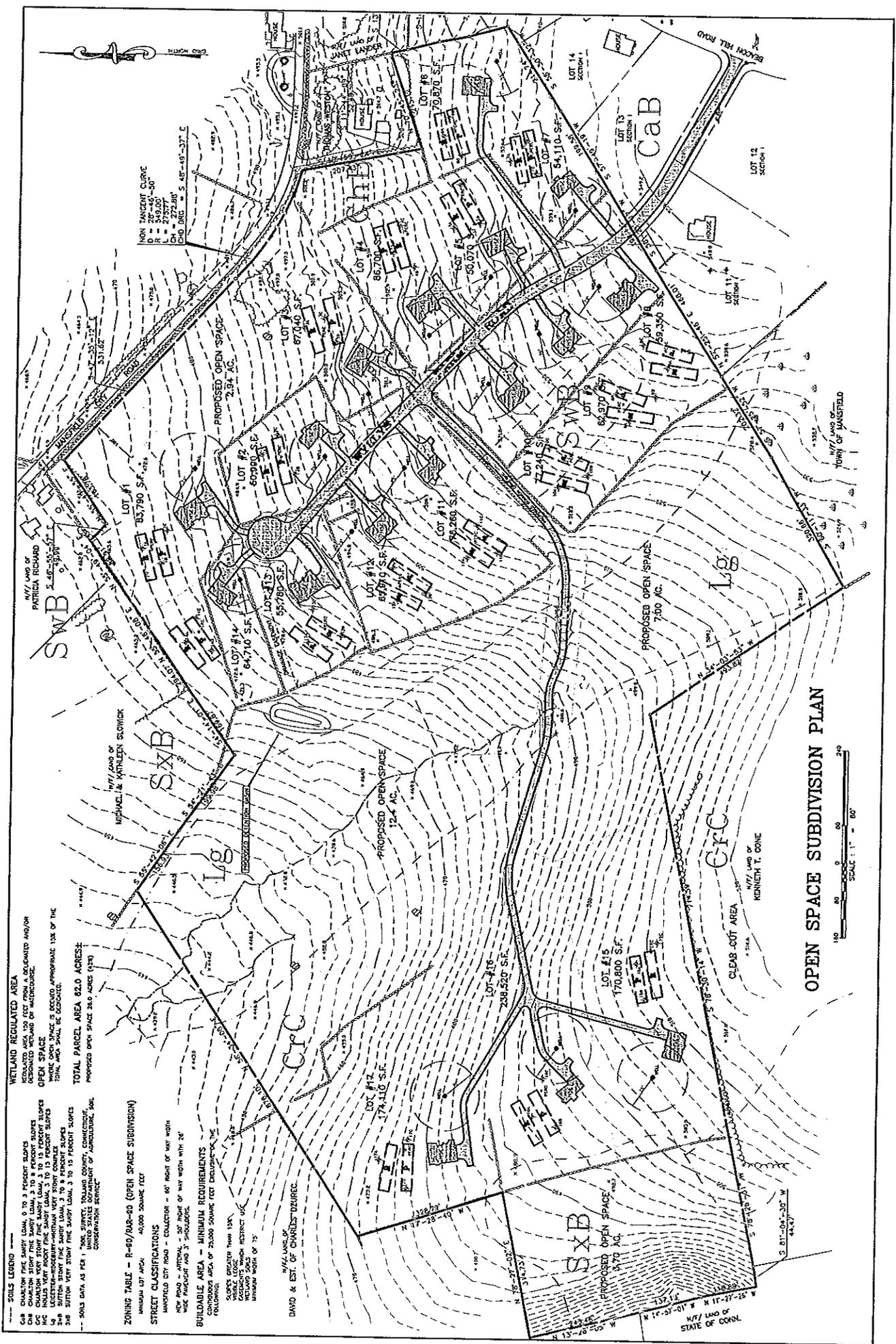
BUILDABLE AREA - MINIMUM REQUIREMENTS
 MINIMUM AREA OF 40,000 SQUARE FEET EXCLUSIVE OF THE FOLLOWING:
 SLOPES GREATER THAN 15%
 WETLANDS
 WETLAND SOILS RESTRICTED USE
 MINIMUM WIDTH OF 75'

**YIELD PLAN
 BEACON HILL - SECTION II**



NON TANGENT CURVE
 D = 20'-45'-30"
 R = 249.00'
 CA = 272.48'
 CHD ARC = 5.48'-49'-37" E

TOWN OF MANSFIELD
 OPEN SPACE



SOILS LEGEND

CaB SWAMPY SOILS, 0 TO 3 PERCENT SLOPES
 CxL SWAMPY SOILS, 3 TO 8 PERCENT SLOPES
 CxH SWAMPY SOILS, 8 TO 15 PERCENT SLOPES
 CxM SWAMPY SOILS, 15 TO 25 PERCENT SLOPES
 CxS SWAMPY SOILS, 25 TO 35 PERCENT SLOPES
 CxT SWAMPY SOILS, 35 TO 45 PERCENT SLOPES
 CxV SWAMPY SOILS, 45 TO 60 PERCENT SLOPES
 CxW SWAMPY SOILS, 60 TO 75 PERCENT SLOPES
 CxX SWAMPY SOILS, 75 TO 90 PERCENT SLOPES
 CxY SWAMPY SOILS, 90 TO 100 PERCENT SLOPES

WETLAND REGULATED AREA
 REGULATED AREA 150 FEET FROM A DEGRADED AND/OR
 ASSOCIATED WETLAND OF WATERCOURSE.
 OPEN SPACE
 TOTAL AREA SHALL BE DEDICATED.
 TOTAL AREA SHALL BE DEDICATED.

TOTAL PARCEL AREA 82.0 ACRES
 PROPOSED OPEN SPACE 28.0 ACRES (34%)

ZONING TABLE - R-40/60-40 (OPEN SPACE SUBDIVISION)

MINIMUM LOT AREA: 40,000 SQUARE FEET

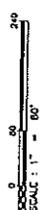
STREET CLASSIFICATIONS

WINDFIELD CITY ROAD - COLLECTOR - 60' RIGHT OF WAY WITH
 15' PARKING AND 3' SHOULDER.

BUILDABLE AREA - MINIMUM REQUIREMENTS
 CONTIGUOUS AREA OF 25,000 SQUARE FEET ENCLOSED BY THE
 FOLLOWING:
 SLOPES GREATER THAN 15%
 CALCULATED WITHIN RESTRICT USE
 MINIMUM WIDTH OF 75'

1/21 LAND OF
 DAVID & EST. OF CHARLES DUIREC.

OPEN SPACE SUBDIVISION PLAN



DRAFT MINUTES
MANSFIELD PLANNING AND ZONING COMMISSION
Regular Meeting
Monday, June 18, 2012
Council Chamber, Audrey P. Beck Municipal Building

Members present: J. Goodwin (Chairman), B. Chandy, R. Hall, K. Holt (7:05 p.m.), G. Lewis, P. Plante, B. Pociask, K. Rawn, B. Ryan
Alternates present: V. Ward, S. Westa
Staff Present: Linda Painter, Director of Planning and Development

Chairman Goodwin called the meeting to order at 7:00 p.m., appointing Ward to act until Holt's arrival at 7:05 p.m.

Minutes:

6-4-12 Minutes- Hall MOVED, Ryan seconded, to approve the 6/4/12 meeting minutes as written. MOTION PASSED with all in favor except Plante and Pociask who disqualified themselves.

6-12-12 Field Trip Minutes: Ryan MOVED, Holt seconded, to approve the 6/12/12 field trip minutes as written. MOTION PASSED with Goodwin, Holt, Ryan and Westa in favor and all others disqualified.

Zoning Agent's Report:

The Zoning Agent's report was noted.

Old Business:

a. Special Permit for Cut/Fill Activities, Merrow Road Corn Maze, 3 Merrow Road, Mason Brook LLC/Christopher Kueffner, owner/applicant (PZC File #1309)

Chandy MOVED, Holt seconded, to approve to approve with conditions the Special Permit application (PZC File #1309) of Mason Brook, LLC, for the removal of approximately 4,200 cubic yards of gravel and associated regrading and drainage work, as described in the application dated April 23, 2012, including the statement of use and the Proposed Borrow Pit and Grading Plan dated April 17, 2012; and as presented at Public Hearings on 5/21/12 and 6/4/12. This approval is granted because the application as approved is considered to be in compliance with Article V, Section B (Special Permit Requirements), Article X, Section H (Sand and Gravel) and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions:

- 1) **Extent of Approval.** This approval authorizes the removal of approximately 4,200 cubic yards of gravel, and associated grading and drainage improvements as depicted on the Proposed Borrow Pit and Grading Plan. Any significant change in the site work as described in application submissions and at the Public Hearing shall require further PZC review and approval. Any questions regarding what constitutes a significant change shall be reviewed with the Zoning Agent and, as deemed necessary, the PZC.
- 2) **Waivers.** Pursuant to the requirements of Article X, Section H.4, the following waivers to application requirements have been granted as the information was not needed to determine compliance with the Regulations:
 - a) A-2 Survey and Location of Utility Poles (Article V, Section A.3.d)
 - b) Data Accumulation Plan (Article X, Section H.3.b)

- 3) **Plan Revisions.** The Proposed Borrow Pit and Grading Plan shall be revised to include the following information:
- a) Traffic Management Plan for days when construction activity is concurrent with use of the parking lot by customers for the business on the north side of Merrow Road
 - b) Requirement that all truck loads be covered, both on and off-site.
 - c) Measures to control wind erosion and dust from stockpiles
 - d) Locations of areas where excavation will exceed depth of 10 feet and 3 to 1 slope and safety measures for those areas.
 - e) Use of best management practices as recommended by the Department of Energy and Environmental Protection (DEEP) and the USDA Natural Resources Conservation Service for the application of manure, fertilizer or pesticide once the property is replanted and management of animal waste if livestock are to be kept on the property.
 - f) Requirement that the Town shall be informed by the applicant when excavation work is going to be done so that exposed soil conditions can be monitored. If necessary, the Assistant Town Engineer shall have the authority to raise the finished grade levels to ensure that current conditions for rainfall moving through the gravel to the underlying aquifer are maintained.
 - g) Identification of an alternative stockpile location that meets the 50 foot setback from the railroad right-of-way to be used until such time as written approval is received for the railroad for the stockpile locations adjacent to their right-of-way.
- 4) **Authorization from New England Central Railroad.** Pursuant to Article X, Section H.5.e, the applicant is required to obtain written approval for any excavation or stockpiles within 50 feet of the railroad right-of-way. As there are existing stockpiles within the 50 foot setback, it is not beneficial to prohibit all work on the site until such time as written consent is received. As such, there shall be no further grading or other excavation activity within 50 feet of the right-of-way of the Central Vermont Railroad (aka New England Central Railroad) other than the spreading of loam stockpiled in that area across other portions of the site/property in accordance with the Proposed Borrow Pit and Grading Plan until such time as written approval is received and confirmed by the Zoning Agent. Upon receipt of such approval, the Zoning Enforcement Officer may authorize excavation, grading and stockpiling activities within 50 feet of the railroad right-of-way.
- 5) **Erosion and Sedimentation Controls.** Erosion and sedimentation controls shall be installed where necessary as determined by the Assistant Town Engineer/Inland Wetlands Agent, including an anti-tracking pad at the entrance to the site off of Merrow Road.
- 6) **Topsoil.** All disturbed areas shall be covered with a minimum of 6 inches of topsoil and revegetated as per regulatory requirements and application submissions. No topsoil shall be removed from the site without prior authorization.
- 7) **Bonding.** Due to the agricultural nature of the subject application and the adequacy of submitted plans, no site development bonding shall be required at this time. The PZC reserves the right to require bonding if site development problems arise.
- 8) **Validity.** This permit shall not become valid until the applicant obtains the special permit form from the Planning Office and files it on the Land Records. If the subject excavation and site restoration work are not completed by 7/1/2013, renewal of this Special Permit shall be required.

MOTION PASSED UNANIMOUSLY.

b. **Request for release and capping of bond escrow funds for Freedom Green (PZC File #636-4)**
Item is tabled pending staff review.

c. **Gravel Permit Renewals**

Holt MOVED, Ryan seconded, that the public hearings for the purpose of reviewing requests for the renewal of special permits for earth removal be scheduled for July 16, 2012. MOTION PASSED UNANIMOUSLY. The current permit period ends August 7, 2012.

New Business:

****Holt MOVED, Pociask seconded, to add to New Business two items: Field Trip for Beacon Hill Estates Section II, and the Pending Right to Farm Ordinance. MOTION PASSED UNANIMOUSLY.**

a. **Request to Modify Building Area Envelope, Lot 16 Beacon Hill Estates, PZC File #1214-2**

Pociask MOVED, Ryan seconded, that the Planning & Zoning Commission approve the proposed revision to the Building Area Envelope for Lot 16 of the Beacon Hill Estates Subdivision, as described in the 6/6/12 request from Spring Hill Properties, LLC., and shown on a plan dated 6/5/12, subject to the condition that the stone walls be retained pursuant to Section 7.7 of the Subdivision Regulations. This revision will not affect neighboring properties, natural or manmade features or the overall character of the subdivision. This action shall be noticed on the land record. MOTION PASSED UNANIMOUSLY.

b. **Application to amend the Zoning Regulations, Article VII, Section S.2; Article VIII; and Article X, Section A.4.d- M. Healey-applicant, PZC File #1310**

Holt MOVED, Ryan seconded, to receive the application submitted by Michael C. Healey to amend Article VII, Section S.2; Article VIII, and Article X, Section A.4.d of the Mansfield Zoning Regulations, File #1310, as submitted to the Commission, and to instruct the applicant to work with staff on final wording prior to advertising, and to refer said application to WINCOG and the Town Attorney for review and comment, and to set a Public Hearing for August 6, 2012. MOTION PASSED UNANIMOUSLY.

c. **8-24 Referral-LaGuardia Lane/Quiet Meadow Subdivision**

Holt MOVED, Hall seconded, that the PZC notify the Town Council that the proposed acquisition of the LaGuardia Lane Property would promote Mansfield's Plan of Conservation and Development through protection of interior forest and improved access to existing preserved open space. MOTION PASSED UNANIMOUSLY.

d. **8-24 Referral-School Building Project**

After extensive discussion, Plante MOVED, Pociask seconded, to table this item. MOTION FAILED with Plante, Pociask, Holt and Chandy in favor and Rawn, Hall, Lewis, Ryan and Goodwin opposed. Then Rawn MOVED, Hall seconded, RESOLVED, that the Planning and Zoning Commission of the Town of Mansfield approves the following project with respect to the Town's elementary and middle schools, pursuant to Section 8-24 of the General Statutes of Connecticut, consisting of:

1. The closure and demolition of the Dorothy C. Goodwin Elementary School and the Annie E. Vinton Elementary School, and the construction and equipping of a new elementary school on each of these sites, including, if necessary or desirable to accommodate the new school design, the purchase of land adjacent to either of these sites, and including related work and improvements;;
2. Select heavy renovations to the Mansfield Middle School, including but not limited to roof and window replacements, installation of solar panels, and the replacement of modular classrooms, and related work and improvements; and

3. The closure of the Southeast Elementary School, the future use of which is undetermined at this time; and

provided that this resolution is for approval of conceptual plans only. Each project is subject to and shall comply with all applicable zoning, site plan, subdivision, inland wetland and other laws, regulations and permit approvals, and this resolution shall not be a determination that any such project is in compliance with any such applicable laws, regulations or permit approvals. MOTION FAILED with Rawn, Lewis and Ryan in favor and Plante, Pociask, Hall, Goodwin, Holt, and Chandy opposed.

e. UConn Technical Park-Jurisdiction

Linda Painter, Director of Planning and Development, reviewed her memo and an opinion letter from an Assistant Attorney General regarding a project that is similar to the proposed Technology Park. After extensive discussion, the consensus of the Commission was, it does not believe it has jurisdiction over the project but it strongly encourages the Town of Mansfield to work with the University to ensure the Town has adequate sewer and water capacity for the future development in town that is likely to occur as a result of the Technology Park.

f. Consideration of Cancelling the July 2, 2012 Regular Meeting

Holt MOVED, Hall seconded, that the Planning and Zoning Commission cancel the July 2, 2012 and August 20, 2012 regular meetings of the Planning and Zoning Commission. MOTION PASSED UNANIMOUSLY.

g. Field Trip Scheduling

Staff recommended scheduling a field trip for Beacon Hill Estates Section II. It was agreed to schedule a field trip for July 10th at 3:30 p.m. If any new IWA items come in on July 16th, another field trip will be scheduled for July 24th.

h. Proposed Right to Farm Ordinance

Goodwin suggested that the Commission write a letter in support of the Right to Farm and Agricultural Tax Incentive Ordinances presently before the Town Council for action, as these proposed ordinances are consistent with, and support, the Commission's work in protecting and promoting agriculture. PZC members asked staff to provide samples of such ordinances used by other towns.

Reports from Officers and Committees:

Vera Ward noted that the next meeting of the Regulatory Review Committee will be Wednesday, June 27th at 1:15 p.m. in Conference Room C. She invited any interested members of the PZC to attend.

Communications and Bills:

Noted.

A Field Trip was scheduled for July 10 at 3:30 p.m.

Adjournment: The meeting was adjourned at 8:37 p.m. by the chairman.

Respectfully submitted,

Katherine Holt, Secretary



University of Connecticut
*Office of the Executive Vice President
for Administration and Chief Financial Officer*

Architectural, Engineering
and Building Services

July 10, 2012

Dear UConn Water System Users:

UConn is issuing a Stage IA Water Conservation Alert because seasonally dry conditions have reduced area streamflows. We are enlisting your cooperation to conserve water until further notice.

The University's water supply remains adequate to meet current and forecasted system demands and any emergency needs such as firefighting. Per UConn's Water Supply Plan, we are committed to operating an environmentally sustainable water supply system. Given current streamflow conditions and rainfall forecast, we are asking our students, faculty, staff and our off-campus municipal, commercial, and residential users to be conscientious of their daily water use and to conserve water voluntarily by:

- * Taking shorter showers
- * Running dishwashers and clothes washing machines with full loads
- * Shutting off water while washing dishes, shaving, brushing teeth, and lathering up to wash hands, rather than running the water continuously
- * Avoiding vehicle washing or power-washing homes and other buildings
- * Not using water to clean sidewalks, driveways and roads
- * Reducing, to the extent possible, the watering of lawns, recreational and athletic fields, gardens, or other landscaped areas (if watering is essential, late-evening hours are best)
- * Not using public water to fill residential swimming pools

By issuing the Stage IA Water Conservation Alert, we encourage you to reduce how much water you use. Thank you for your help. We appreciate your cooperation. UConn is actively monitoring conditions and will continue to provide updates as conditions change.

Sincerely,

Eugene Roberts

Director of Deferred Maintenance and Infrastructure Management

An Equal Opportunity Employer

PAGE
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University of
Connecticut

2011 Water Quality Report

Main Campus, Storrs (Public Water System ID No. CT 0780021)

Depot Campus, Mansfield (Public Water System ID No. CT 0780011)

The University is pleased to provide you with the 2011 Water Quality Report of the Main Campus Water System in Storrs and the Depot Campus Water System in Mansfield. This report includes a brief overview of your drinking water supply and the results of water quality tests conducted from January through December of 2011. This "Consumer Confidence Report" is an annual requirement of the Federal Safe Drinking Water Act to provide consumers with water quality information. We hope this report gives you a better understanding of your water supply.

The Main Campus and Depot Campus systems experienced no water quality or monitoring/reporting violations in 2011. Further, there were no interruptions to water service as a result of the local power outages experienced during Tropical Storm Irene and Storm Alfred.

New England Water Utility Services, Inc. (NEWUS) continued to provide the University water systems with professional management as well as daily and after-hours emergency operation and maintenance throughout 2011. Under their contract with the University, NEWUS provides a team of certified operations and management staff for day to day operations of the water systems; meter reading, billing and response to customer inquiries; advising on current and proposed regulatory requirements; and overseeing major maintenance and capital improvements.

In addition to providing water quality results for 2011, this report also describes many of the ongoing improvements we are making to our water systems, including:

- Completion of a new emergency power supply at the Willimantic Wellfield.
- Continued work on the new chemical treatment building.
- The start of construction of the Reclaimed Water Facility.

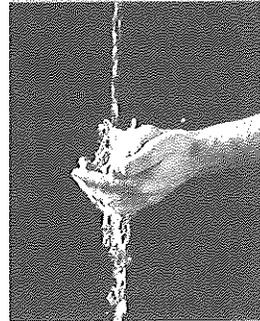
In 2011, the University also completed the latest update to its Water Supply Plan. The Plan incorporates the wellfield management strategies recommended in the 2005 Fenton River Study and the conservation strategies from the 2010 Willimantic River Study. The latest Water Supply Plan also identifies several possible new sources of water that would ensure an adequate water supply now and for the foreseeable future. Those possible sources are being analyzed in an ongoing Environmental Impact Evaluation kicked off in June 2011.

For more information concerning drinking water quality in the University systems, call week days between 8 a.m. and 5 p.m. to the University's Department of Environmental Health and Safety at 860-486-3613, or New England Water Utility Services, Inc.'s project manager at 860-486-1081, or visit our Web site at www.facilities.uconn.edu.

Source Protection

The University is committed to protecting its wells and wellfields, and the Fenton and Willimantic Rivers, which are invaluable water resources. Pursuant to the Connecticut Environmental Policy Act (CEPA), the University completes detailed Environmental Impact Evaluations for projects based on their size, location, cost or other factors consistent with the Generic Environmental Classification Document for State Agencies. This process, administered through the State Office of Policy and Management (OPM), provides numerous state agencies, the town of Mansfield, environmental organizations, and interested citizens with an opportunity to review and comment on a project regarding its potential environmental impact. The University also cooperates with Windham Water Works regarding watershed inspections on the Main Campus. This interaction is designed to protect the Fenton River wellfield and the Fenton River, as well as the downstream reservoirs that serve the Windham Water system.

The University utilizes its aquifer mapping information to better understand the areas of groundwater recharge. This hydraulic evaluation, required by the Department of Energy and Environmental Protection (DEEP), shows the critical areas of direct recharge that must be protected. The State of Connecticut Department of Public Health (DPH), in conjunction with the DEEP, has on record the Source Water Assessment Program (SWAP) report on the Fenton River and Willimantic River wells. This report evaluates potential sources of contamination near our wells. The University's wellfields have an Overall Susceptibility Rating of "LOW," the best possible rating. To ensure continued source protection however, the University will remain vigilant in protecting all of its water supply sources in the years to come. For more information regarding the SWAP report, visit the DPH's Web site at www.ct.gov/dph.



Regulatory Oversight

To ensure that tap water is safe to drink, the Federal Environmental Protection Agency (EPA) and the DPH established regulations that limit the amount of certain contaminants in the water provided by public water systems. Water quality testing is an ongoing process, and the frequency of testing for each parameter varies as prescribed by these drinking water regulations. Due to testing schedules, not all of these tests were required during 2011, but the most recent test data are shown in the table located on page three. Samples from the University's water systems are tested regularly at state-certified laboratories to ensure compliance with state and federal water quality standards. Water samples are collected for water quality analyses from our wells, from entry points into our systems, and from sample locations within our distribution system.

System Description

The University owns and operates the Main Campus Water System at Storrs and the Depot Campus Water System in Mansfield. Although the Main and Depot systems are interconnected, the source of water within each system can vary. The Main Campus receives water from gravel-packed wells located in the Fenton River and Willimantic River wellfields. The Depot Campus receives water only from the Willimantic River wellfield. Our wells do not pump directly from the Fenton and Willimantic Rivers; rather, the wells are located near the rivers and pump groundwater from underground aquifers. As groundwater moves very slowly through the fine sands that make up these aquifers, the water is naturally filtered. The result is water of excellent chemical, physical, and bacteriological quality pumped from each wellfield. The only water treatment added is sodium hydroxide for pH adjustment and corrosion control, and chlorine for disinfection. The University continues to have an ample supply of high quality drinking water to meet the needs of its on-campus and off-campus users. In addition, it has over 7.6 million gallons of water storage capacity to meet all domestic, process, and fire protection needs. Large booster pumps help maintain adequate system pressures, and emergency generator power ensures continued operation during electric power outages.

Water Quality

As water travels over the land surface and/or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity, including:

- viruses and bacteria, which may come from septic systems, livestock and wildlife;
- salts and metals, which can be natural or may result from storm water runoff and farming;
- pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff or lawn care;
- organic chemicals, which originate from industrial processes, gas stations, storm water runoff and septic systems; and
- radioactive substances that can be naturally occurring.

To ensure safe tap water, EPA prescribes limits on these substances in water provided by public water systems. The presence of these contaminants does not mean that there is a health risk. The University complies with EPA and DPH water quality requirements to ensure the quality of the water delivered to consumers. There were no water quality violations in the University's systems in 2011.



Stage 2 Disinfectants and Disinfectants By-products Rule (DBPR)

The Environmental Protection Agency's Stage 2 Disinfectants and Disinfectants By-products Rule (DBPR) requires all water systems to evaluate the potential for producing elevated levels of certain "disinfectant by-products" that have potential adverse health effects. These chemical compounds can be produced by the reaction of disinfecting chemicals with naturally occurring chemical compounds found in the water. Water quality test results over eight consecutive quarterly sampling periods showed that none of the samples contained levels of disinfection by-products in excess of allowable levels. Because of these favorable sample results, both the Depot and Main Campus water systems have been designated as in compliance with the DBPR.

Health Information

Consumer Confidence Reports are required to contain public health information for certain contaminants and compounds, even if the levels detected in the system were less than the Maximum Contaminant Levels (MCL) established for those parameters. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA and the Federal Center for Disease Control guidelines on reducing the risk of infection by *Cryptosporidium* and other microbial contaminants are available from EPA's Safe Drinking Water Hotline (800-426-4791).

CRYPTOSPORIDIUM. *Cryptosporidium* is a microbial parasite found in surface waters throughout the U.S. Since the University uses groundwater (wells) rather than surface water (reservoirs), the University is not required to test for *Cryptosporidium*.

COPPER & LEAD. The University currently meets regulatory requirements for both lead and copper. Lead and copper were tested in 2010 (Depot Campus) and 2011 (Main Campus), and will be tested again in 2013 (Depot Campus) and 2014 (Main Campus). None of the samples collected exceeded the Action Levels for lead or copper. Nonetheless, the University believes it is important to provide its customers with the following information regarding lead and copper.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The University's Main Campus and Depot Campus water systems provide high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap water for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Similarly, elevated copper levels can also have health impacts. Copper is an essential nutrient, but like lead, its levels can vary from location to location. Some people who drink water containing copper in excess of the Action Level over a relatively short period of time could experience gastrointestinal distress and may also suffer liver or kidney damage. People with Wilson's disease should consult their personal physician. If you are concerned about elevated copper levels, you may wish to have your water tested. Running your tap for 30 seconds to 2 minutes before using for drinking or cooking will significantly reduce copper levels in the water.

Water Quality Testing

The table below lists the results of water quality monitoring conducted in 2011. Most of the data below is from testing done in 2011. However, the tests for some substances are required only once every two or three years because the concentrations are expected to be relatively constant. Because of this, some of the data, though representative of the water quality, may be more than one year old. If levels were tested prior to 2011, the year is identified in parentheses. Any contaminant/compound detected in the latest round of testing is included in the table. As required by the EPA and the DPH, the University also periodically tests for "unregulated contaminants." Unregulated contaminants are those that do not yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. The last required samples for those unregulated compounds were collected in July 2009 with all sample results below detection levels.

Water Quality Test	MCL	MCLG	Main Campus			Depot Campus			Possible Contaminant Source
			Highest Level Detected	Range of Detections	MCL Exceeded?	Highest Level Detected	Range of Detections	MCL Exceeded?	
Copper (ppm)	AL 1.3	AL 1.3	0.31	no sample above AL	No	0.12 (2010)	no sample above AL	No	Corrosion of household plumbing systems
Lead (ppb)	AL 15	AL 15	14	3 samples above AL	No	6 (2010)	no sample above AL	No	Corrosion of household plumbing systems
Barium (ppm)	2	2	0.015	0.015	No	0.015	0.015	No	Erosion of natural deposits
Chloride (ppm)	250	NA	26	26	No	26	26	No	Erosion of natural deposits
Fluoride (ppm)	4	4	ND	ND	No	ND	ND	No	Erosion of natural deposits
Nitrate (ppm)	10	10	0.65	0.1-0.65	No	0.65	0.65	No	Runoff from fertilizer use
Nitrite (ppm)	1	1	ND	ND	No	ND	ND	No	Runoff from fertilizer use
Sodium (ppm)	NL=28	NA	26.3	26.3	No	27.5	27.5	No	Erosion of natural deposits
Sulfate (ppm)	NA	250	13	13	No	13	13	No	Erosion of natural deposits
Turbidity (ntu)	TT (5 ntu)	NA	2.45	ND-2.45	No	4.9	<0.2-4.9	No	Soil runoff, pipe sediment, or precipitation of minerals or metals
Total Coliform Bacteria	presence in >5% of mo. samples	0	0	ND	No	<1	Present in 5 samples for the year	No	Naturally present in the environment
Alpha Emitters (pCi/L)	15	0	ND (2010)	ND	No	ND (2010)	ND	No	Erosion of natural deposits
Combined Radium (pCi/L)	5	0	1.2 (2010)	ND-1.2	No	ND (2010)	ND	No	Erosion of natural deposits
Uranium (pCi/L)	30	0	ND (2010)	ND	No	ND (2010)	ND	No	Erosion of natural deposits
Chlorine (ppm)	MRDL 4	MRDLG 4	1.2	0.1-1.2	No	0.4	0.02-0.4	No	Water additive used to control microbes
HAA5 (ppb) [Haloacetic acids]	60	NA	4.2	ND-4.2	No	ND	ND	No	By-product of drinking water disinfection
THM5 (ppb) [Total Trihalomethanes]	80	0	6.11	ND-6.11	No	6.4	ND-6.4	No	By-product of drinking water disinfection

Definitions and Key Terms

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Typically when MCLs are exceeded a violation occurs and public notification is required.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfection Level): The highest level of a disinfectant allowed in drinking water.

MRDLG (Maximum Residual Disinfection Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health.

Detected Contaminant: A detected contaminant is any contaminant measured at or above a **Method Detection Level**. Just because a contaminant is detected does not mean that its MCL is exceeded or that there is a violation.

N/A: Not applicable.

ND: Not detected.

NL: Notification level.

ppb (parts per billion): One part per billion = ug/L; the equivalent of 1 penny in \$10,000,000.

ppm (parts per million): One part per million = 1 mg/l; the equivalent of 1 penny in \$10,000.

PCi/L (picocuries per liter): A measure of radioactivity.

TT (Treatment technique): A required process intended to reduce the level of a contaminant in drinking water.

< : Less than.

2011 Annual Water Quality Report



University of Connecticut
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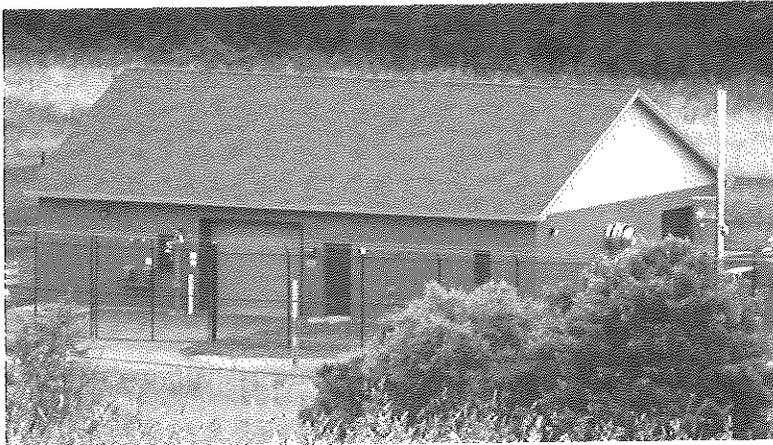
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2011 Water System Improvement Projects

A number of important improvements to the University of Connecticut water system were initiated, continued or completed in 2011, including:

- Standby power improvements at the Willimantic Wellfield have been completed. The new on-site generator can power all four Willimantic wells and replaces the generators that were capable of providing power to only two wells.
- Construction progressed on the Willimantic wellfield's new water treatment building. Once complete, this facility will provide centralized pH adjustment (helps prevent pipe corrosion) and disinfection, and allow two older treatment facilities to be retired.
- Construction of the new Reclaimed Water Facility broke ground in June 2011. Once complete, the facility will "polish" treated wastewater from the University's Water Pollution Control Facility for reuse at the University Central Utility Plant. Using recycled wastewater for non-potable heating and cooling purposes will conserve up to 400,000 gallons per day of treated drinking water supplies. In the future, we expect additional water will be conserved as reclaimed water is also used for irrigation.
- The University also commissioned the design of several projects to be completed in the years to come, for example, a replacement transmission pipe to the Willimantic wellfield, upgrades to the 1951 water tower, and improvements to the underground 5.4 million gallon "High Head" reservoir.



New Willimantic Wellfield water treatment facility

System Reliability

Tropical Storm Irene and Storm Alfred resulted in two of the largest power outages in Connecticut's history. Fortunately, the UConn water system was minimally disrupted by the storms and service continued uninterrupted throughout. Careful planning and coordinated responses by both the UConn Facilities Operations and NEWUS were pivotal in preventing an emergency condition. The generators at the wellfields and booster pumps worked as designed, kicking on when downed tree limbs interrupted normal electrical service. Water supply from the Willimantic wellfield was never affected, and when downed lines temporarily cut power from the Fenton wellfield generator to the wells, the UConn Electrical Shop quickly restored the emergency power connections, and the UConn Utilities Department and NEWUS managed the Willimantic wellfield supply to serve the system's demand for water.

Future Water Supply Planning

2011 also saw the submittal of the latest 5-year update of the University's Water Supply Plan to the DPH and the kick-off of a comprehensive evaluation of possible future sources of water.

The Water Supply Plan for the University's water system, the fourth such iteration, was prepared with the following principal goals of water system planning in mind: (1) to ensure an adequate quantity of pure drinking water, now and in the future; (2) to ensure orderly growth of the system; and (3) to make efficient use of available resources.

The University and its consultant made sure this Plan was a well informed document built off the extensive river studies and master planning efforts done since the last Plan was drafted. In addition, the University took the unique step of making the draft available for public review and comment before submitting to the DPH in May 2011.

A critical element of water supply planning is forecasting future demands and addressing how the system can meet those demands. Activation of the Reclaimed Water Facility and maximizing non-potable reclaimed water for use at the Central Utility Plant will allow the University to meet public health goals for the next several years. However, the Plan's forecasts indicate the University will need to add supply to its domestic water system in the next 20 and 50 year planning periods. The Plan identified several possibilities for this new supply, all of which are now being evaluated.

Having recently incorporated public comments into the Plan and then submitting it to the DPH for review, the time was right to thoroughly explore which of the possible new sources of water was the most feasible and prudent. The University, in collaboration with the Town of Mansfield, initiated an Environmental Impact Evaluation (EIE) of the various potable water supply alternatives for the region. These include interconnecting via a new pipeline to other existing water supply systems, as well as new wellfields within Mansfield either along the Willimantic River or around Mansfield Hollow.

The selected alternative will provide the University and the surrounding Town areas with at least 0.5 to 1 million gallons per day of additional water. This will enable growth of the University and surrounding area consistent with the University Water Supply Plan and University Master Plans – particularly for the proposed University Technology Park to be developed on the University's North Campus. This additional source of water supply will also enable economic development as delineated in the Town Plan of Conservation and Development, particularly as envisioned for the Mansfield Four Corners and Storrs Center and other areas in northern Mansfield. The proposed action will improve the University water supply's margin of safety and supplement available water during times in drier years when the existing supply is limited in response to aquatic and environmental concerns.

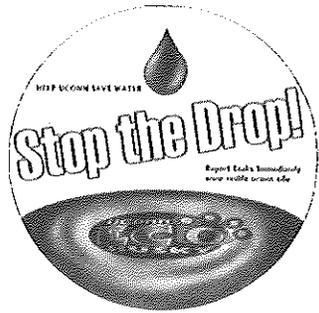
The EIE is being conducted pursuant to the Connecticut Environmental Policy Act (CEPA), which seeks to identify and evaluate the impacts of proposed state actions which may affect the environment. A public scoping meeting for the EIE was held on June 28, 2011, with a second public scoping meeting held January 24, 2012. Finalization of the EIE and identification of a preferred water supply alternative is expected by December 2012.

Water Usage

Water usage in 2011 was essentially the same as that of 2010 despite a slight increase in population, leading to a drop in the year-to-year per capita usage. The drop in per capita usage occurred during a wetter year when streamflows were sustained throughout and there were no direct requests for water conservation in response to environmental concerns. If conservation had been needed, a larger drop would have been expected.

The average daily demand for the water systems has decreased from 1.49 million gallons per day (mgd) in 2005 to 1.29 mgd in 2011. During those years student enrollment and faculty/staff increased by over 9 percent, but the average daily water demand in our water system decreased by 13 percent.

These reductions in system demands did not happen by accident but were the result of deliberate actions taken by the University to conserve water. Over the years, the University has made water system operation changes to maximize water efficiencies, thereby reducing wasted water and has completed



a comprehensive water conservation program in University buildings. The University regularly invests in leak detection and repair, the installation of water-saving devices and more efficient water chillers, the replacement of old water mains, as well as the retrofit or replacement of equipment with more efficient methods. Though the more significant

savings from conservation efforts may have already been realized, it is important to continue to promote conservation and reinforce the need for wise use of water.

Water Conservation

Water conservation measures at the onset of low streamflows are now incorporated in the University's updated water supply plan and were put into practice during 2010 as dry weather conditions brought about streamflows undesirable for river habitat. Because of the wetter weather experienced in 2011, streamflows remained at or above target levels and water conservation measures were not placed into effect during the calendar year. However, the University and NEWUS encourage the wise and efficient use of water at all times by applying the following tips:

Conservation Tips

- Install water-efficient fixtures and equipment, such as water-saving shower heads and toilets.
- Take shorter showers.
- Turn off faucets and showers when not in use.
- Wash full loads in washing machines/dishwashers.
- Limit running water in food preparation.
- Limit outdoor watering to early mornings or evenings and do not water on windy days.
- Mulch around plants to reduce evaporation.
- Limit running water time when washing a car, or use a car wash.
- Repair leaks:
 - In UConn dorms, promptly report leaks to your Resident Advisor.
 - In other campus buildings, report leaks to Facilities Operations at 860-486-3113.

Storrs Campus Water System
Population vs. Daily Demand (in million gallons per day)
2005-2011

