AGENDA

Mansfield Conservation Commission
Wednesday, December 16, 2009
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. November 18, 2009

5. **New Business**
   a. IWA Referrals: (memo from Inland Wetlands Agent)

      W1444 - Hillel House - sidewalk and parking alternations
      W1445 - Chernushek - add'l gravel removal
      W1446 - Kielbania - Mansfield City R - SF house in buffer

   b. Proposed Telecommunication Tower, Daleville Road, Willington (memo from Director of Planning)
   c. Proposed State Streamflow Standards and Regulations (email from River Alliance of CT and draft Regulations attached)
   d. Other

6. **Continuing Business**
   a. UConn Master Drainage Plan/Memorandum of Agreement with DEP/Swan Lake Drainage Outfall Report
   b. Water Supply Issues
      (Willimantic Wellfield Study Technical Advisory Committee meeting postponed to January)
   c. Invasive Plantings (PZC has agreed to revise Zoning Regulations)
   d. Protecting Mansfield's Aquifers (Conservation Commission recommended revisions to Zoning Regulations to be incorporated into Spring 2010 revision proposal)
   e. CL&P "Interstate Reliability Project" (See attached email from CL&P)
   f. Proposed UConn Composting Facility
      (site work has started and facility expected to be in operation in early 2010)
   g. Ponde Place Student Housing Project (well drilling and testing has started)
   h. Natchaug River Basin project (no new information)
   i. Eagleville Brook Impervious Surface TMDL Project (no new information)
   j. Conservation Commission Administrative Procedures
   k. Other

7. **Communications**
   a. Minutes
      - Open Space (11/17/09)
      - PZC (11/16/09; 12/7/09)
      - IWA (12/7/09)
   b. Inland Wetland Agent Monthly Activity Report
   c. Thames River Basin Partnership, Partners in Action Quarterly Report (Fall 09)
   d. 12/7/09 Council on Environmental Quality News Release: Connecticut Forests
   e. Joshua's Tract Winter Newsletter
   f. Nov/Dec 09 Connecticut Wildlife
   g. Other Correspondence

8. **Other**

9. **Future Agendas**

10. **Adjournment**

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 18 November 2009
Community Room, Mansfield Community Center
(DRAFT) MINUTES

Members present: Peter Drzewiecki, Quentin Kessel, Scott Lehmann, John Silander, Frank Trainor. *Members absent*: Robert Dahn, Joan Stevenson. *Others present:* Jason Coite & Rich Miller (UConn Office of Environmental Policy), Matt Hart (Mansfield Town Manager), Greg Padick (Mansfield Director of Planning), Lon Hultgren (Mansfield Director of Public Works), Eric Thomas (Connecticut Department of Environmental Protection), Robert Thorson

1. The meeting was **called to order** at 7:35p by Chair Quentin Kessel.

2. The draft **minutes of the 21 October 09 meeting** were approved with correction of a minor typo.

3. UConn Composting Facility. Rich Miller reported that construction of the new composting facility at a site off Rte. 32 just north of Rte. 44 is now under way. A field trip to a similar facility on a dairy farm in Caanan was arranged for Town residents concerned about odors emanating from UConn's facility; those who went were reassured, according to Miller.

4. UConn Hazardous Waste Site. Kessel asked about the status of UConn's plan to move its hazardous waste transfer station out of the Fenton River watershed. Miller indicated that the University was working on it but was not yet ready to identify a new site. Greg Padick expressed surprise at this, as he had understood that the University had settled on a site off N. Eagleville Rd.; he requested better communication with the Town on this issue.

5. Storrs Campus Drainage Master Plan. Miller & Jason Coite reviewed the University's Drainage Master Plan. In part because the University neglected to obtain Flood Management Certificates for some UConn 2000 projects, the DEP has required it to develop a master plan for dealing with storm-water runoff, with emphasis on reducing flow of sediment and pollutants into Eagleville Brook, which is where most UConn runoff goes at present. DEP and UConn have recently signed a Memorandum of Agreement to this master plan.

The plan aims to manage the volume and rate of storm-water runoff and to improve its quality.

Total runoff volume will be reduced by enhancing infiltration on campus (with rain gardens, green roofs, and porous pavement). Volume directed to Eagleville Brook will be reduced by diverting runoff from 43 acres of this watershed (near W-lot) to the Fenton River watershed, via a pipe from Swan Lake (at the Chemistry Building) under Rte. 195 to Valentine Meadow. (Swan Lake currently drains to Eagleville Brook via underground piping.)

Runoff rate will be managed by using Swan Lake and Mirror Lake (at Manchester Hall) as storm-water reservoirs; a v-notch weir to be installed at Mirror Lake's outflow will increase the lake's capacity.

Water quality will be improved by installing sediment separators on inflows to Swan and Mirror Lakes, and constructing a plunge pool at the Swan Lake outfall in Valentine Meadow (currently badly eroded).

Among the issues raised in discussion were these:

- Q: Why wasn't the Commission informed of the development of the plan and asked to

comment, since it is charged by statute with advising the Town on water resource issues? A: It's a state project, & the state is not required to do so. (Apparently, no other stakeholders were asked for input on the plan, either.)

- Q: Won't diverting storm-water runoff into the Fenton degrade water quality in the Fenton River well-field and the Willimantic Reservoir? A: If DEP had reason to think so, it wouldn't have signed off on the drainage master plan.
- Q: What alternatives to the Fenton diversion were considered? A: More costly diversion to another watershed (e.g., Cedar Swamp).
- Q: What is the basis for claiming that implementation of the plan will slow runoff for 2-, 10-, and 100-year storms to pre-UConn 2000 flows (measured in cfs) in both Eagleville and Roberts Brooks? A: Projections from watershed models calibrated using historical data.
- Q: By how much runoff be reduced for various storm events by improved infiltration at UConn? A: The University is now gathering data on the rain gardens, green roofs, and porous pavement it has already installed.

The Commission thanked Miller & Coite for their presentation. Kessel will re-draft his letter to DEP for consideration at the Commission's December meeting.

6. Updated operating procedures? Kessel observed that the Commission's updated operating procedures still awaited approval or disapproval by the Town Manager. Matt Hart promised to attend to it.

7. FOI Guidelines. Kessel noted that the *FOI Guidelines for Boards, Commissions, and Committees* brochure included with the materials for this meeting prohibits "conducting business via e-mail" and wondered exactly what counts as "conducting business." For example, the location for this meeting was arranged by e-mail. He would appreciate some clarification from the Town Manager.

8. Adjourned at 9:35p.

Scott Lehmann, Secretary, 20 November 09

Memorandum: December 2, 2009
To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
Re: New Business for the December 7, 2009 meeting

Renewal Request:

In our regulations, Section 7.9 B:

Re: permit renewals:

"Any such permit shall be renewed upon request of the permit holder unless the Agency finds that there has been a substantial change in circumstances which requires a new permit application or an enforcement action has been undertaken with regard to the regulated activity for which the permit was issued provided no permit may be valid for more than ten years."

Permit renewals may be acted on at the meeting when the request is received.

W1442(W1296) - King - Wormwood Hill Rd

	yes	no
fee paid	x	
certified receipts		n.a.
map dated	3.02.2005	

This is a request for renewal of permit W1296 issued 4.04.2005. A copy of the original approval is in this packet. No change to the plan is planned at this time. This is a first cut lot from the Dorwart subdivisions. The lot is the most southerly piece of Dorwart's on the west side of Wormwood Hill Rd.

W1443(W1291) - Abbott - Mulberry Rd

	yes	no
fee paid	x	
certified receipts		n.a.
map dated	2.01.2005	

This is a request for renewal of permit W1291 issued 3.07.2005. A copy of the original approval is in this packet. No change to the plan is planned at this time. This is a first cut lot from the Dorwart subdivisions. The lot is at the southeast corner of the Mulberry Rd and Wormwood Hill Rd intersection (east side of Wormwood Hill Rd).

Modification Request:

W1444(W1437) - Hillel House - sidewalk and parking alternations

	yes	no
fee paid	x	
certified receipts		n.a.
map dated	11.13.2009	

This application has been submitted as a modification request. The proposed work will extend the sidewalk along the adjacent driveway from its former ending to the rear of the Hillel property. The present parking at the rear of the site is to shift nearer to the small wetlands area in order to place the present parking fully on the Hillel property. The extended section of the walkway will thus extend a few feet into the wetlands.
This wetland appeared to be clearly related to earlier construction on and off this site. It was mapped as wetlands by John Ianni, Soil Scientist.
As submitted, this plan shows partial filling and regrading of the small wetland area. I suggest the area be reworked as part of this modification to provide a "rain garden" area along this extended walk. This amounts to a mitigation effort which can be acceptable.

Copies of the previous action and map are included in this packet.

A modification request may be acted on the same night of application receipt. A full application has been submitted in case the Agency feels a permit is required for this work.

W1445(W1419) - Chernushek - add'l gravel removal and constr. haul road

	yes	no
fee paid	to come in Thursday	
certified receipts	n.a.	
map dated	10.19.2009 Chernushek map 11.30.2009 GM sketch map undated DeSiato sketch map	

This is a request to remove 750 cubic yards of gravel from the site. The removal will lower the present elevation of the 50'x 150' riding area approximately 2 feet, and will include grading slopes around the existing edges of the area. This work will require a construction access roadway for which permission has been given by the adjacent property owner Mr. Brodin.

A modification request may be acted on the same night of application receipt.

New Applications:

W1446 - Kielbania - Mansfield City R - SF house in buffer

	yes	no
fee paid	x	
certified receipts	to come in.	
map dated	11.23.2009	

This application is for a new house on the former Swanson house at the intersection of Mansfield City R and Spring Hill R. A detailed plan has been submitted, with wetlands located by a soil scientist.

Receipt and referral to the Conservation Commission is appropriate.

Committee Report:

W1447 - IWA Regulation Revisions
Draft Regulations & time line requirements
See information in this packet.

PAGE
BREAK

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
TEL: 860-429-3334 OR 429-3331
FAX: 860-429-6863

FOR OFFICE USE ONLY
File # W 1444/1437
Fee Paid ✓
Official Date of Receipt 12-07-09

Request for Modification

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

— Henry M Zachs - H&Z Contracting, LLC

Part A - Applicant

Name B'NAI B'RITH Hillel Foundations of Conn +C

Mailing Address 40 Woodland St

Hartford CT Zip 06105

Telephone-Home (Cell) 860 3062787 Telephone-Business 860 727-5702

Title and Brief Description of Project

AMEND PDR SIDEWALK AND PARKING GRADE 5, 7B - REMOVE TREES IN WETLANDS

Location of Project 54 North Eagleville Rd

Intended Start Date — AFTER APPROVAL

Part B - Property Owner (if applicant is the owner, just write "same")

Name B'NAI B'RITH Hillel Foundations of Conn

Mailing Address 40 Woodland St

Hartford CT Zip 06105

Telephone-Home 3062787 Telephone-Business 727 520

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature _____ date 11/19/09

Applicant's interest in the land: (if other than owner) CONTRACTOR AND BOARD MEMBER

Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (**See guidelines at end of application – page 6.**)
Please include a description of all activity or construction or disturbance:

a) ***in*** the wetland/watercourse

b) ***in*** the area ***adjacent*** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is ***off*** your property

SIDEWALK – ADD NEW
FENCE RELOCATION/REMOVAL
MODIFY EXISTING PARKING
TREE REMOVAL IN WETLAND AREA
GRADING WETLAND AREA
AS SHOWN DATED
OCT 16TH REVISED NOV. 15TH

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):

a) ***in*** the wetland/watercourse

b) ***in*** the area ***adjacent*** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

APPROXIMATELY 170 FT X 50 = TOTAL
8500 SQ. FT. - TOTAL
ACTUAL WETLANDS IN = 725 SQ FT.

3) Describe the type of materials you are using for the project: GRAVEL BASE FOR PARKING + SIDEWALK – EXISTING - REGRA. SIDEWALK BASE + PARKING BASE to be ADDED

a) include ***type*** of material used as fill or to be excavated GRAVEL

b) include ***volume*** of material to be filled or excavated AVG WIDTH 1.52 FT X 50 = 1500 SQ FT.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

SILT FENCE AS NEEDED -

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

FLAT – WELL DRAINED – SMALL WETLAND

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

NO -

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application – page 6.)**

2) Applicant's map date and date of last revision 10/16/

3) Zone Classification _____

4) Is your property in a flood zone? _____Yes X No _____Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name Address

UCONN - REAR LOT + PARKING + DRIVEWAY

ST THOMAS CHURCH - NORTH EAGLEVILLE

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress; and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. ***Postal receipts of your notice to abutters must accompany your application.*** (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield–sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable

1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site?___Yes___No_X_Don't Know

2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality?____ Yes _X_ No ____ Don't Know

3) Will water run off from the improved site impact streets or other municipal or private property within the adjoining municipality?____ Yes _X_ No ____Don't Know

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (*Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)* ATTACHED DATUM

Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

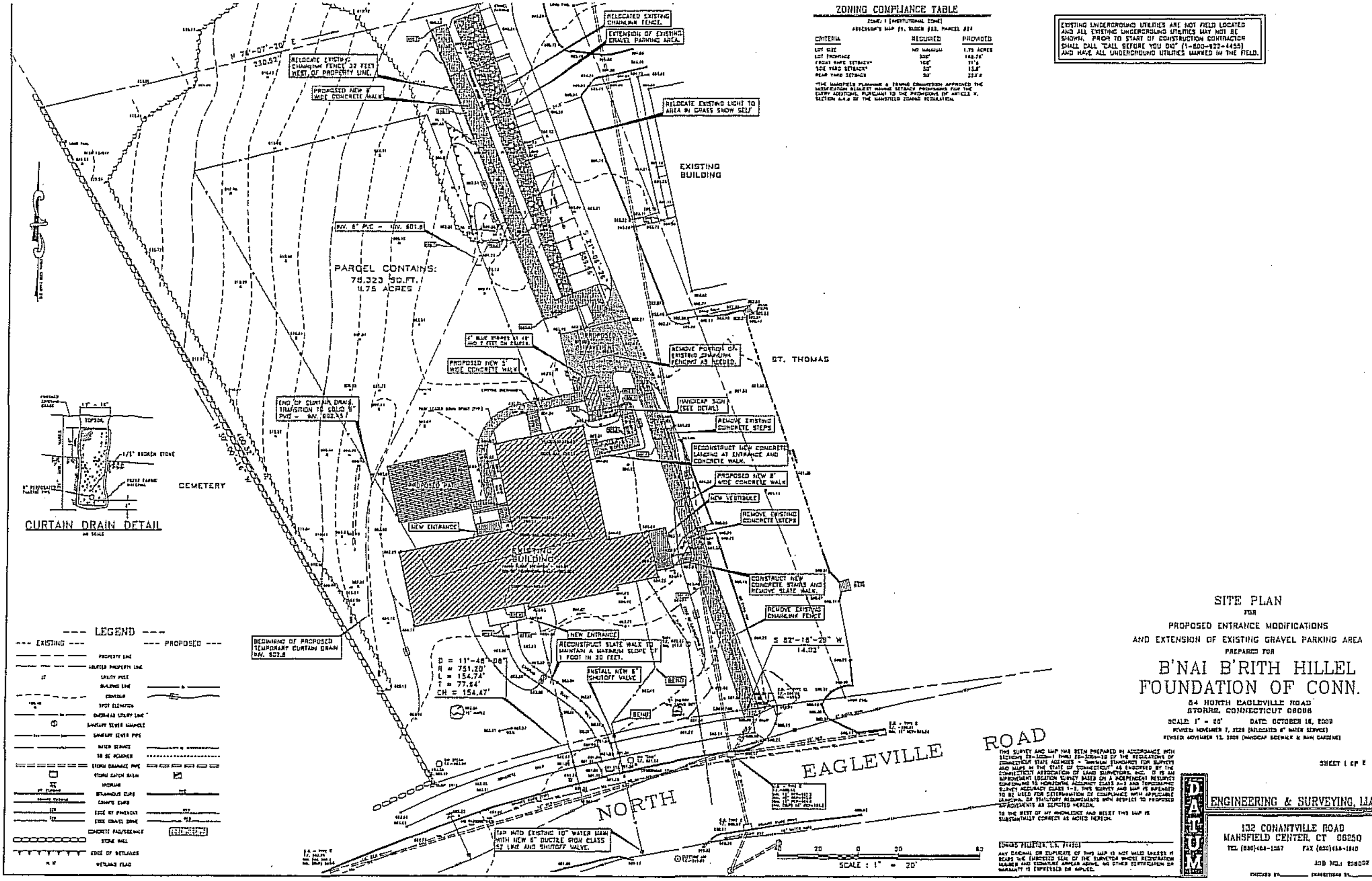
____ $385. _____ $110. ____ $60. ____ $25. $50, PAID BY HAND

Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.

_____ 11/19/09

Applicant's Signature Date


ZONING COMPLIANCE TABLE
CRITERIA
REQUIRED
PROVIDED
EXISTING UNDERGROUND UTILITIES ARE NOT FIELD LOCATED AND ALL EXISTING UNDERGROUND UTILITIES MAY NOT BE SHOWN. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL CALL "CALL BEFORE YOU DIG" (1-800-922-4455) AND HAVE ALL UNDERGROUND UTILITIES MARKED IN THE FIELD.
RELOCATED EXISTING CHAINLINK FENCE.
EXTENSION OF EXISTING GRAVEL PARKING AREA.
RELOCATE EXISTING CHAINLINK FENCE 37 FEET WEST OF PROPERTY LINE.
PROPOSED NEW 8' WIDE CONCRETE WALK
RELOCATE EXISTING LIGHT TO AREA IN GRASS SNOW SHELF
EXISTING BUILDING
PARCEL CONTAINS: 76,323 SQ.FT. / 1.75 ACRES
PROPOSED NEW 5' WIDE CONCRETE WALK
REMOVE PORTION OF EXISTING CHAINLINK FENCING AS NEEDED.
ST. THOMAS
HANDICAP SIGN (SEE DETAIL)
REMOVE EXISTING CONCRETE STEPS
RECONSTRUCT NEW CONCRETE LANDING AT ENTRANCE AND CONCRETE WALK.
PROPOSED NEW 8' WIDE CONCRETE WALK
NEW VESTIBULE
REMOVE EXISTING CONCRETE STEPS
CEMETERY
CURTAIN DRAIN DETAIL
NEW ENTRANCE
EXISTING BUILDING
CONSTRUCT NEW CONCRETE STAIRS AND REMOVE SLATE WALK.
REMOVE EXISTING CHAINLINK FENCE
LEGEND
EXISTING
PROPOSED
BEGINNING OF PROPOSED TEMPORARY CURTAIN DRAIN
NEW ENTRANCE
RECONSTRUCT SLATE WALK TO MAINTAIN A MAXIMUM SLOPE OF 1 FOOT IN 20 FEET.
INSTALL NEW 6" SHUTOFF VALVE
D = 11°-48'-08"
R = 751.20'
L = 154.74'
T = 77.64'
CH = 154.47'
S 82°-18'-29" W 14.02'
NORTH EAGLEVILLE ROAD
TAP INTO EXISTING 10" WATER MAIN WITH NEW 6" DUCTILE IRON CLASS 52 LINE AND SHUTOFF VALVE.
SCALE : 1" = 20'
SITE PLAN
FOR
PROPOSED ENTRANCE MODIFICATIONS
AND EXTENSION OF EXISTING GRAVEL PARKING AREA
PREPARED FOR
B'NAI B'RITH HILLEL
FOUNDATION OF CONN.
54 NORTH EAGLEVILLE ROAD
STORRS, CONNECTICUT 06268
SCALE: 1" = 20'
DATE: OCTOBER 16, 2009
SHEET 1 OF 2
DATUM
ENGINEERING & SURVEYING, LLC
132 CONANTVILLE ROAD
MANSFIELD CENTER, CT 06250

PAGE
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Memorandum: December 3, 2009
To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
Re: W1445/W1419 - Chernushek - Modification request

reference:
W1419 previous approval
Chernushek letter - 10.19.2009
DeSiato sketch map
GM sketch map

This is a request to remove 750 cubic yards of gravel from the site. The removal will lower the present elevation of the 50'x 150' training area approximately 2 feet, and will include grading slopes around the edges of the area. This work will require a construction access roadway for which approval has been given by the adjacent property owner. (See attached GM sketch map).

I have walked the site with Mr. DeSiato who has explained the work involved:

He will lower the 50'x 150' training area approximately 2 feet and slope the surrounding edges at 2:1 slope.

Access to the site for his trucks will be from the adjacent Brodin property parking lot. The roadway will be 12 feet wide.

I have spoken with Mr. Brodin and verified that he has given permission for this access.

This work is consistent with the previous approval except for the truck access roadway.

This change to have gravel removed from the site comes about from the depth to the sandy layer that was found once the area was graded. The stony gravel found is not suitable for horses hooves. The sandy layer two feet deeper is suitable.

This request offers professional finishing of the site by Mr. DeSiato, with the construction of an access roadway being the significant change to the previous approval.

The timing of this work is unfortunate due to the season. The choice is between doing this work now or waiting until Spring. I favor waiting until Spring.

It seems to me that we have to weigh the risk of 4 months delay against the risk of fresh work being stopped by winter weather and being more vulnerable during the winter. The present site surfaces have been stable and the central pond area has contained what material has moved. This impondment acts as a sediment trap. Previous seeding has matured in most areas along the wetlands so that major disturbance seems undesirable at this late date. If fresh work is started and then stopped due to weather, conditions may be worse through the rest of the winter.

Considerations:

Starting this work now

- fresh soil surfaces will be exposed to winter weather without the stabilization provided by grass growth
- work may be stopped by frost making finish work difficult

Waiting until Spring

- seasonal cold weather issues will not be of concern
- stabilizing grass on fresh soil surfaces can grow in quickly
- means four months delay

Mr. Chernushek's 10.19.2009 letter adds some discussion to the original approval. This letter was received 10.19.2009; it reads as if it is at the time of the original approval. The following specific items are mentioned:

1. **stump disposal** - the original approval indicated moving the stumps from the present locations to a specific location shown on the approved plan. This is appropriate. I don't recommend leaving them where they are. The specific area was #14 on the approved plan.
2. **gravel surfaces:**
   A. area #6 is the 50'x 150' riding area. The request we have now will lower this area 2 feet and that is the location of the 750 cubic yards of gravel removal.
   B. brook crossing #4 is the rear brook crossing. This should remain at its present height with the stone protection mentioned.
3. **grass area** was approved at 25' wide rather than 10 feet wide.
4. **garden area** no change indicated. This is area #8 on the approved plan.
5. the winter rye planting mentioned was done and has come in fairly well in areas near wetlands.
6. this letter mentions **possible removal of 6 to 12 trees** in area #15 on the approved plan. Mr. DeSiato indicated he expected to be able to make his truck entrance without any large tree cutting, and that he is intending to finish the present banks without any tree clearing. The two feet of gravel are to be removed from the present 50'x 150' riding area (area #6 on the approved plan).
7. brook crossing #5 is the front brook crossing and I measured the two pipes under it. One is 4" the other 6". The **6" pipe** was installed. It was approved in the original approval.

Recommendations:

1. The original approval should remain in effect and be revised to include the removal of 750 cubic yards of gravel from the 50'x 150' riding area, and the new 12' wide truck access from the rear Brodin parking lot to the 50'x 150' riding area.
2. This work should not be started until April 1, 2010 and should be finished by July 1, 2010.
3. Silt fencing is to be placed along the downhill side of the

access road from the Brodin parking area to the edge of the 50'x 150' area.

4. Silt fencing now in place along the northwesterly wetlands crossing is to be reset so water won't pass under it.
5. the rear brook crossing (#4) should remain at its present height to provide an effective pond for continued sediment protection.

PAGE
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Certified Mail Return Receipt
#91 7108 2133 3934 5228 5945

TOWN OF MANSFIELD
INLAND WETLAND AGENCY

AUDREY P. BECK BUILDING
FOUR SOUTH EAGLEVILL ROAD
STORRS, CT 06268
(860) 429-3330

FILE

April 8, 2009

Henry Chernushek
473 Middle Turnpike
Storrs, CT 06268

Re: Mansfield's IWA approval
IWA file #1419

Dear Mr. Chernushek,

At a meeting held on 4/6/09, the Mansfield Inland Wetlands Agency adopted the following motion:

"to grant an Inland Wetlands License under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield to **Henry M. Chernushek** (file no. W1419), for clear cutting in wetlands and regulated areas within 150 feet of wetlands, as shown on plans dated January 2, 2009 and received at the January 5, 2009 meeting of the Wetlands Agency, and as described in other application submissions including a 2/25/09 Attachment #1 and 2/26/09 Attachment #2, both drawn by Grant Meitzler, Wetlands Agent. This action is based on the application submissions, consideration of applicable regulations, information observed on field trips to the site on December 10, 2008 and January 12, 2009, and information presented in public hearing sessions held on February 2, 2009 and March 2, 2009.

Based on the above considerations, the Agency hereby finds this project will not cause significant impact, provided the following conditions are met:

1. Work is to be done according to the applicant's plan, submitted to staff on January 2, 2009 and received at the January 5, 2009 meeting, with the following modifications, which shall be attached to and made a part of the plan:
   A. A second row of silt fence shall be installed along the downstream edge of "crossing #4", as shown on the 1/02/2009 plan.
   B. The indicated 10-foot wide grassed separation area (#9 on the 1/02/09 plan) between the riding area (#6 on the 1/02/09 plan) and the sediment pond (#7) and the garden (#8) shall be increased to 25 feet. This increase will allow the flat riding area to be raised about two feet and lessen the volume of excavation.
   C. Disturbed areas downstream of "crossing #4" and upstream of "crossing #5" shall be finish-graded and seeded by April 30, 2009. The 25 foot wide grassed areas between the sediment pond (#7) and garden (#8) shall be finish-graded and seeded by April 30, 2009. These are areas directly adjacent to wetlands and most in need of stabilization. Adequacy of seeding is to be assessed by the Chairman and the Wetlands Agent. The applicant is directed to local seed suppliers and/or the Natural Resources Conservation Service who can provide specific manufacturers recommendations for type of seed and recommended planting instructions.
   D. Stumps shall be moved to the area marked #14 on the January 2, 2009 plan.
   E. A 6-inch diameter pipe shall be added under "crossing #5" on the January 2, 2009 plan.
   F. Minor changes are recommended to the rectangular shape of the riding area (#6) to reduce disturbance due to excavation. Any such change is to be approved by the Wetlands Agent prior to that change being made.

Certified Mail Return Receipt
#91 7108 2133 3934 5228 5945

2. It is understood that areas that were clear cut are not intended for general pasture use. Unless a change in use is specifically authorized by the Inland Wetlands Agency, the applicant shall restrict animal use to the approved riding area (#6).

3. Work is to start and continue on or before April 15, 2009 and is to be completed by July 1, 2009. The Wetlands Agent is to make regular inspections of this site and to regularly report to the Wetlands Agency until the July 1, 2009 completion date.

4. The applicant is to be provided with a report entitled "A Guide to Composting Horse Manure" and strongly encouraged to follow those guidelines to minimize wetlands impact.

5. All erosion and sedimentation controls shall be in place prior to construction and maintained during construction and removed when disturbed areas are completely stabilized. Particular care should be taken to control erosion on the steep slope between the house/barn area and the garden/wetlands area below.

This approval is valid for a period of five years (until April 6, 2014), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment."

This letter constitutes your license.

If you have any questions regarding this action, please call the Planning Office at 429-3330.

Very truly yours,

Katherine K. Holt, Secretary
Mansfield Inland Wetlands Agency

Attachments (1)

ZEO Received 10/19/09

Curt Hirsch – Zoning Agent
Town of Mansfield

We have an ongoing project through the Inland-Wetland Agency Ref.# 91-7108-2133-3934-5228-4412
File# W1418

To complete this project we need to have 700 to 750 cubic yards of sand and gravel removed. This would be needed to level the pasture/riding area for our horses.

The work will be done by DeSiato Sand and Gravel Corp. of Mansfield. The work will be done between the hours of 7am and 5pm..Equipment used would be an excavator and dump trucks.

Bernie of Villa Hills Golf Course has agreed to let the trucks go out through the clubhouse parking lot and out of the driveway across from Birch Rd. on Rte. 44.

Our neighbors were notified by certified mail in Dec. 2008 of our project and the possibility of having the sand and gravel removed to complete our project. De Siato will only be removing the sand and gravel. The white sand/clay material will be left and leveled for the riding area. The riding area is for personal use only. The work should only take about one week, weather permitting. As soon as we get a permit he can do the work within a few weeks.

I'd like to get this project completed as soon as possible so I can plant grass seed in the meadow before winter.

Thank you for your help.

Mike Chernushek
473 Middle Tpke.
Mansfield
487-4328
cell: 208-2915

Received by ZEO
10-19-09

SWEET Charity Farm
Jo Ann and Mike Chernushek
373 Middle TURNPIKE
Mansfield, CT 06268
860-487-4328

Inland Wetland Agency
Ref# 91-7108-2133-3934-5228-4412 File# W1418

This is an addition to our original application to answer some of your questions.

Stump disposal - the stumps on the work site are going to be cut up for firewood after they season for one year. My friend in Tolland has an outdoor woodburning boiler and needs the wood. If they need to be moved I can move them to higher ground behind the proposed riding areas past rear corner.

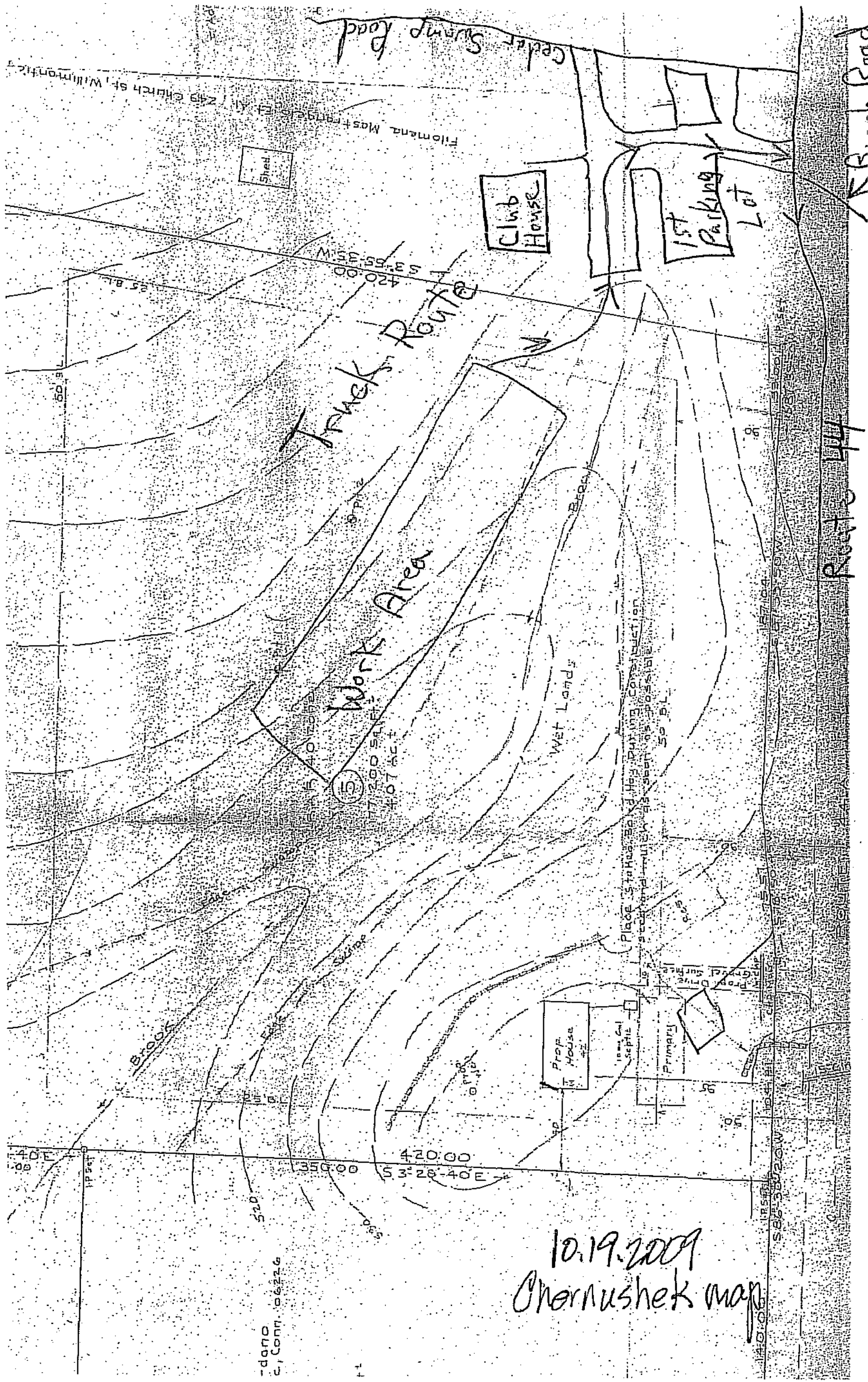
Gravel surfaces - The area shown as #6 is going to be levelled off 2 feet higher than our original plan so no material

will be removed from the property. The brook crossing marked #4 will be raised 1 to 2 feet and stones will be placed on the back side to prevent runoff from the sediment pond during heavy rains.

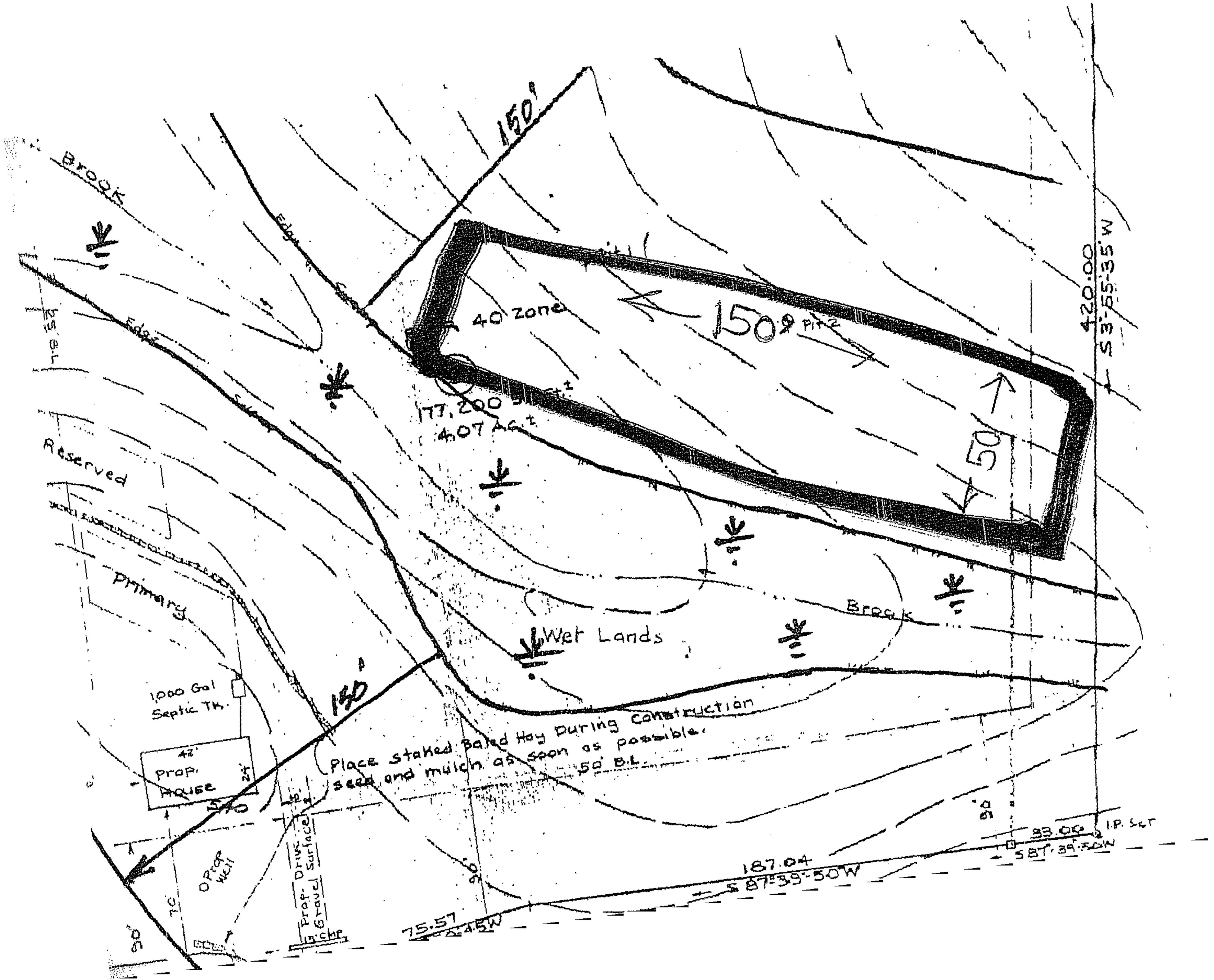
There will be a grass area, min of 10 feet, planted all around the brooks and sediment pond.
Garden area - This area is approximately 40 feet by 100 feet between the house driveway and the brook. It needs to be levelled and stones removed. There will be no material taken out or brought in for this project. I planted 50 pounds of winter rye seed on this area and around the brook and sediment pond.

Tree removal - the only possible tree removal will be on the east side of the riding area, if needed, to slope the hill to meet safety requirements of 2 to 1 by the zoning regulations. This would only be 6 to 12 trees at most.

Construction - as of now we do not have any plans to build a barn or any other structures on the work site. I will be doing all the work myself. The only equipment will be my payloader to move material around and a buildozer to level the riding area. The only brook work needed is on brook crossing #5. I'd like to place a 6 inch pipe next to the 4 inch pipe already there.

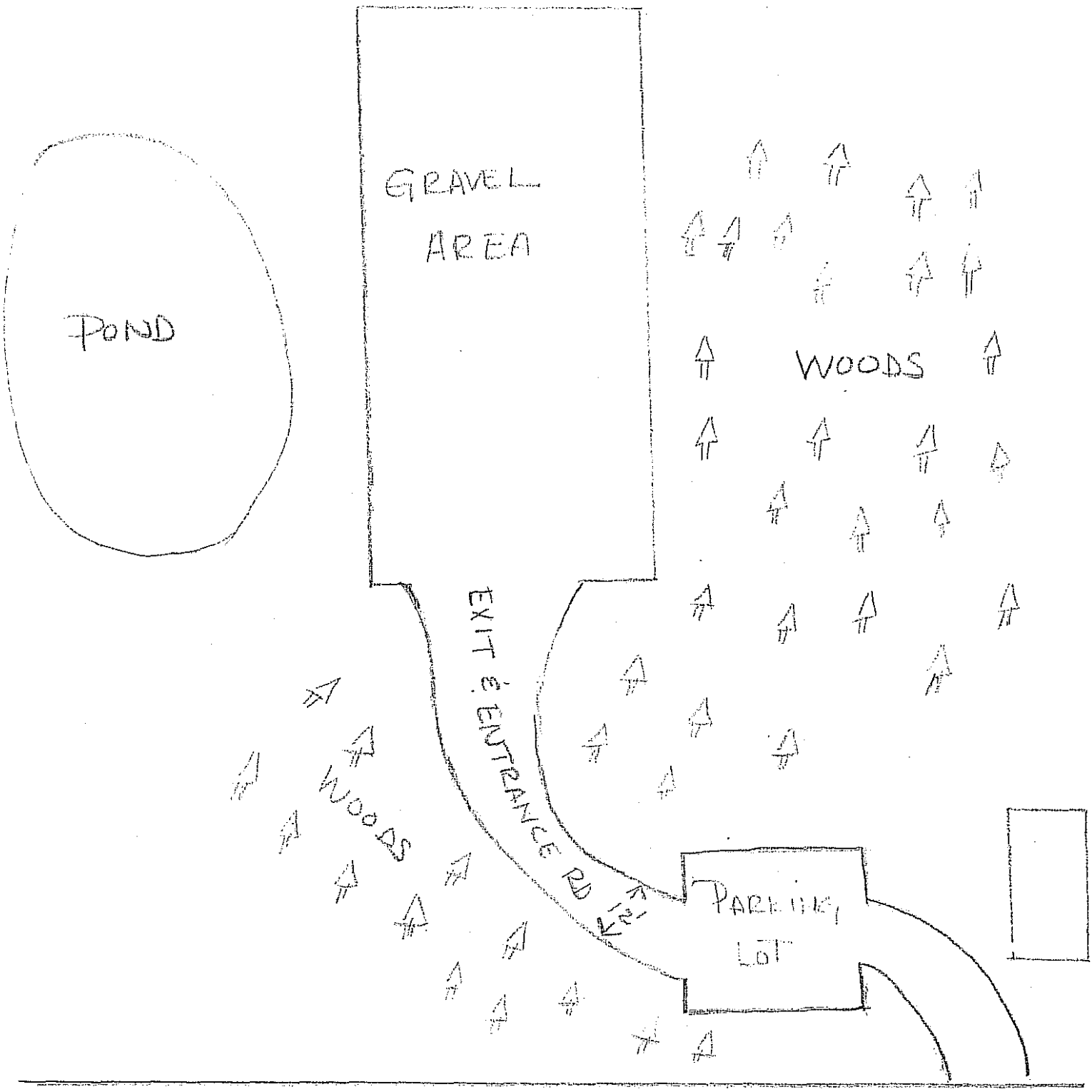


Cedar Swamp Road
Club House
1st Parking Lot
Truck Route
Work Area
Wet Lands
Route 44
Shed
Brook
420.00
S 3°55'35" W
350.00
S 3°28'40" E
Prop. House
Septic
Primary
10.19.2009
Chernushek map



Brook
Edge
150'
40 Zone
150 ft
50
420.00
S 3°-55'-35" W
177,200 S.F.±
4.07 Ac.±
Reserved
Primary
Wet Lands
Brook
1,000 Gal
Septic Tk.
42'
Prop.
House
24'
150'
Place Staked Baled Hay During Construction
seed and mulch as soon as possible.
50' B.L.
25' B.L.
Prop. Well
Prop. Drive
Gravel Surface
93.00
I.P. Set
S 87°-39'-50" W
187.04
S 87°-39'-50" W
75.57

DeSiato
SAND & GRAVEL
CORPORATION



DECORATIVE STONE • CRUSHED STONE • SAND • SCREENED LOAM
EXCAVATING • TRUCKING • BULLDOZING

999 STAFFORD RD. • STORRS, CT 06268 • TEL: 860.429.6479 • FAX: 860 429-5436

Brodin
Modification Request

11.30.09

GIS sketch map
not to scale

① Desiato access route
② existing area - gravel removal

APPLICATION FOR PERMIT
MANSFIELD INLAND WETLANDS AGENCY
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268
TEL: 860-429-3334 OR 429-3331
FAX: 860-429-6863

FOR OFFICE USE ONLY
File # W 1446
Fee Paid $185 -
Official Date of Receipt

Applicants are referred to the Mansfield Inland Wetlands and Watercourses Regulations for complete requirements, and are obligated to follow them. For assistance, please contact Grant Meitzler, Inland Wetlands Agent at the telephone numbers above.

Please print or type or use similar format for computer; attach additional pages as necessary.

Part A - Applicant

Name Bryan F. and Margaret O. Kielbania

Mailing Address 408 Browns Road

Storrs, CT Zip 06268

Telephone-Home ____ Telephone-Business (Cell) (860) 428-7119

Title and Brief Description of Project

Septic Design & Plot Plan for Bryan F & Margaret O. Kielbania - 3 Bedroom Home and related improvements

Location of Project 619 Mansfield City Road

Intended Start Date February, 2010

Part B - Property Owner (if applicant is the owner, just write "same")

Name Same

Mailing Address ____

____ Zip ____

Telephone-Home ____ Telephone-Business ____

Owner's written consent to the filing of this application, if owner is not the applicant:

Signature ____ date ____

Applicant's interest in the land: (if other than owner) ____

Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (**See guidelines at end of application – page 6.**)
Please include a description of all activity or construction or disturbance:
a) ***in*** the wetland/watercourse
b) ***in*** the area ***adjacent*** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is ***off*** your property

a) No Wetland disturbance.
b) See plans. Disturbance of about 0.364 Ac.. The area drains to the on site wetlands. The activities include excavation, filling, construction of new 3 bedroom house, driveway, septic system and footing drains. The disturbed area is to be silt fenced.

2) Describe the amount or area of disturbance (in square feet or cubic yards or acres):
a) ***in*** the wetland/watercourse
b) ***in*** the area ***adjacent*** to (within 150 feet from the edge of) the wetland/watercourse, even if wetland/watercourse is **off** your property

Disturbed area within 150' of the edge ≈ 0.364 Ac.

3) Describe the type of materials you are using for the project: See plans, concrete, wood, gravel, pipe, etc.

a) include ***type*** of material used as fill or to be excavated sandy gravel, till, topsoil, & some stones
b) include ***volume*** of material to be filled or excavated 300 yds³ for foundation hole.

4) Describe measures to be taken to minimize or avoid any adverse impacts on the wetlands and regulated areas (silt fence, staked hay bales or other Erosion and Sedimentation control measures).

See plans. Use of silt fence, timely construction and daily monitoring.

Part D - Site Description

Describe the general character of the land. (Hilly? Flat? Wooded? Well drained? etc.)

Sloped homestead area, lawn with trees ~~and~~, driveway and some boulders.

Part E - Alternatives

Have you considered any alternatives to your proposal that would meet your needs and might have less impact on the wetland/watercourse? Please list these alternatives.

No more suitable area for house construction exists on the site. Reconstruction of the delapidated non zoning & building compliant house was impractical. It was removed for safety concerns.

Part F - Map/Site Plan (all applications)

1) Attach to the application a map or site plan showing **existing conditions** and the **proposed project** in relation to wetland/ watercourses. Scale of map or site plan should be 1" = 40'; if this is not possible, please indicate the scale that you are using. A sketch map may be sufficient for small, minor projects. **(See guidelines at end of application – page 6.)**

2) Applicant's map date and date of last revision 11/23/09

3) Zone Classification RAR 90

4) Is your property in a flood zone? ____Yes X No ____Don't Know

Part G - Major Applications Requiring Full Review and a Public Hearing

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) List the names and addresses of abutting property owners

Name Address

See attached list (7 abutters)

2) **Written Notice to Abutters** . You must notify abutting property owners by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. ***Postal receipts of your notice to abutters must accompany your application.*** (This is not needed for exemptions).

Part I - Additional Notices, if necessary

1) Notice to Windham Water Works is attached. If this application is in the public watershed for the Windham Water Works (WWW), you must notify the WWW of your project within 7 days of sending the application to Mansfield--sending it by certified mail, return receipt requested. Contact the Mansfield Inland Wetlands Agent to find out if you are in this watershed.

2) Notice to Adjoining Town. If your property is within 500 feet of an adjoining town, you must also send a copy of the application, on the same day you sent one to Mansfield, to the Inland Wetlands Agency of the adjoining town, by certified mail, return receipt requested.

3) The Statewide Reporting Form (attached) shall be part of the application and specified parts must be completed and returned with this application.

Part J - Other Impacts To Adjoining Towns, if applicable N/A

1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site?___Yes___No___Don't Know

2) Will sewer or water drainage from the project site flow through and impact the sewage or drainage system within the adjoining municipality?____ Yes ____No ____ Don't Know

3) Will water run-off from the improved site impact streets or other municipal or private property within the adjoining municipality?____ Yes ____No ____Don't Know

Part K - Additional Information from the Applicant

Set forth (or attach) any other information which would assist the Agency in evaluating your application. (*Please provide extra copies of any lengthy documents or reports, and extra copies of maps larger than 8.5" x 11", which are not easily copied.)*

Part L - Filing Fee

Submit the appropriate filing fee. (Consult Wetlands Agent for the fee schedule available in the Mansfield Inland Wetlands and Watercourses Regulations.)

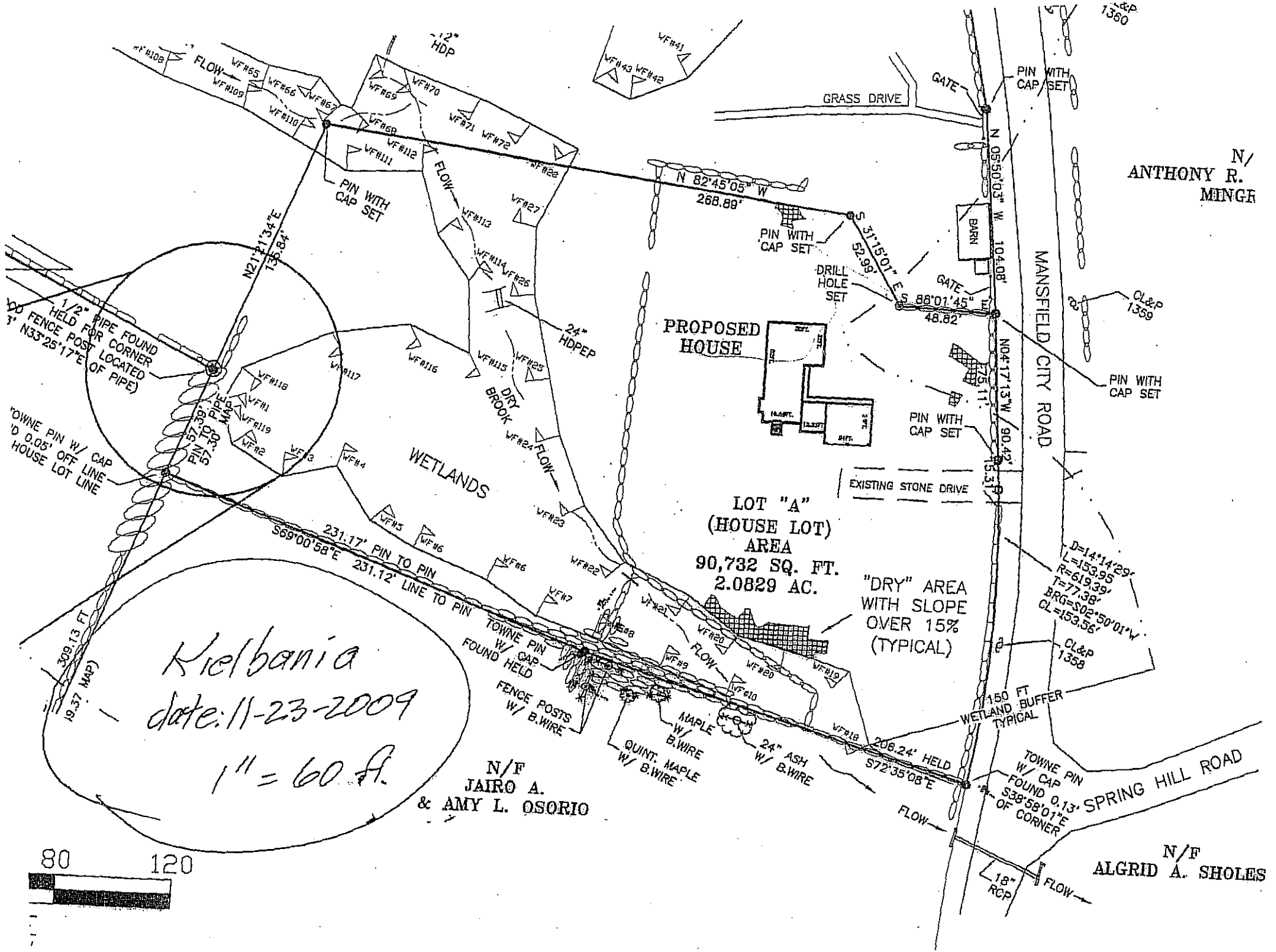
____ $385. ____ $110. ____ $60. ____ $25.

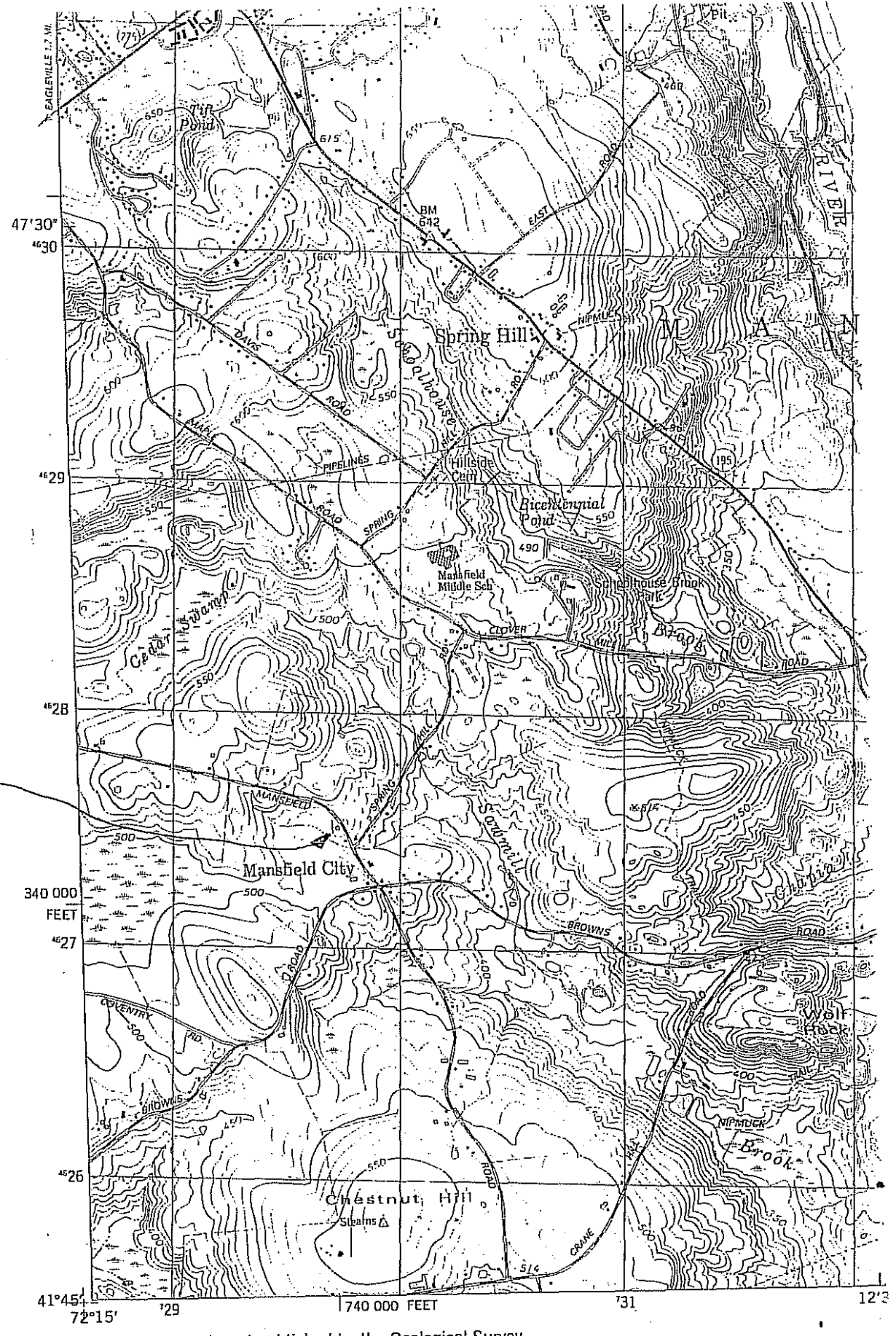
Note: The Agency may require you to provide additional information about the regulated area which is the subject of the application, or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional information and/or a public hearing may be required.

The undersigned applicant hereby consents to necessary and proper inspections of the above mentioned property by members and agents of the Inland Wetlands Agency, at reasonable times, both before and after the permit in question has been granted by the Agency.

B [signature] 11-30-09

Applicant's Signature Date


PROPOSED HOUSE
LOT "A"
(HOUSE LOT)
AREA
90,732 SQ. FT.
2.0829 AC.
"DRY" AREA WITH SLOPE OVER 15% (TYPICAL)
WETLANDS
DRY BROOK
EXISTING STONE DRIVE
GRASS DRIVE
GATE
BARN
MANSFIELD CITY ROAD
SPRING HILL ROAD
PIN WITH CAP SET
DRILL HOLE SET
N 82°45'05" W 268.89'
S 31°15'01" E 52.99'
S 86°01'45" E 48.82'
N04°17'13"W 90.42'
N 05°50'03" W 104.08'
75.11'
15.31'
D=14°14'29"
L=153.95'
R=619.39'
T=77.38'
BRG=S02°50'01"W
CL=153.56'
CL&P 1360
CL&P 1359
CL&P 1358
N/ ANTHONY R. MINGR
N21°21'34"E 136.84'
1/2" PIPE FOUND HELD FOR CORNER (FENCE POST LOCATED N33°25'17"E OF PIPE)
TOWNE PIN W/ CAP 0.05' OFF LINE HOUSE LOT LINE
57.39' PIN TO PIPE
PIPE MAP
309.13 FT (19.37 MAP)
231.17' PIN TO PIN
S69°00'58"E 231.12' LINE TO PIN
TOWNE PIN W/ CAP FOUND HELD
FENCE POSTS W/ B.WIRE
MAPLE W/ B.WIRE
QUINT. MAPLE W/ B.WIRE
24" ASH W/ B.WIRE
206.24' HELD S72°35'08"E
TOWNE PIN W/ CAP FOUND 0.13' S38°58'01"E OF CORNER
150 FT WETLAND BUFFER TYPICAL
18" RCP
FLOW
12" HDP
24" HDPEP
N/F JAIRO A. & AMY L. OSORIO
N/F ALGRID A. SHOLES
Kielbania
date: 11-23-2009
1" = 60 ft.
80
120



SITE

SPRING HILL
CONN.
1" = 2000'

(COLUMBIA)
6567 III NE

Mapped, edited, and published by the Geological Survey
in cooperation with Connecticut Department of Environmental Protection

Control by USGS, NOS/NOAA, and Connecticut Geodetic Survey

Topography by photogrammetric methods from aerial photographs
taken 1974. Field checked 1976. Revised from aerial photographs
taken 1980. Limited field check 1983. Map edited 1983
Supersedes map dated 1953

Projection and 10,000-foot grid ticks: Connecticut coordinate
system (Lambert conformal conic)

MN GN
14½° 258 MILS
1°53' 33 MILS

41

TOWN OF MANSFIELD
OFFICE OF PLANNING AND DEVELOPMENT

GREGORY J. PADICK, DIRECTOR OF PLANNING

Memo to: Mansfield Town Council
Mansfield Planning and Zoning Commission
Conservation Commission
From: Gregory Padick, Director of Planning
Date: 12/2/09
Re: Proposed telecommunication tower, Daleville Road, Willington

Please find attached a 12/1/09 letter from K. Baldwin, representing Cellco Partnership d/b/a Verizon Wireless, describing a proposed new telecommunication tower off of Daleville Road and portions of a technical report prepared in association with state permit requirements. The following comments are offered for the consideration of the PZC, Town Council and Conservation Commission.

- The proposed tower is under the jurisdiction of the Connecticut Siting Council. Pursuant to Siting Council guidelines, an advance sixty (60) day notice period has been provided to the Town of Willington and to the Town of Mansfield (due to the proposed tower's location within 2,500 feet of the Town line). In association with a formal application to the Siting Council, a public hearing will be held in Willington to receive any formal comments. Preliminary comments can be submitted prior to the formal application submittal.

- The proposed tower would be 100 feet tall and would be located near the center of a 22 acre parcel at 343 Daleville Road. Access would be from an existing driveway on Daleville Road.

- The expressed purpose of the proposed tower is to improve coverage along Route 44 where there is a 2.15 mile cellular frequency gap and a 1.99 mile PCS frequency gap. The tower has been designed for a minimum of three (3) additional wireless carriers.

- The technical report includes a preliminary viewshed map which indicates that there will be limited off-site visual impact. The tower will be visible year round from upper portions of Horse Barn Hill on the UConn campus and from a small area on Old Turnpike Road.

- The submitted information indicates that there will be minimal impacts on environmental resources and no impact on historic resources. The site is not within a DEP designated Natural Diversity Data Base area.

- In 2008, essentially the same tower proposal was formally submitted to the CT. Siting Council but withdrawn prior to the holding of a public hearing. Town officials reviewed the 2008 application and, at that time did not forward any comments for state consideration.

Summary/Recommendation

My review indicates that the proposed tower will have minimal impact on Mansfield residents or the physical environment. Other existing towers in the area are more visible. The proposed tower is expected to enhance wireless service for Mansfield residents and visitors. No comments or recommendations from Mansfield officials are considered necessary at this time. An additional opportunity to comment will be available in association with the CT Siting Council's Public Hearing.

PAGE
BREAK

ROBINSON & COLE LLP

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

December 1, 2009

Christina B. Mailhos
First Selectman
Town of Willington
40 Old Farms Road
Willington, CT 06279

Re: **Submission of Technical Information Concerning Proposal to Construct a Wireless Telecommunications Facility at 343 Daleville Road, Willington, Connecticut**

Dear Ms. Mailhos:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). In April of 2008, Sandy Carter and I met with you and Susan Yorgenson to discuss Cellco's plans to construct a wireless telecommunications tower at 343 Daleville Road in Willington. Following that initial meeting, the Cellco development team appeared before the Willington Inland Wetlands and Watercourses Commission to discuss the proposal. On August 25, 2008, Cellco filed its application with the Connecticut Siting Council ("Council"). In November 2008, Cellco determined that it was not prepared to proceed with the development of this tower site and withdrew its Council application. Following a recent review of network development priorities, Cellco has decided to reactivate this site and recommence the Council approval process.

The proposed wireless telecommunications facility in Willington (the "Facility") will provide service to Cellco customers in the southeasterly portion of Willington and northerly portions of the Town of Mansfield. This technical report is submitted pursuant to Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50*l*(e), which establishes local input requirements for the siting of any facility under the jurisdiction of the Council.

For your information, a copy of this report will also be forwarded to Mayor Elizabeth C. Paterson and Matthew W. Hart, Town Manager for the Town of Mansfield. Conn. Gen. Stat. § 16-50*l*(e) requires the submission of technical information to the municipality where the facility will be located and any other

municipality within 2,500 feet of the proposed facility location. The proposed Facility is located within 2,500 feet of the Mansfield town line.

Correspondence and/or communications regarding the information contained in this report should be addressed to:

Sandy Carter, Regulatory Manager
Verizon Wireless
99 East River Drive
East Hartford, CT 06108
(860) 803-8219

A copy of all such correspondence or communications should also be sent to Cellco's attorneys:

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
(860) 275-8345

Cellco intends to submit an application to the Council requesting a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance and operation of a wireless telecommunications facility at 343 Daleville Road. The proposed Facility would provide coverage along Route 44 and local roads in the area, particularly in those areas not currently served by Cellco's existing Ashford West 2 cell site (an existing tower at 99 Knowlton Road, Ashford); Mansfield cell site (an existing tower at 497 Middle Turnpike, Mansfield); Storrs cell site (an existing tower at 82 North Eagleville Road, Storrs); UCONN East cell site (a facility at the Storrs Congregational Church at 2 North Eagleville Road, Storrs); UCONN cell site (an existing building façade installation at 855 Bolton Road, Mansfield); and Mansfield North cell site (an existing Town-owned tower at 1725 Stafford Road, Mansfield). Coverage plots for Cellco's existing cell sites in the area alone and together with the proposed Facility are included in Attachment 1. On these plots the proposed Facility at 343 Daleville Road is identified as the "Willington-Mansfield 4 Corners" cell site.

Cell Site Information

The proposed Facility would be located in the central portion of a 22 acre parcel located at 343 Daleville Road in Willington. This site is located in Willington's Residential R-80 zone district.

At this site, Cellco proposes to construct a 100-foot telecommunications tower. Cellco will install a total of twelve (12) panel-type antennas at the top of the tower with their centerline at the 97-foot level. Equipment associated with the Cellco antennas would be located in a 12' x 30' shelter located near the base of the tower. Cellco will also place a 1000 gallon propane tank on the ground within the fenced compound. All site improvements associated with the proposed Facility would be located within a 100' x 100' leased area. Access to the cell site would extend from Daleville Road over a portion of the landowner's existing driveway, a distance of approximately 710 feet, then over a new gravel access driveway, a distance of approximately 450 feet to the cell site. Both the tower and leased area are designed to accommodate additional carriers. Project plans for the Facility are included in Attachment 2.

Connecticut Siting Council

Municipal jurisdiction over the siting of the proposed telecommunications facility described in this report is pre-empted by provisions of the Public Utilities Environmental Standards Act ("PUESA"), Conn. Gen. Stat. § 16-50g et seq. The PUESA gives exclusive jurisdiction over the location, type and modification of telecommunications towers to the Council (Conn. Gen. Stat. § 16-50x(a); 16-50i(a)(6)). Accordingly, the Facility described in this report is exempt from the municipal land use regulations (e.g. zoning, wetlands, etc.), which may ordinarily apply to this type of site development. However, pursuant to § 16-50*l*(e) of the General Statutes, municipal officials are entitled to receive technical information regarding the proposal at least sixty (60) days prior to the filing of an application with the Council. This technical information is provided to the municipalities in accordance with this provision.

Pursuant to Section 16-50*l*(e) of the General Statutes, Cellco must provide a summary of the Town's comments and recommendations, if any, to the Council within fifteen (15) days of the filing of an application. Upon receipt of an application, the Council will assign a docket number and set a hearing date. At that time, the Town may choose to become a party in the proceeding. Other procedures followed by the Council include serving the applicant and other participants with interrogatories, holding a pre-hearing conference, and conducting a public hearing.

The public hearing would be held at a location in Willington. Following the public hearing, the Council will issue findings of fact, an opinion and a decision and order. Prior to construction, the Council will also require the Applicant to submit a development and management plan ("D&M Plan") which is, in essence, a final site development plan showing the location of structures and details of site development. These procedures are also outside the scope of the municipality's jurisdiction and are governed by the Connecticut General Statutes, the Regulations of Connecticut State Agencies, and the Council's Rules of Practice. If the Council approves the Facility described in this report, Cellco will submit to the municipal Building Official an application for approval of a local building permit. Under Section 16-50x of the General Statutes, which provides for the exclusive jurisdiction of the Council, the building official must honor the Council's decision.

Public Need

The primary purpose of the Facility described above is to provide coverage to customers between Cellco's existing Ashford West 2, Mansfield and Storrs cell sites, particularly along the heavily-traveled Route 44 and local roads in the area. As depicted on the coverage maps included in Attachment 1, Cellco cannot currently provide reliable service at PCS or cellular frequencies to customers traveling along Route 44 from its existing sites in this area. The Facility described in this filing will provide coverage to a 2.15 mile portion of Route 44 at cellular frequencies; a 1.99 mile portion of Route 44 at PCS frequencies; and an overall area of approximately 3.2 square miles at cellular frequencies and 1.4 square miles at PCS frequencies.

Environmental Effects

From our experience, the primary impact of a wireless facility, such as the one proposed here, is visual. The visual impact of the proposed facilities will vary from place to place around each facility, depending upon factors such as vegetation, topography, distance from the tower, and the location of buildings in the sight-line of the facility. (See Attachment 4 – Preliminary Viewshed Map).

There would also be no significant air, water, noise or other environmental impacts from the proposed Facility. The operations at the Facility would not pose any hazard to human health. No sanitary facilities are required and none are proposed. Finally, the leased area has been located so as to minimize the need to remove any significant trees in the area.

Power Density

The Federal Communications Commission ("FCC") has adopted a standard (the "Standard") for exposure of radio frequency ("RF") emissions from telecommunications facilities like the proposed Facility. To ensure compliance with the Standard, Cellco has performed power density calculations for the site according to the methodology described in FCC Office of Science and Technology Bulletin No. 65 ("OST Bulletin 65"). This calculation is a conservative, worst-case approximation of RF power density levels at the closest accessible point to the antenna (i.e., the base of the tower), and with all antennas transmitting simultaneously on all channels at full power. The calculated power density level for Cellco antennas at the Facility would be 35.43% of the Standard (see Attachment 3).

Scenic Natural Historic or Recreational Impacts

To further assess the environmental impacts of the proposed Facility, Cellco has asked Vanasse Hangen Brustlin, Inc. ("VHB") to prepare a National Environmental Policy Act ("NEPA") Environmental Screening Checklist (the "NEPA Checklist") to determine if the Facility will have any significant adverse environmental effects. The NEPA Checklist includes information from the Environmental and Geographic Information Center of the Connecticut Department of Environmental Protection ("DEP"), the U.S. Fish and Wildlife Service ("USFWS") and the State Historic Preservation Officer ("SHPO"). The USFWS has already determined that the proposed Facility will not have an adverse impact on Federal endangered, threatened or special concern species or critical habitat.

Copies of the DEP, USFWS and the SHPO determinations will also be included in the Council Application.

Site Selection Process

Cellco's real estate representatives conducted a search for suitable cell site locations in the southerly portion of Willington and northerly portion of Mansfield. Cellco's site search included the review of existing tower sites, existing tall structures and "raw land" sites within or near the identified search ring. The proposed Facility described in this report satisfies Cellco's coverage objectives in the area and results in significantly fewer environmental effects and was therefore preferred over the other alternative locations considered.

Tower Sharing

As stated above, Cellco intends to build a tower in Willington that is capable of supporting Cellco's antennas and those of additional wireless telecommunications providers. The provision to share the tower is consistent with the intent of the General Assembly when it adopted Conn. Gen. Stat. § 16-50aa. The availability of space on the proposed Facility tower may reduce, if not eliminate, the need for additional towers in the Willington-Mansfield area for the foreseeable future.

Conclusion

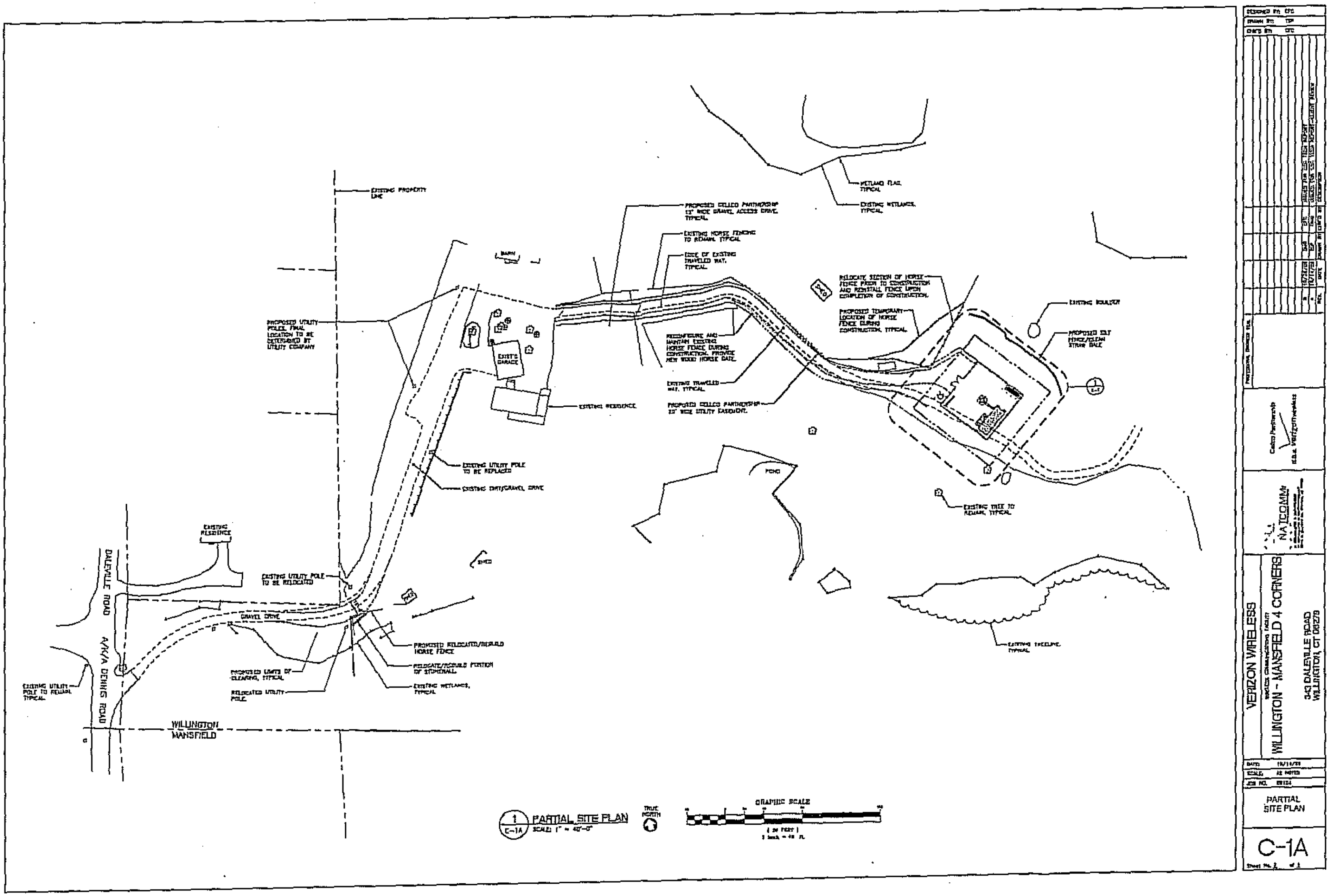
This technical report is submitted in accordance with Conn. Gen. Stat. § 16-50*l*(e), which requires Cellco to supply the Town with technical information regarding its proposed Facility. This report includes information regarding the site selection process, need for the Facility, and the potential environmental impacts of the Facility. Cellco submits that the proposed Facility would not have any significant, adverse environmental effects. Moreover, Cellco submits that the need for high quality wireless service, and a competitive framework for providing such service has been determined by the FCC to be in the public interest and that such public need far outweighs any perceived environmental effects of the proposed Facility.

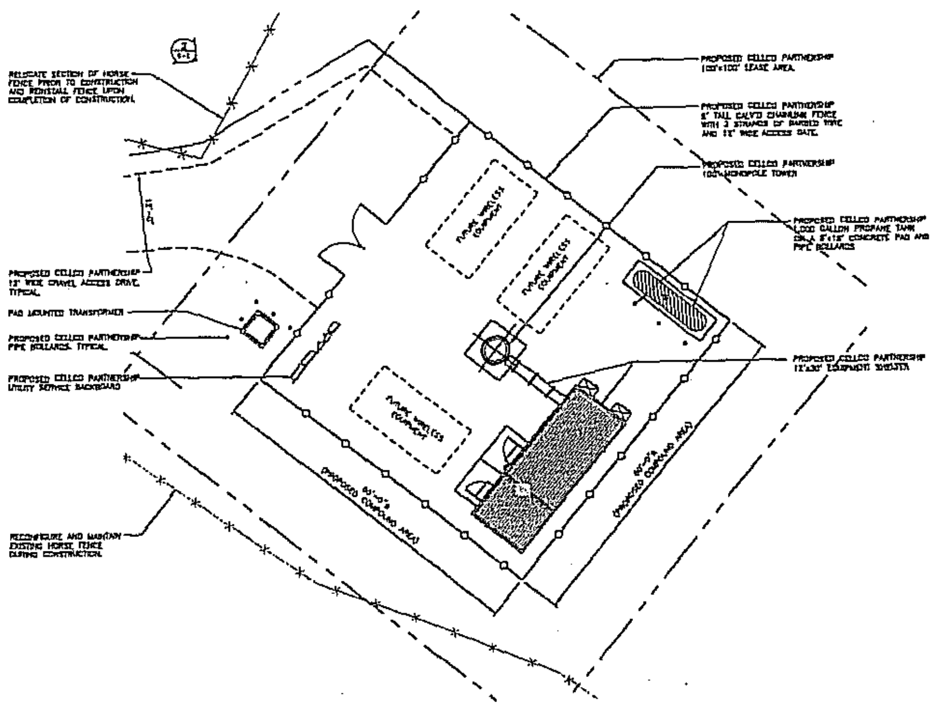
Please contact me if you have any additional questions regarding the proposed Facility.

Sincerely,

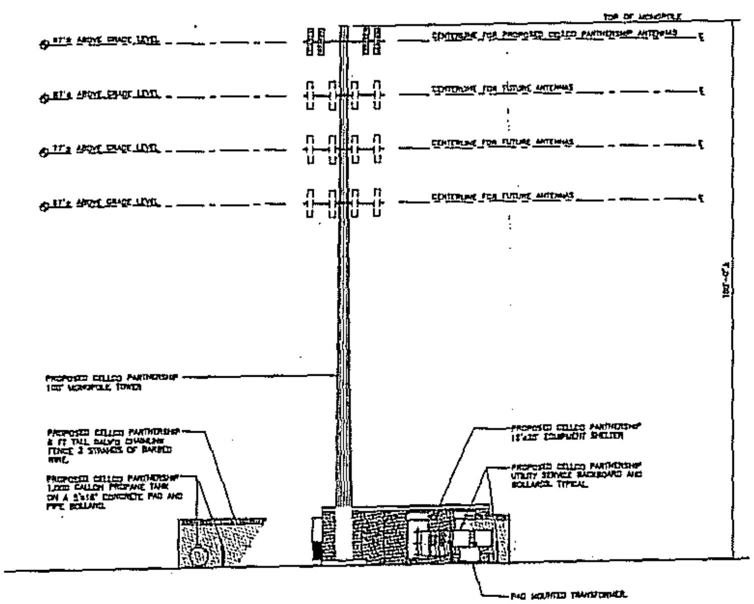
Kenneth C. Baldwin

Enclosures
Copy to:
Elizabeth C. Paterson, Mayor of Mansfield
Matthew W. Hart, Mansfield Town Manager
Sandy M. Carter

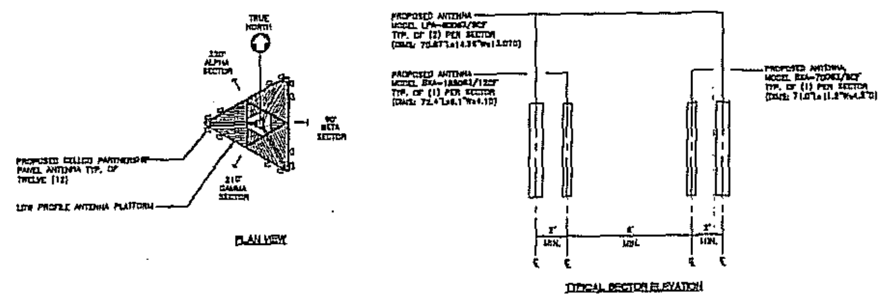

EXISTING PROPERTY LINE
PROPOSED UTILITY POLES. FINAL LOCATION TO BE DETERMINED BY UTILITY COMPANY
BARN
EXIST'G GARAGE
EXISTING RESIDENCE
PROPOSED CELLCO PARTNERSHIP 12' WIDE GRAVEL ACCESS DRIVE, TYPICAL
EXISTING HORSE FENCING TO REMAIN, TYPICAL
EDGE OF EXISTING TRAVELED WAY, TYPICAL
RECONFIGURE AND MAINTAIN EXISTING HORSE FENCE DURING CONSTRUCTION. PROVIDE NEW WOOD HORSE GATE.
EXISTING TRAVELED WAY, TYPICAL
PROPOSED CELLCO PARTNERSHIP 12' WIDE UTILITY EASEMENT.
WETLAND FLAG, TYPICAL
EXISTING WETLANDS, TYPICAL
RELOCATE SECTION OF HORSE FENCE PRIOR TO CONSTRUCTION AND REINSTALL FENCE UPON COMPLETION OF CONSTRUCTION.
PROPOSED TEMPORARY LOCATION OF HORSE FENCE DURING CONSTRUCTION, TYPICAL
EXISTING BOULDER
PROPOSED SILT FENCE/CLEAN STRAW BALE
EXISTING TREE TO REMAIN, TYPICAL
POND
EXISTING TREELINE, TYPICAL
EXISTING UTILITY POLE TO BE REPLACED
EXISTING DIRT/GRAVEL DRIVE
EXISTING RESIDENCE
EXISTING UTILITY POLE TO BE RELOCATED
GRAVEL DRIVE
PROPOSED RELOCATED/REBUILD HORSE FENCE
RELOCATE/REBUILD PORTION OF STONEWALL
EXISTING WETLANDS, TYPICAL
PROPOSED LIMITS OF CLEARING, TYPICAL
RELOCATED UTILITY POLE
EXISTING UTILITY POLE TO REMAIN, TYPICAL
DALEVILLE ROAD
A/K/A DENNIS ROAD
WILLINGTON
MANSFIELD
1 C-1A PARTIAL SITE PLAN SCALE: 1" = 40'-0"
TRUE NORTH
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
VERIZON WIRELESS
WILLINGTON - MANSFIELD 4 CORNERS
343 DALEVILLE ROAD
WILLINGTON, CT 06279
NATCOMM
Cellco Partnership d.b.a. Verizon Wireless
DESIGNED BY: CFC
DRAWN BY: TSP
CHK'D BY: CFC
PARTIAL SITE PLAN
C-1A



1 C-2 COMPOUND PLAN
SCALE: 1" = 10'-0"
GRAPHIC SCALE



2 C-2 NORTHWEST ELEVATION
SCALE: 1" = 10'-0"
GRAPHIC SCALE



3 C-2 ANTENNA MOUNTING CONFIGURATION
NOT TO SCALE

VERIZON WIRELESS

WILLINGTON - MANSFIELD 4 CORNERS

343 DALEVILLE ROAD
WILLINGTON, CT 06279

Cellco Partnership d.b.a. Verizon Wireless

NATCOMM

SCALE: AS NOTED

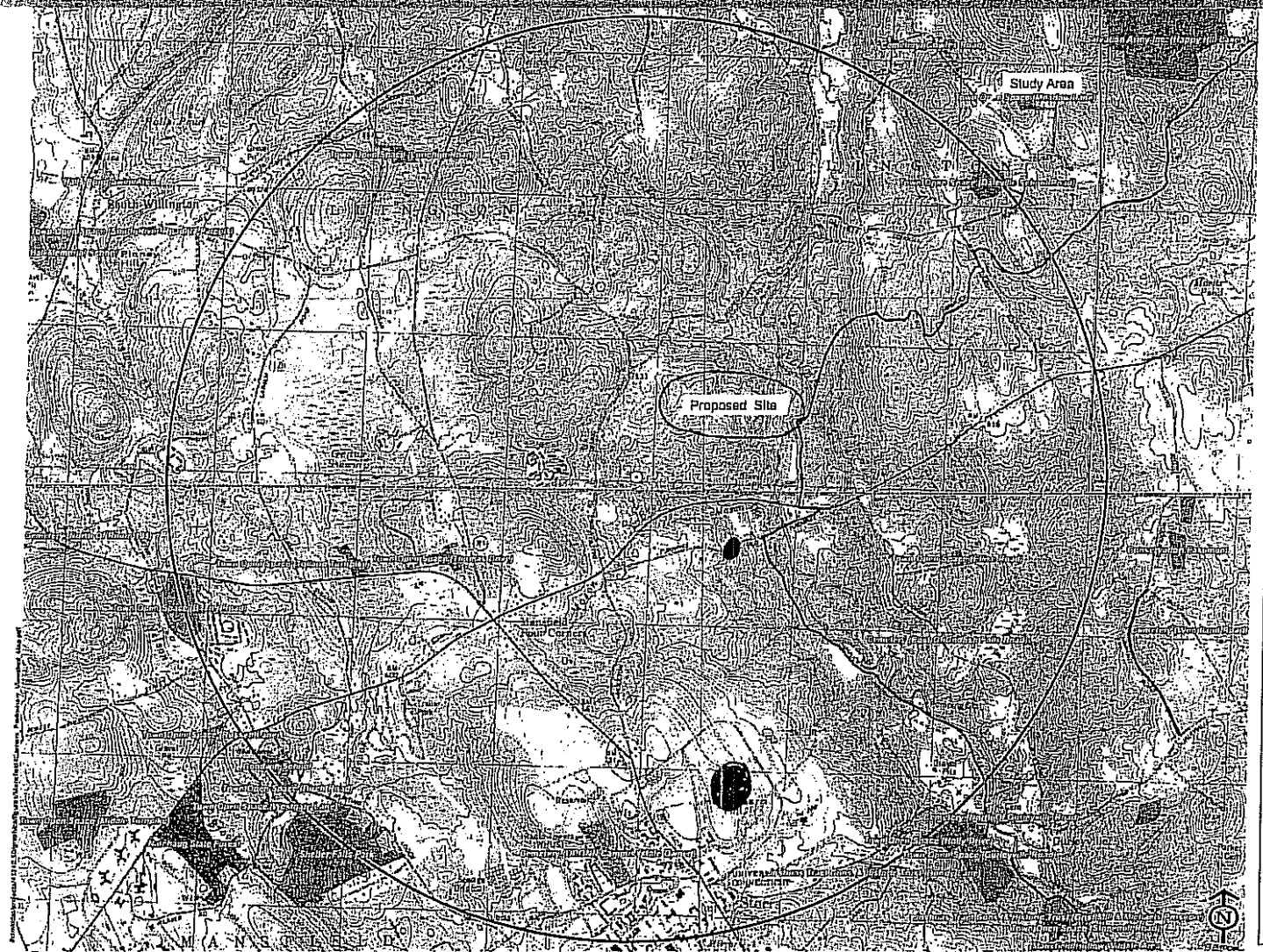
COMPOUND PLAN AND ELEVATION

C-2

Preliminary Viewshed Map

Topography and Forest Cover as Constraints

Town of Willington, Connecticut



Proposed Telecommunications Facility
Willington - Mansfield 4 Corners
343 Daleville Road
Willington, Connecticut

NOTE:
- Viewshed results are preliminary pending balloon float and in-field reconnaissance.
- Viewshed analysis conducted using ESRI's Spatial Analyst.
- Proposed Facility height is 100 feet.
- Existing tree canopy height estimated at 50 feet.
- The Study Area is comprised of a 2-mile radius surrounding the proposed Facility and includes 8,042 acres

DATA SOURCES:
- Digital elevation model (DEM) derived from USGS National Elevation Dataset (NED) with a resolution of one arc-second (approximately 30 meters) produced by the USGS, 1925 - 1999
- Forest areas derived from 2006 digital orthophotos with 1-foot pixel resolution; digitized by VHB, 2006
- Base map comprised of Coventry (1983) and Spring Hill (1983) USGS Quadrangle Maps
- Protected properties data layer provided CTDEP; May, 2007
- Scenic Roads layer derived from available State and Local listings.
- Nipmuck Trail digitized based on Connecticut Walk Book (East)

Map Compiled March, 2008

Legend

- Proposed Monopole Location (Includes select areas of visibility approximately 500 feet around facility)
- Approximate Year-Round Visibility (Approximately 8 Acres)
- Protected Properties (CT DEP)
  - State Forest
  - State Park
  - DEP Owned Waterbody
  - State Park Scenic Reserve
  - Historic Preserve
  - Natural Area Preserve
  - Fish Hatchery
  - Flood Control
  - Other
  - State Park Trail
  - Water Access
  - Wildlife Area
  - Wildlife Sanctuary
- Protected Properties (Municipal)
  - Cemetery
  - Preservation
  - Conservation
  - Existing Preserved Open Space
  - Recreation
  - General Recreation
  - School
  - Uncategorized
- Protected Properties (Federal)
- DEP Boat Launches
- Town Line
- Nipmuck Trail (CT Blue Blaze)

Vanasse Hangen Brustlin, Inc.
Transportation | Land Development | Environmental Services

verizon wireless

• ● – Areas identified that would have year-round visibility (total of ~ 8 acres)

PAGE
BREAK

There will be an informational meeting at DEP, December 21, 2009, 1:30 p.m. - 4:00 p.m., Phoenix Auditorium, 5th Floor, 79 Elm Street.

The official public hearing begins at the same place, January 21, 2010, 9:00 a.m. - until all comments have been heard.

We can help with car-pooling. We can help with preparing comments.

Thanks.

Margaret

Gregory J. Padick

From: Gregory J. Padick
Sent: Monday, November 23, 2009 11:58 AM
To: Conservation Comm
Subject: FW: AT LAST: FLOW PROTECTION FOR ALL CT WATERCOURSES (email from Rivers Alliance of CT)

STREAMFLOW REGULATION PRESENTED TO THE PUBLIC

Since 1971, the state has tried to develop effective ways to protect natural flows in our streams. Nothing has worked. Every dry season, too many brooks and small rivers slow to an unnatural trickle or even dry up. Several large rivers are also affected, with waters that are lower, warmer, and more polluted than they should be. The total number of CT watercourses impaired or threatened by low flows is approximately 60.

Now, after almost 40 years of of faltering policy and expensive litigation, the state has developed a regulation to protect the natural flow pattern in streams. This is very likely the best chance we will have for many decades to keep water flowing in our state water courses.

The proposed regulation was written pursuant to Public Act 05-142, which required the DEP to develop an ecologically protective flow regulation, while taking into account societal needs for water for household use, industry, and so forth. Many of you participated in the vigorous campaign to pass this law. DEP then met with stakeholders for some three years before releasing the present proposed regulation.

For the sake of our water future, we need environmental leaders to provide comment on the regulation and to speak out for streams and rivers and all the creatures that depend upon them (including us). Water utilities have launched extremely active opposition in CT and Massachusetts against flow regulation. (In Massachusetts, a law is pending similar to the law we passed here). Flow regulation limits utilities ' diversion of water and requires them to make an investment in water preservation, not just in water extraction and sale. Naturally, this is not popular. There are many in the industry, however, who recognize that the longterm health and prosperity of water utilities, as well as the health and prosperity of the larger community, depend on preserving the total water infrastructure: not just pipes, pumps, and reservoirs, but the entire system of natural wetlands, streams, lakes, and rivers – and the web of life they sustain.

At Rivers Alliance we would be pleased to answer questions and to provide any materials that you need to understand the issue. The basis of the regulation is a classification of rivers according to quality of flows, with highest protection for the most pristine streams. The flow standards are keyed to the natural hydrograph. There are numerous exemptions, protections for supply in times of drought, and emergency variances.

We have a DEP powerpoint presentation available electronically, and many other materials. Here is a link to the regulation itself on the DEP website.
http://www.ct.gov/dep/lib/dep/water/watershed_management/flowstandards/proposedstreamflowstandardsr

The Nature Conservancy helped to develop the flow standards and is championing flow protection in both CT and MA. They, too, are ready to answer questions and provide information. Their representative is David Sutherland, dsutherland@tnc.org tel. 203-568-6297

The DEP would be pleased to send out people to make a presentation on the regulation to any group that would welcome such an exposition. If your watershed group, land trust, conservation commission, garden club, regional planning agency, fishing association, council of governments, or other local entity would like to learn more, please get in touch with the DEP or with Rivers Alliance or with The Nature Conservancy. (If your group has already received a presentation from the the utility representatives, we would appreciate the opportunity to respond.) The water bureau number at DEP is 830-424-3704. The number here at RA is 860-361-9349. Our email is rivers@riversalliance.org

Proposed Stream Flow Standards and Regulations

Public Notice, October 13, 2009

The Regulations of Connecticut State Agencies are amended by adding sections 26-141b-1 to 26-141b-9, inclusive, as follows:

(NEW) **Section 26-141b-1. Short title.** Sections 26-141b-1 to 26-141b-9, inclusive, shall be known as the department's Stream Flow Standards and Regulations.

(NEW) **Sec. 26-141b-2. Definitions.** As used in sections 26-141b-1 to 26-141b-9, inclusive, of the Regulations of Connecticut State Agencies:

(1) "Anadromous" means a species of aquatic life that spawns in freshwater and migrates to salt water to complete its life cycle as an adult;

(2) "Antecedent period" means the fourteen consecutive days immediately preceding the date the required release is calculated pursuant to section 26-141b-6(a)(3) of the Regulations of Connecticut State Agencies;

(3) "Best management practices" means those practices, facilities or procedures which reduce the impact of human activity on natural stream flow patterns which the commissioner has determined to be acceptable based on technical, economic and institutional feasibility;

(4) "Bioperiod" means the period during which certain biological processes dependent on stream flow rates occurs or is likely to occur;

(5) "Bioperiod Q25" means the daily stream flow that is equaled or exceeded on 25 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(6) "Bioperiod Q50" means the daily stream flow that is equaled or exceeded on 50 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(7) "Bioperiod Q75" means the daily stream flow that is equaled or exceeded on 75 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(8) "Bioperiod Q80" means the daily stream flow that is equaled or exceeded on 80 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(9) "Bioperiod Q90" means the daily stream flow that is equaled or exceeded on 90 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(10) "Bioperiod Q95" means the daily stream flow that is equaled or exceeded on 95 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(11) "Bioperiod Q99" means the daily stream flow that is equaled or exceeded on 99 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(12) "Cfsm" means cubic feet per second per square mile of contributing watershed area at a discrete point within a river or stream system and refers to the discharge rate of water;

(13) "Classification map" means a map delineating the stream flow classification of river or stream segments within a specified geographic area;

(14) "Clupeid spawning bioperiod" means that period from May 1 to May 31, inclusive, of each year;

(15) "Commissioner" means the Commissioner of the Department of Environmental Protection or such commissioner's designated agent or representative;

(16) "Dam" means "dam" as defined in section 22a-409-1 of the Regulations of Connecticut State Agencies;

(17) "Department" means the Department of Environmental Protection;

(18) "Diversion" means "diversion" as defined in section 22a-367 of the Connecticut General Statutes;

(19) "Divert" means "divert" as defined in section 22a-367 of the Connecticut General Statutes;

(20) "Fluvial specialist" means a species of aquatic life that requires flowing water throughout its life cycle;

(21) "Geomorphic" means those landforms resulting from geologic processes;

(22) "Habitat forming bioperiod" means that period from March 1 to April 30, inclusive, of each year;

(23) "Interbasin transfer" means "interbasin transfer" as defined in section 22a-367 of the Connecticut General Statutes;

(24) "Median natural flow" means daily stream flow that is equaled or exceeded on fifty percent of days in a period of record calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(25) "Other structure" means, without limitation, any pump, well, siphon, probe, channel, intake or any device that causes water to be diverted and by so diverting has an impact upon the flow of surface water, and that is not a dam;

(26) "Overwinter bioperiod" means that period from December 1 to February 28 or February 29, inclusive, of each year;

(27) "Person" means "person" and "municipality" as these terms are defined in section 22a-423 of the Connecticut General Statutes;

(28) "Public water supply" means any surface or groundwater resource that provides water for a private, municipal or regional utility supplying water to fifteen or more service connections or to twenty-five or more persons;

(29) "Q99" means the daily stream flow that is equaled or exceeded on 99 percent of days in a period of record calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

(30) "Rearing and growth bioperiod" means that period from July 1 to October 31, inclusive, of each year;

(31) "Registration" means a document filed by a person in accordance with section 22a-368(a) of the Connecticut General Statutes that establishes the location of a diversion of surface or groundwater from a river or stream system in existence prior to 1982, the amount of that diversion, and the use of water diverted at that location;

(32) "Resident spawning bioperiod" means that period from June 1 to June 30, inclusive, of each year;

(33) "River or stream segment" means a discrete, contiguous reach of river or stream channel for which a uniform classification has been adopted;

(34) "River or stream system" means the water in the river or stream channel upstream of any point on that river or stream, including all tributary streams that drain into the channel, and the subsurface groundwater that contributes flow to sustain flow in the river or stream;

(35) "Run-of-river" means a method of operating a dam on a continuous basis where no headpond storage is used and which results in a condition where outflow from the reservoir is equal to inflow on an instantaneous basis;

(36) "Salmonid spawning bioperiod" means that period from November 1 to November 30, inclusive, of each year;

(37) "Stratified drift" means "stratified drift" as defined in section 22a-354h of the Connecticut General Statutes;

(38) "Structure" means "other structure" as defined in this section of the Stream Flow Standards and Regulations;

(39) "Water supply plan" means the plan required by section 25-32d-2 of the Regulations of Connecticut State Agencies; and

(40) "Year" means the period starting January 1 and ending on December 31.

(NEW) **Sec. 26-141b-3. Applicability.**

(a) The Stream Flow Standards and Regulations shall apply to all river or stream systems in this state.

(b) Any person owning or operating a dam or other structure that impounds or diverts the waters of a river or stream system or that affects the flow of water in such a system shall comply with the Stream Flow Standards and Regulations starting on the applicable effective date as prescribed by section 26-141b-6 of the Regulations of Connecticut State Agencies. Prior to any applicable effective date prescribed in section 26-141b-6 of the Regulations of Connecticut State Agencies, the minimum stream flow standards established in sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies shall remain in effect.

(c) Notwithstanding subsection (b) of this section, the following activities shall be exempt from the provisions of the Stream Flow Standards and Regulations:

(1) Hydroelectric power generation, provided such operation represents the principal purpose of the dam or other structure and operation is conducted in compliance with a current or renewed license issued by the Federal Energy Regulatory Commission;

(2) Temporary inspection, maintenance, repair or modification to a dam or other structure, provided all federal, state and local authorizations have been obtained and are complied with;

(3) Diversion of water for fire emergency purposes;

(4) Operation of a government-maintained flood control dam for the protection of property;

(5) Operation of a dam that is not constructed on a river, stream or brook, and collects and temporarily stores stormwater runoff during storm events;

(6) Diversion from a river or stream system at or below the point where that river or stream system is influenced by the tidal waters of Long Island Sound;

(7) One or more wells joined in one system whose combined maximum withdrawal of water does not exceed fifty thousand gallons of water during any twenty-four-hour period;

(8) The maximum withdrawal of fifty thousand gallons of surface water during any twenty-four-hour period;

(9) Diversion of water incidental to testing the production capability of a well or the quality of water withdrawn therefrom, provided the diversion continues no longer than is necessary for testing the production capability of the well or the quality of water withdrawn therefrom;

(10) Diversion of water authorized by the commissioner pursuant to 33 U.S.C. § 1326;

(11) Diversion of water in a manner and degree that is specified by order of the commissioner for the abatement of pollution pursuant to sections 22a-133e, 22a-424, 22a-428, 22a-430, 22a-431, 22a-432, 22a-449 or 22a-451 of the Connecticut General Statutes, or as specified in approved plans submitted pursuant to such an order;

(12) Diversion of water caused by drawing down the surface elevation of an impoundment and subsequent refilling for the purpose of aquatic weed control, water quality control, seasonal drawdown, or inspection or maintenance of a dam, gate house, outlet works, reservoir, shoreline or dock, provided:

(A) the surface elevation of the impoundment is lowered only to the elevation and for the amount of time necessary for aquatic weed control, water quality control, or inspection or maintenance of dam, gate house, outlet works, reservoir, shoreline or dock; and

(B) during drawdown and refilling periods, water is continuously released in an amount equal to or greater than 0.15 cfsm or an amount equal to or greater than the natural inflow, whichever is less;

(13) Diversion of surface waters by the Connecticut Department of Transportation incidental to highway construction authorized by the commissioner pursuant to sections 22a-32, 22a-39, 22a-342, 22a-361, 22a-403 or 25-68b to 25-68h, inclusive, of the Connecticut General Statutes;

(14) Diversion operated in compliance with a diversion permit issued by the commissioner pursuant to sections 22a-368 or 22a-378a of the Connecticut General Statutes;

(15) Diversion subject to a flow management plan contained in a resolution, agreement or stipulated judgment to which the state, acting through the commissioner, is a party and effective as of October 1, 2005, or the management plan developed pursuant to section 3 of Public Act 00-152;

(16) Diversion operated in compliance with a flow management compact approved by the commissioner pursuant to section 26-141b-7 of the Regulations of Connecticut State Agencies;

(17) Operation of a dam designed and constructed for the primary purpose of providing temporary detention of stormwater during and immediately following a storm event;

(18) Operation of a dam in run-of-river only if such dam complies with the recordkeeping and reporting requirements of section 26-141b-8 of the Regulations of Connecticut State Agencies;

(19) Operation of a dam that impounds a river or stream system with an upstream drainage area of three square miles or less and that releases a minimum of 0.1 cfsm of water; or

(20) Operation of a dam that releases a minimum of 0.1 cfsm of water to a river or stream system that flows for a distance of one mile or less before discharging into an impoundment, provided releases from the downstream dam, or the most downstream dam if in a series, meet the release requirements based upon total watershed size at the most downstream dam.

(NEW) **Sec. 26-141b-4. Narrative standards.**

(a) A river or stream segment classified as "Class 1" pursuant to the Stream Flow Standards and Regulations shall, at all times:

(1) Provide the depth, volume and velocity of stream flow necessary to support and maintain habitat conditions supportive of an aquatic, biological community characteristic of that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions; and

(2) Exhibit the natural variation of flows and water levels characteristic of systems that have not been altered by human activity.

(b) A river or stream segment classified as "Class 2" pursuant to the Stream Flow Standards and Regulations shall, at all times:

(1) Provide the depth, volume and velocity of stream flow necessary to support and maintain habitat conditions supportive of an aquatic, biological community minimally altered from that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions; and

(2) Exhibit near-natural variation of flows and water levels characteristic of systems that have been minimally altered by human activity.

(c) A river or stream segment classified as "Class 3" pursuant to the Stream Flow Standards and Regulations shall, at all times:

(1) Provide the depth, volume and velocity of stream flow necessary to support and maintain habitat conditions supportive of an aquatic, biological community moderately altered from that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions; and

(2) Exhibit sufficient variation of flows and water levels characteristic of systems that have been moderately altered by human activity.

(d) A river or stream segment classified as "Class 4" pursuant to the Stream Flow Standards and Regulations may exhibit substantially altered stream flow conditions caused by human activity as necessary to provide for the legitimate needs and requirements of public health and safety, flood control, industry, public utilities, water supply, agriculture and other lawful uses.

(NEW) **Sec. 26-141b-5. Adoption of river or stream system classifications.**

(a) The commissioner shall prepare a map of proposed classifications after considering the following factors:

(1) Size and location of permitted and registered diversions;

(2) Size and location of dams, reservoirs and other impoundments;

(3) Size and location of return flows of water;

(4) Existing land cover in the upstream watershed;

(5) Planned land use in the upstream watershed, as contained in a local or state plan;

(6) Available data related to the distribution and abundance of plant and animal species, such as wild brook trout (*Salvelinus fontinalis*), which are dependent upon stream and riparian habitat;

(7) Available data related to the presence of anadromous fish runs or where anadromous fish are actively being restored or are targeted for restoration;

(8) Existence of trout management areas and other recreational resources;

(9) The location of stream gages operated and maintained by the U.S. Geological Survey that have been identified by the commissioner in consultation with the U.S. Geological Survey as hydrologic index reference gages;

(10) Wild or scenic water designation by the state or federal government, or waters predominately within state forests, wildlife management areas, natural heritage areas or other large contiguous areas protected for conservation purposes, including protection for public water supply purposes;

(11) River or stream systems or segments thereof that have been identified as a potential source of water supply in a current water supply plan approved by the Department of Public Health;

(12) Practicality of, and potential for, restoring stream flow patterns to achieve consistency with Stream Flow Standards and Regulations due to the extent of prior channel modification or current high impact development and impervious land cover in the watershed; and

(13) Any other factor that the commissioner reasonably deems necessary.

(b) Public participation. After development of a map of proposed classifications, the commissioner shall provide notice to the public of the proposed classifications of such river or stream segments and offer opportunity for public comment.

(1) Notice of the proposed classifications and opportunity to comment shall be published in a newspaper with general circulation in the area within which the river or stream system is located, and on the department's web site.

(2) Notice shall also be provided to the following:

(A) The chief elected official in those municipalities within which the river or stream system is located;

(B) The executive director of the Council of Environmental Quality;

(C) The commissioners of the Department of Public Health, Department of Agriculture, and Department of Public Utility Control;

(D) The Secretary of the Office of Policy and Management;

(E) Persons, at any such person's last known address as filed with the department, holding registration or permits issued by the department authorizing activities that are known or suspected to alter the flow of water in the system for which classifications have been proposed; and

(F) Regional planning organizations, as defined in section 4-124i of the Connecticut General Statutes.

(3) Procedure for submitting comments

(A) The public shall have no fewer than 90 days from the date of newspaper publication of notice to submit comments on the proposed classification of any river or stream segment identified in such notice.

(B) An additional comment period of no fewer than 60 days shall be provided for the limited purpose of receiving comments within the scope of comments previously received pursuant to subparagraph (A) of this subdivision. Any additional comments shall be accompanied by a statement identifying the comment or comments submitted pursuant to subparagraph (A) of this subparagraph to which the additional comment is responding.

(C) To the extent practicable, all comments received by the commissioner shall be posted on the department's web site.

(D) The submission of additional comments exceeding the scope of comments received pursuant to subparagraph (A) of this subdivision will not be considered by the commissioner or posted on the department's website unless: (i) such comment is accompanied by a statement as to the comment's relevance and the reason the comment was not submitted earlier; and (ii) the commissioner finds that the comment is relevant and material and there was good cause for the failure to offer such comment earlier. If an additional comment exceeding the original scope of

comments submitted pursuant to subparagraph (A) of this subdivision is accepted by the commissioner, the commissioner shall provide notice to the public on the department's website that the public shall have no fewer than fourteen days to respond to such additional comment.

(4) Following the timely submission of public comments pursuant to subsection (b) of this section, the commissioner shall: (A) consider such comments and adopt classifications for the river or stream system or segment thereof as identified in the newspaper notice; and (B) prepare a document, to be published on the department's website, summarizing the principal reasons in support of the classifications, the principal considerations raised in opposition to the classifications and the reasons for rejecting or modifying a proposed classification.

(5) Notice of the adopted classification of any river or stream system or segment shall be published in the Connecticut Law Journal and such publication date shall be the effective date for purposes of implementing the Stream Flow Standards and Regulations for such river or stream system or segment.

(c) Petition to change classification. The commissioner may consider from any person a written petition to change the classification of a river or stream system or segment thereof or review whether current classifications continue to be appropriate and, if not, propose any classification changes as necessary.

(1) Demonstration of need for classification change

(A) Any petition to change the classification of a river or stream system or segment thereof from a more altered to a less altered classification shall include a demonstration that:

(i) one or more of those factors identified in subsection (a) of this section as having relevance with respect to the original classification of that river or stream system have changed or were mischaracterized at the time of the original classification by the commissioner; and

(ii) the river or stream system currently exhibits a pattern of flow that is consistent with the narrative stream flow standard for the proposed classification.

(B) Any petition to change the classification of a river or stream system or segment thereof from a less altered to a more altered classification shall include a demonstration that:

(i) such change is necessary to accommodate the legitimate needs and requirements of public health and safety, flood control, industry, public utilities, water supply, agriculture, or other lawful uses and that those needs and requirements cannot be satisfied while maintaining consistency with the narrative stream flow standard for the current classification;

(ii) one or more of those factors identified in subsection (a) of this section as having relevance with respect to the original classification of that river or stream system have changed or were mischaracterized at the time of the original classification by the commissioner;

(iii) alteration of the stream flow pattern has been and will continue to be minimized to the extent practicable through the application of all reasonably feasible best management practices, including but not limited to conservation practices and water reuse; and

(iv) alternative sources of water, including interbasin transfers and development of new sources currently not utilized, have been and will continue to be utilized to the maximum extent practicable.

(C) For a river or stream system currently exhibiting a stream flow pattern consistent with the stream flow standard for its current classification, the petition shall, in addition to those items enumerated in subparagraphs (A) or (B) of section 22a-141b-5(c) of the Regulations of Connecticut State Agencies, as applicable, include a copy of the completed application for each new or expanded activity proposed in the river or stream system for which a diversion permit is required under Chapter 446i of the Connecticut General Statutes if the proposed change in classification is required to accommodate such activities.

(D) For river or stream system or segment thereof for which a change in classification to Class 4 is sought, the petition shall, in addition to those items enumerated in subparagraph (B) of section 22a-141b-5(c) of the Regulations of Connecticut State Agencies, include a demonstration that there is overriding social or economic justification for changing the

classification of the river or stream system or segment, including identification of the following:

(i) the specific social needs of the municipality or municipalities within which the river or stream system is located that would not be met should the change in classification not be approved and which can not otherwise be satisfied; and

(ii) the specific economic impacts likely to substantially impair or otherwise detrimentally affect the economy of the community or the state that would occur should the change in classification not be approved.

(2) Commissioner action on petitions

(A) The commissioner shall deem incomplete and reject for insufficiency any petition that does not include a prima facie demonstration as required by subdivision (1) of section 22a-141b-5(c) of the Regulations of Connecticut State Agencies.

(B) The commissioner shall substantively review any petition that includes a prima facie demonstration as required by subdivision (1) of section 22a-141b-5(c) of the Regulations of Connecticut State Agencies. The commissioner shall thereafter reject the proposed classification or modify the existing classification.

(C) Notwithstanding section 26-141b-5(c)(2)(B) of the Regulations of Connecticut State Agencies, the commissioner may reject without prejudice any petition submitted less than three years after the last effective date of classification for a river or stream system or segment thereof.

(D) Petitions to change classifications shall be subject to the requirements of subsection (b) of this section, except that the person submitting a petition shall publish notice of any proposed classification and of the opportunity to comment on such proposal in a newspaper of general circulation in the area of the river or stream system that will be affected by any classification change.

(NEW) **Sec. 26-141b-6. Presumptive standards.**

(a) Dam owners or operators shall comply with the following:

(1) Not later than six months after a river or stream segment's effective date of classification as Class 1, all dams shall be operated in run-of-river operation.

(2) Not later than five years after the first effective date of classification for a river or stream segment, a dam shall be operated:

(A) To release seventy-five percent of such system's natural inflow if the release is into a river or stream segment designated as Class 2.

(B) To release the following minimum flow during each bioperiod if the release is into a river or stream segment designated as Class 3:

Bioperiod	Effective Dates	Minimum Required Release
Overwinter	Dec 1- Feb 28/29	Bioperiod Q95
Habitat Forming	Mar 1 – Apr 30	Bioperiod Q95
Clupeid Spawning	May 1 – May 31	Bioperiod Q95
Resident Spawning	June 1 – June 30	Bioperiod Q90
Rearing and Growth	July 1- Oct 31	Bioperiod Q80
Salmonid Spawning	Nov 1 – Nov 30	Bioperiod Q90

(C) To release the greater of 0.1 cfsm or the minimum stream flow required pursuant to sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies if the release is into a river or stream segment designated as Class 4.

(3) Not later than ten years after the first effective date of classification for a river or stream segment, a dam shall be operated:

(A) To release the following minimum continuous flow if the release is into a river or stream segment designated as Class 3 and except as allowed pursuant to subdivision (4) of subsection (a):

Bioperiod	Effective Dates	Minimum Required Release	
		Antecedent Period Dry	Antecedent Period Wet
Overwinter	Dec 1- Feb 28/29	Bioperiod Q95	Bioperiod Q75
Habitat Forming	Mar 1 – Apr 30	Bioperiod Q95	Bioperiod Q75
Clupeid Spawning	May 1 – May 31	Bioperiod Q95	Bioperiod Q75
Resident Spawning	June 1 – June 30	Bioperiod Q90	Bioperiod Q75
Rearing and Growth	July 1- Oct 31	Bioperiod Q80	Bioperiod Q50
Salmonid Spawning	Nov 1 – Nov 30	Bioperiod Q90	Bioperiod Q75

(i) The required release shall be calculated and the release rate adjusted, if necessary, on the first day and the fifteenth day of every month unless such day falls on a weekend or holiday in which case the required release shall be calculated and the release rate adjusted on the next business day.

(ii) The wet period release is required when the median natural flow during the antecedent period equals or exceeds the bioperiod Q25.

(iii) The dry period release is required when the median natural flow during the antecedent period is less than the bioperiod Q25.

(B) To release the greater of 0.1 cfsm or the minimum stream flow required pursuant to sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies if the release is into a river or stream segment designated as Class 4.

(4) Dam owners subject to section 25-32d of the Connecticut General Statutes and regulations adopted thereunder may, not later than five years after the first effective date of classification for a river or stream segment, reduce the minimum release required pursuant to subdivisions (2) and (3) of subsection (a) during certain drought phases. These drought phases, as defined in the dam owner's water supply plan, shall trigger the following reduced releases:

Water Supply Plan Trigger	**Percentage of Required Dry Release**	
	Rearing & Growth Bioperiod	**All Other Bioperiods**
Drought Advisory	100%	75%
Drought Watch	50%	50%
Drought Warning	25%	25%
Drought Emergency	No Release Required	No Release Required

(5) For the purposes of subsection (a) of this section, release includes dam leakage, spillage return flow, and discharge from outlet works.

(b) Owners or operators of other structures shall comply with the following:

(1) Not later than five years after the first effective date of classification for a river or stream segment, each structure that causes an impact to such segment, regardless of the effect that dams and other structures may have on such segment, shall:

(A) If the structure impacts a Class 1 segment, limit on any day the maximum alteration of stream flow to an amount less than or equal to 0.05 multiplied by the naturally occurring, annual Q99. For illustrative purposes:

$$\text{Each structure's maximum alteration} \leq (0.05)(Q99_{annual})$$

(B) If the structure impacts a Class 2 segment, limit on any day the maximum alteration of stream flow to an amount less than or equal to 0.25 times the naturally occurring, annual Q99 multiplied by the ratio of the naturally occurring Q99 for the current bioperiod to the naturally occurring Q99 for the rearing and growth bioperiod. For illustrative purposes:

$$\text{Each structure's maximum alteration} \leq [(0.25)(Q99_{annual})] \times \frac{Q99_{current\ bioperiod}}{Q99_{rearing\ \&\ growth\ bioperiod}}$$

(C) If the structure impacts a Class 3 segment, limit on any day the maximum alteration of stream flow to an amount less than or equal to 0.50 times the naturally occurring, annual Q99 multiplied by the ratio of the naturally occurring Q99 for the current bioperiod to the naturally occurring Q99 for the rearing and growth bioperiod. For illustrative purposes:

$$\text{Each structure's maximum alteration} \leq [(0.50)(Q99_{annual})] \times \frac{Q99_{current\ bioperiod}}{Q99_{rearing\ \&\ growth\ bioperiod}}$$

(2) Not later than ten years after the first effective date of classification for a river or stream segment, each structure that causes an impact to such segment, with due regard to the effect that dams and other structures may have on such segment, shall:

(A) If the structure impacts a Class 1 segment, maintain and operate in such a way as to limit on any day the collective, maximum alteration of stream flow to an amount less than or equal to 0.05 multiplied by the naturally occurring, annual Q99. For illustrative purposes:

$$\text{Collective, maximum alteration in the river or stream system} \leq (0.05)(Q99_{annual})$$

(B) If the structure impacts a Class 2 segment, use best efforts to maintain and operate in such a way as to limit on any day the collective, maximum alteration of stream flow to an amount less than or equal to 0.25 times the naturally occurring, annual Q99 multiplied by the ratio of the naturally

occurring Q99 for the current bioperiod to the naturally occurring Q99 for the rearing and growth bioperiod. For illustrative purposes:

$$\text{Collective, maximum alteration in the river or stream system} \leq [(0.25)(Q99_{annual})] \times \frac{Q99_{current\ bioperiod}}{Q99_{rearing\ \&\ growth\ bioperiod}}$$

(C) If the structure impacts a Class 3 segment, use best efforts to maintain and operate in such a way as to limit on any day the collective, maximum alteration of stream flow to an amount less than or equal to 0.50 times the naturally occurring, annual Q99 multiplied by the ratio of the naturally occurring Q99 for the current bioperiod to the naturally occurring Q99 for the rearing and growth bioperiod. For illustrative purposes:

$$\text{Collective, maximum alteration in the river or stream system} \leq [(0.50)(Q99_{annual})] \times \frac{Q99_{current\ bioperiod}}{Q99_{rearing\ \&\ growth\ bioperiod}}$$

(3) For a structure impacting stream flow in a Class 4 river or stream segment at the time of such classification, continue to operate unaffected by the Stream Flow Standards and Regulations, provided any such structure complies with all other applicable law.

(4) For a structure diverting water from a reservoir, not be required to operate pursuant to the requirements of subsection (b) of this section, provided that the requirements of subsection (a) of this section are met at the dam forming the reservoir.

(c) Variances

(1) The commissioner may issue a variance to reduce the minimum release required pursuant to subsection (a) of this section, or to increase the maximum alteration required pursuant to subsection (b) of this section if requested by either:

(A) The commissioner of any state agency or the Governor; or

(B) The owner or operator of a dam or other structure.

(2) A request for a variance under this subsection shall contain information sufficient to allow the commissioner to give adequate consideration to the effect of the operation of the dam or other structure under such a variance on the river or stream system in question. The commissioner may require additional information prior to acting on such a request. If the requested variance is for a period longer than 90 days, the requester shall, at the same time a request is submitted to the

commissioner and in a form as prescribed by the commissioner, publish notice of the request in a newspaper of general circulation in the area of the river or stream system that will be affected by the variance.

(3) In determining whether to grant the requested variance under this section, the commissioner shall evaluate consistency of the proposed variance with the appropriate narrative standard for the river or stream system in accordance with section 26-141b-4 of the Regulations of Connecticut State Agencies. The commissioner may also consider the following factors:

(A) Runoff or rainfall statistics for the period in question as compared with average runoff or rainfall over preceding years;

(B) Impoundment levels or volume of diversion as compared with levels or volumes at the same season in previous years;

(C) Peculiar or unusual demand situations or requirements to protect water quality;

(D) Peculiar or unusual water capture problems;

(E) Unusual health, safety, power, or other crises imposing increased demands on water supplies; and

(F) If notice was published by the requester, any comments received in response to such notice.

(4) The commissioner may issue the requested variance in whole or part, on an individual, basin-wide or state-wide basis, and may include any condition, such as time limitations, deemed necessary.

(d) Notwithstanding subsections (a) and (b) of this section, and after the first effective date of classification for a river or stream system, the release requirements for any classification change made to such system resulting from a petition, the commissioner's initiative or a flow management compact adopted pursuant to section 26-141b-7 of the Regulations of Connecticut State Agencies shall be effective immediately.

(e) After the first effective date of classification for a river or stream segment, the department, in issuing a permit pursuant to section 22a-368(b) of the Connecticut General Statutes to authorize the diversion of surface or groundwater from such system, or in renewing or modifying such a permit, shall consider and apply the Stream Flow Standards and Regulations to the maximum extent practicable.

(NEW) **Sec. 26-141b-7. Flow management compacts.**

(a) Any person may, at any time after a river or stream system's effective date of classification, develop and propose for the commissioner's approval a flow management compact with alternative standards differing from the presumptive standards required pursuant to section 26-141b-6 of the Regulations of Connecticut State Agencies.

(b) A flow management compact must demonstrate that when fully implemented:

(1) It will meet the narrative standards;

(2) It will impose sufficient restrictions on all dams and other structures subject to the Stream Flow Standards and Regulations and that are within the compact's geographic area defined in terms of a river or stream system or segments;

(3) It will implement best management practices, including but not limited to conservation practices and water reuse, in order to minimize alteration of the natural flow pattern; and

(4) It will develop monitoring and reporting requirements, in order to verify that all dams and other structures governed by the compact are in compliance with its terms and conditions.

(c) A proposal for a flow management compact shall include the following information:

(1) The geographic area of the compact;

(2) The river or stream system or segments and their classifications;

(3) A list of persons covered under the compact;

(4) Authorized or permitted diversions of all persons within the geographic area of the compact;

(5) Current maximum withdrawal or minimum dam releases of persons covered under the compact;

(6) Alternative water allocations and operational restrictions necessary to meet the Stream Flow Standards and Regulations;

(7) Supporting documentation demonstrating that any proposed alternatives to the presumptive standards will be sufficient to meet the narrative standards for each classified river or stream segment within the compact, including the following:

(A) Information submitted by persons owning or operating dams or other structures within the river or stream system, including any planned improvements that, once implemented, can reasonably be expected to achieve consistency with the compact;

(B) Results of any biological or habitat studies performed within the river or stream system or in comparable systems demonstrating the effect of stream flow characteristics on natural aquatic habitat and the composition of the aquatic biological community; and

(C) Results of any modeling or other scientific investigations or readily available, credible information that the commissioner deems relevant to estimating the collective impact of dams and other structures that impound or divert the flow of water, including those dams and other structures that are located in the river or stream system upstream from those river or stream segments where the commissioner finds that stream flow patterns are not consistent with narrative or presumptive stream flow standards. The proposal for a flow management compact shall provide the following additional information:

(i) the geographic locations of dams and other structures that impound or divert the flow of water;

(ii) the separation distance between any groundwater extraction wells and the river or stream channel;

(iii) the sub-surface geology, particularly the presence or absence of stratified drift deposits or other geological features that may influence the movement of water between surface and groundwater contributing to the flow pattern;

(iv) any enforceable restrictions or conditions placed upon the extraction of water contained in any registration, permit or other written agreement that may serve to mitigate the impact of the extraction on flow in the river or stream system;

(v) development density and the degree to which best management practices have been applied to minimize the impact of impervious surfaces on the natural stream flow pattern;

(vi) return flow of water or treated wastewater that alter stream flow patterns in the river or stream system; and

(vii) a natural stream flow pattern to be equivalent to the pattern described by a synthetic hydrograph of daily stream flow values derived using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner for the purpose of calculating the naturally occurring annual and bioperiod stream flow statistics necessary to evaluate consistency with these stream flow standards;

(8) An implementation schedule; and

(9) Any other information deemed necessary by the commissioner.

(d) The commissioner shall not approve a proposed flow management compact unless it considers to the maximum extent practicable the legitimate needs and requirements of public health and safety, flood control, industry, public utilities, water supply, agriculture and other lawful uses.

(e) The commissioner may, at any time during the implementation of an effective compact, modify or terminate a compact if the implementation of such compact does not meet narrative standards. A stream flow management compact approved by the commissioner shall be effective for up to twenty years, after which period such compact may be reapproved.

(f) Prior to the re-approval of a compact or the commissioner's intent to approve, modify or terminate a compact, the procedure for public notice and opportunity for public comment pursuant to section 26-141b-5(b) of the Regulations of Connecticut State Agencies shall apply, except that the person seeking commissioner action on a compact shall be responsible for publishing notice in a newspaper of general circulation in the area of the river or stream system that will be affected by the compact.

(NEW) **Sec. 26-141b-8. Record keeping and reporting requirements.**

(a) Any person owning or operating a dam or other structure subject to the Stream Flow Standards and Regulations shall, not later than one year after the effective date of classification for a river or stream segment on which such owner's dam or other structure is located, submit to the department on a form prescribed by the commissioner the following information:

(1) The name of the dam or other structure;

(2) The permit or registration number assigned to the dam or other structure pursuant to section 22a-368 of the Connecticut General Statutes;

(3) The geographical location of the dam or other structure in latitude and longitude (degrees, minutes, seconds);

(4) The affected river or stream system or segment thereof and their classifications;

(5) The name, address and telephone number of the owner or operator of the dam or other structure;

(6) A certification that the owner or operator will continue to meet sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies, if applicable; and

(7) A statement that the owner or operator has a plan for making those necessary infrastructure changes necessary to comply with the five-year timeframe established in subdivision (2) of subsections (a) and (b) of section 26-141b-6, if such timeframe is applicable.

(b) Any person owning or operating a dam in run-of-river operation shall, not later than one year after the effective date of classification of the river or stream segment on which such owner's or operator's dam is located, submit to the department a certification that such dam is operating and will continue to operate in run-of-river mode.

(c) Any person subject to the Stream Flow Standards and Regulations shall, not later than five years after the effective date of classification of the river or stream segment on which such owner's or operator's dam or other structure is located, maintain the following information:

(1) The daily amount of water diverted for each day of operation and, for a dam only, the daily amount of water released from the dam during the previous calendar year; and

(2) The daily amount of water returned to the river or stream system and the geographical location in latitude and longitude of said return.

(d) All operating records shall be maintained for a minimum of fifteen years and such records shall be submitted to the commissioner not later than thirty days following a written request for such records. Upon notification by the department that an electronic reporting system is available for use, operators and owners shall commence the annual submittal of data electronically as prescribed by the commissioner.

(NEW) **Sec. 26-141b-9. Conflict and severance.**

(a) Where there is a conflict between the provisions of the Stream Flow Standards and Regulations and those of any other applicable ordinance, regulation or permit, the provisions of the ordinance, regulation or permit that imposes the most stringent requirements shall govern.

(b) The invalidity of any word, clause, sentence, section, part or provision of the Stream Flow Standards and Regulations shall not affect the validity of any other part that can be given effect without such invalid part or parts.

Statement of Purpose:

The purpose of the proposed regulations is to provide for the protection of Connecticut's river and stream systems by establishing stream flow standards that apply to (or exempt by regulation) all river and stream systems in the state. These proposed rules eventually replace the existing requirements found in the Minimum Stream Flow Standards and Regulations of the Connecticut Department of Environmental Protection, sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies.

The proposed regulations balance the needs of humans to use water for drinking and domestic purposes, fire and public safety, irrigation, manufacturing, and recreation, with the needs of fish, wildlife and other biota that also rely upon the availability of water to sustain healthy, natural communities. The regulations provide a framework considering the best available science to balance the human and ecological needs for water both through classification and operational rules, provide for public notice and input into the process, and provide a phased implementation of regulatory requirements to encourage and support water planning and conservation efforts. Finally, these rules protect Connecticut's river and stream systems by promoting better, more efficient management of our water supplies, so that all needs, both human and ecological, can be met both today and in the future.

The proposed regulations include the following provisions:

(1) Section 26-141b-1 – Short title for the proposed regulations;

(2) Section 26-141b-2 – Definitions. These include terms such as "bioperiod," "river or stream segment," "river or stream system," "run-of-river," and "structure";

(3) Section 26-141b-3 – Applicability and exemptions. There are exemptions for safety, such as fire or drought emergencies and dam inspections; limited or short term water use, such as withdrawals less than 50,000 gallons per day, temporary stormwater detention

and well capacity testing; permitted withdrawals; and other activities such as pollution abatement;

(4) Section 26-141b-4 – Narrative standards. This section establishes stream flow classifications and the narrative goals for those stream classes, based on the natural variation of stream flows, and on the existing and planned degree of human alteration to the streams. The proposed stream flow standards incorporate the concept of balancing human and ecological needs for water by establishing different flow standards for each of four categories or classes of waters. In Class 1 waters, priority is given to protecting ecological health. In Class 4 waters, support of human activities is weighted most heavily. Class 2 and Class 3 waters have intermediate balance points between ecological and human uses. The flow standards for each class are based on maintaining, to various degrees, the natural variation in flow expected in Connecticut given seasonal climate and rainfall patterns;

(5) Section 26-141b-5 – Adoption of river or stream system classifications. This section sets out the adoption process for stream flow classifications, including the physical, natural and human factors for classification, the public participation process, and the petition process for changes. The factors the commissioner will consider when determining a classification for a river or stream segment include, but are not limited to, the following: size and location of surface and groundwater withdrawals; size and location of planned future withdrawals, including potential sources for public water supply; size and location of dams and impoundments; size and location of water and wastewater discharges; existing and proposed development; presence of flow-sensitive aquatic life; anadromous fish runs, trout management areas, and other recreational resources; location of US Geological Survey natural reference stream gages; designated open space protected areas; and physical habitat restoration potential. A map of the proposed classifications will be publicly noticed and ample opportunity for public comment is incorporated into the requirements. The commissioner will take such comments into consideration before finalizing the classifications, which will then be published. A petition process to request changes to the classification (to either a more altered or less altered class) is included, along with factors for consideration and public comment;

(6) Section 26-141b-6 – Presumptive standards. This section sets out presumptive, numeric flow standards for each class based on seasonable flow criteria and type of flow altering activity. This includes specific release requirements for dams to maintain a minimum stream flow, maximum stream flow alteration standards for other structures such as wells or pumps to limit the water withdrawn from the stream, implementation timeframes, and drought relief and variance provisions;

(7) Section 26-141b-7 – Flow management compacts. This section establishes rules and procedures for developing flow management compacts among the water users in a river or stream system for the commissioner's approval that identify alternative flow standards from the presumptive, numeric standards, but which still meet the narrative standards for the river or stream system. Goals, information requirements and supporting documentation are required for such a compact;

(8) Section 26-141b-8 – Record keeping and reporting requirements. This section sets out requirements to submit to the department basic information on the dam or other structure, such as name of owner and location, within one year of adoption of the regulations. Beginning five years after adoption, data on the daily amount of water diverted and any amounts returned to the river or stream system should be maintained and, upon a request, submitted to the commissioner; and

(9) Section 26-141b-9 – Conflict and severance. A conflict and severance section is included in case of conflicting legal requirements.

University of Connecticut
Office of the Vice President and Chief Operating Officer

Office of Environmental Policy

December 4, 2009

Mr. James Hooper
Windham Water Works
174 Storrs Road
Mansfield Center, CT 06250

RE: UConn Drainage Project in Willimantic Reservoir Watershed

Dear Mr. Hooper:

Enclosed please find a copy of our applications for a DEP Flood Management Certification and a DEP General Permit for Utilities and Drainage for work proposed on the UConn Storrs campus that is within the Willimantic Reservoir watershed.

Specifically, the work will consist of extending a pair of existing storm drain pipes (one of which is the primary outfall for UConn's Swan Lake), constructing a new headwall, and installing a preformed scour hole.

These applications were submitted to DEP in August 2009. The permits are still pending. Assuming we have our DEP authorizations, the construction work is scheduled to start in late Spring 2010.

The purpose is two fold: 1) to correct existing erosion problems being caused by the flow from the pipes, and 2) to ensure that the downstream channel will be adequately protected when future flows increase as a result of additional drainage projects. These additional drainage projects are conceptually outlined in our Drainage Master Plan, available for your review upon request. When we apply for DEP permits for these additional projects, the Windham Water Works will be copied on the applications.

If you have any questions, please contact me at 860-486-9305 or jason.coite@uconn.edu.

Sincerely,

Jason Coite
Environmental Compliance Analyst

Cc: Robert Miller, Director, Eastern Highlands Health District

31 LeDoyt Road Unit 3055
Storrs, Connecticut 06269-3055
Telephone: (860) 486-5446
Facsimile: (860) 486-5477
web: www.ecohusky.uconn.edu

8-12-09

SWAN LAKE DRAINAGE OUTFALL IMPROVEMENTS

DEP General Permit for Utilities and Drainage

PREPARED FOR:

UNIVERSITY OF CONNECTICUT

July 2009

Prepared by:

LENARD ENGINEERING, INC.

CIVIL, ENVIRONMENTAL & HYDROGEOLOGICAL CONSULTANTS

1768 STORRS ROAD, P.O. BOX 580

STORRS, CT 06268-0580

Part VI: Project Summary (cont.)

4. **Plan for Maintenance of Boat Launch Facilities and Beaches**

   Provide the following information if the subject activity involves maintenance of boat launch facilities and beaches as described in Section 3(a)(2) of the General Permit for Minor Grading (DEP-IWRD-GP-007)

   Include as Attachment F, a Plan for Maintenance of Boat Launch Facilities and Beaches.

   Go to Part VII of this form; do not complete items (5) through (9) of Part VI.

5. **Drainage Maintenance Plan**

   Provide the following information if the subject activity is drainage maintenance as described in Section 3(a)(3) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005).

   Include as Attachment G, a Drainage Maintenance Plan.

   Go to Part VII of this form; do not complete items (6) through (9) of Part VI.

6. **New, Replaced Or Modified Drainage System(s)**

   Provide the following information if the subject activity involves the placement, replacement, or other modification of a drainage system:

   a. Q_{10} = V_{10} =
   Is energy dissipaton or inlet/outlet protection provided? ☐ Yes ☐ No
   Riprap/stone size:
   Pad dimensions are:
   If there is more than one pad, provide additional pad dimensions on a separate sheet.
   ☒ Check if additional sheets are attached to this page.

   b. Include as Attachment H, adequate design computations which show that such activity is designed in accordance with accepted engineering practices and conforms to the applicable flood management standards and criteria, including standards for floodproofing of structures, established in Section 25-68d of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies (RCSA).

7. **Floodproofing of Structures**

   Have the structures been designed according to the standards for flood-proofing of structures established in the RCSA Sections 25-68h-1-3? ☐ Yes ☒ No

8. **Activities Involving Dams**

   Provide the following information if the subject activity involves maintenance, repair or improvement of an existing dam, or construction of a low hazard dam as described in Section 3(a) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008) (all such details must be depicted on the site plan, Attachment B):

   a. Include as Attachment I, an engineering report, as described in Section 4(c)(2)(L) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008).

   b. *Pond Characteristics*:

   Surface area: acres
   Drainage area: acres or square miles
   Volume at spillway elevation: acre feet

ADDITIONAL INFORMATION
PART VI: Project Summary

Item 6. New, Replaced or Modified Drainage System(s)

Response: Per discussions with DEP Inland Water Resources staff, the University is submitting this general permit application under the category "Extensions of Culverts and / or Drainage Pipes". Therefore, we have not completed all the information in Item 6a.

However, as given in the Flood Management Certification application that accompanies this general permit, LEI designed the outfall for the predicted 100 year design storm combined flow of **34 cfs** from the 36 and 30 inch piping, and used a peak channel velocity of **8 feet per second** obtained from the HEC RAS output to conservatively design the erosion protection at the outfall of both pipes.

This project was designed to not only remedy the existing erosion problems at the outlets, but to accommodate additional flows from a 55 acre diversion proposed as part of the University's campuswide Flood Management Certification application, during a 100 year storm event.

Part VI: Project Summary (cont.)

c. *Dam Characteristics:*

Maximum height: feet

Total length: feet

Type of construction (e.g., earth, concrete masonry, timber etc.):

Type of spillway (e.g., weir, drop inlet, ogee, etc.):

d. *Fill in Watercourses:*

Does the subject activity involve placement of fill material in the existing brook, stream, river or impoundment? ☐ Yes ☐ No

If yes, describe the volume of such fill, its engineering characteristics and intended purpose:

☐ Check if *additional* sheets are attached to this page.

9. **Best Management Practices**

Describe the pollution prevention and best management practices that will be implemented during construction and operation of the proposed activity to: minimize disturbance and pollution of floodplains, wetlands, and watercourses; maintain an uninterrupted stream flow; and prevent flooding or other environmental damage. Show erosion and sedimentation controls in Attachment B, include pretreament of stormwater runoff.

The construction activity will take place only during low flow conditions. During construction, stormwater will be diverted around the construction area by either temporary bypass piping, pumps or a combination of these measures. Temporary check dams will be installed in the stream channel downstream of the construction area, to minimize the potential for downstream sedimentation.

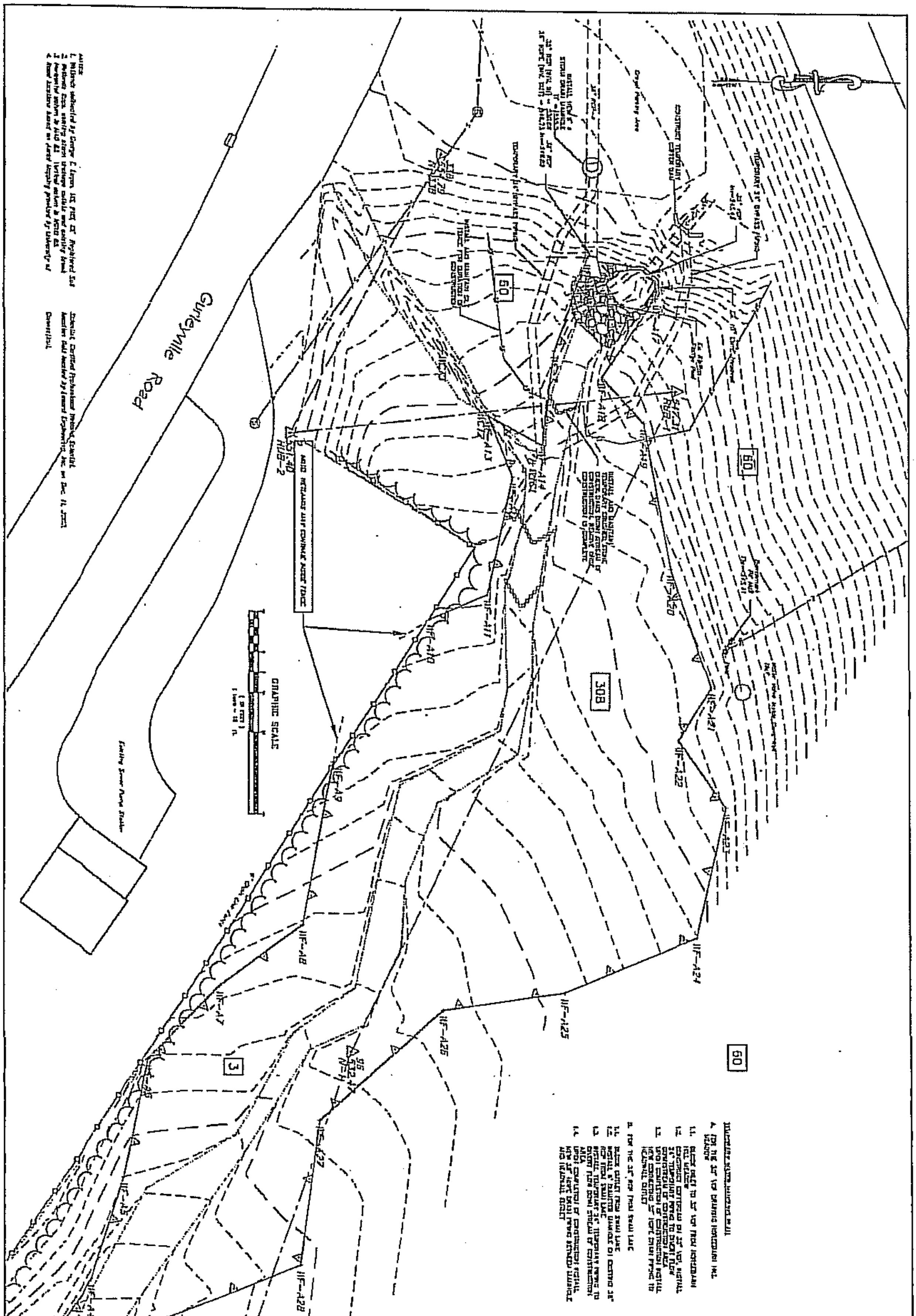
☐ Check if additional sheets are attached to this page.

Part VII: Supporting Documents

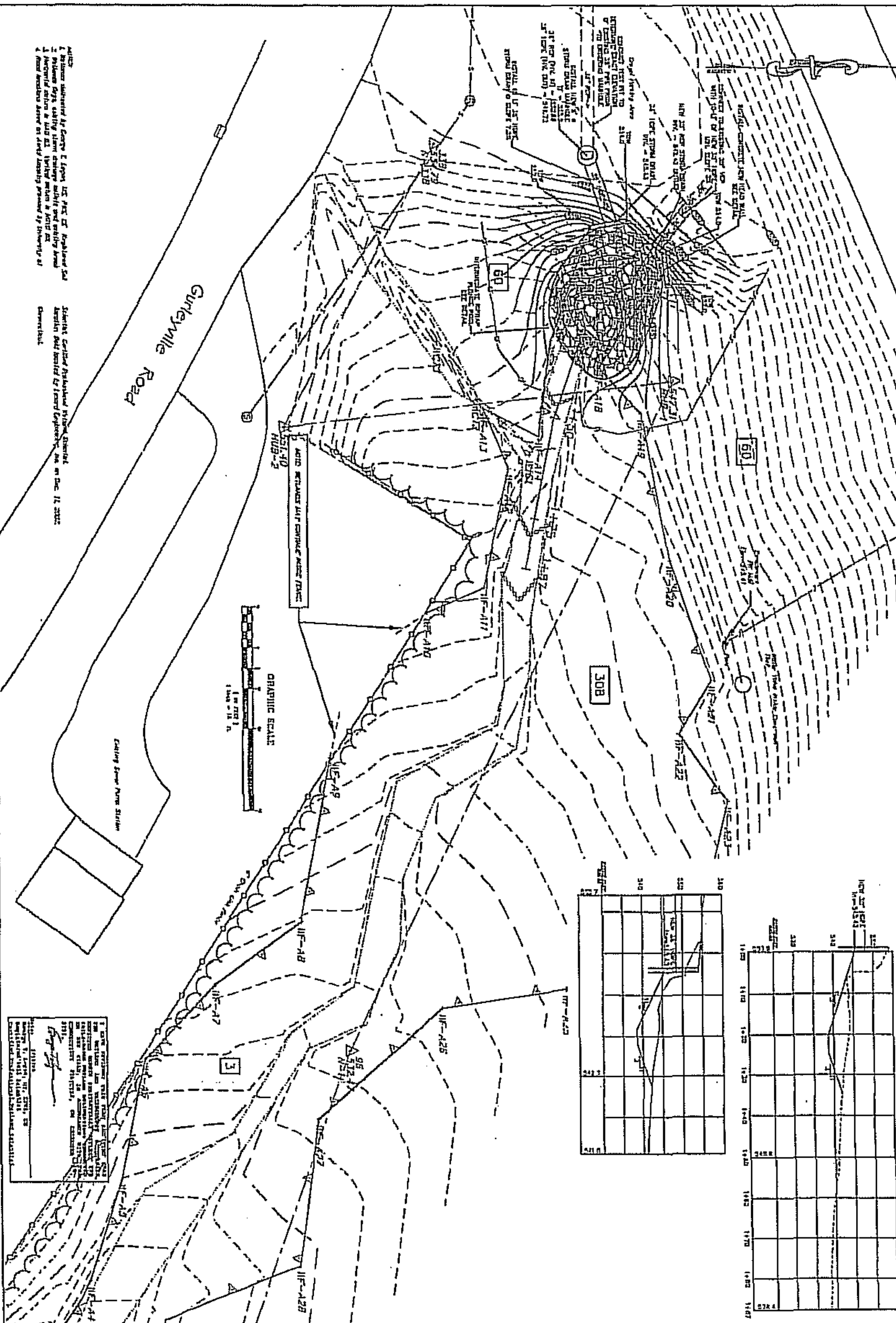
In addition to the documents described in Parts V and VI of this form, your request for authorization must include a location map (*Attachment A*) and a site plan (*Attachment B*). For directions as to the information that should be depicted on such maps and plans, please review Section 4(c)(2) of the applicable general permits.

Please enter a check mark by the attachments as verification that *all* attachments have been submitted with this request for authorization form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., *Attachment A, Location Map*, etc.) and be sure to include the requester's name as indicated on the *Permit Application Transmittal Form*.

☒	Attachment A:	Location Map: A depiction, on an 8.5" x 11" copy of the relevant portion of the most recent version of the United States Geologic Survey topographic map (Scale 1:24,000), of the exact location of the property at which such activity will be conducted.
☒	Attachment B:	Site Plan: please review Section 4(c)(2) of the applicable general permits.
☐	Attachment C:	*Coastal Consistency Review Form* (DEP-APP-004), if applicable
☒	Attachment D:	A copy of the NDDB Review Request Form (DEP-APP-007) and the NDDB response thereto, and any biologist's report on endangered, threatened or special concern species, if applicable.
☐	Attachment E:	Certification of a licensed engineer, as described in Section 4(c)(2)(M) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), for work involving the construction of culverts or bridges. For guidance, please refer to *Model Hydraulic Analysis, Supplemental Guidelines for Preparing Hydraulic Analyses in Permit Applications Submitted to the Inland Water Resources Division* (DEP-IWRD-GUID-001, Rev. 02/13/02).
☐	Attachment F:	Plan for Maintenance of Boat Launch Facilities and Beaches, as described in Section 3(a)(2) of the General Permit for Minor Grading (DEP-IWRD-GP-007), if applicable.
☐	Attachment G:	Drainage Maintenance Plan, as described in Section 3(a)(3) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), if applicable.
☐	Attachment H:	Design Computations, as described in Section 4(c)(2)(L) of the General Permit for Utilities and Drainage (DEP-IWRD-GP-005), for work involving placement, replacement, or other modification of a drainage system.
☐	Attachment I:	Engineering Report, as described Section 4(c)(2)(L) of the General Permit for Dam Safety Repair and Alteration (DEP-IWRD-GP-008) for work related to a dam.
☐	Attachment J:	Other information provided by requester (list):



Lenard Engineering, Inc. Civil, Environmental and Hydrogeological Consultants	**WATER HANDLING PLAN** PREPARED FOR UNIVERSITY OF CONNECTICUT GURLEYVILLE ROAD STORRS, CONNECTICUT	Drawing Date: May 7, 2000	Drawing Scale: 1"=10'
S2			



Drawing #: S3	Lenard Engineering, Inc. Civil, Environmental and Hydrogeological Consultants	PROPOSED SITE PLAN
		PREPARED FOR UNIVERSITY OF CONNECTICUT GURLEYVILLE ROAD STORRS, CONNECTICUT

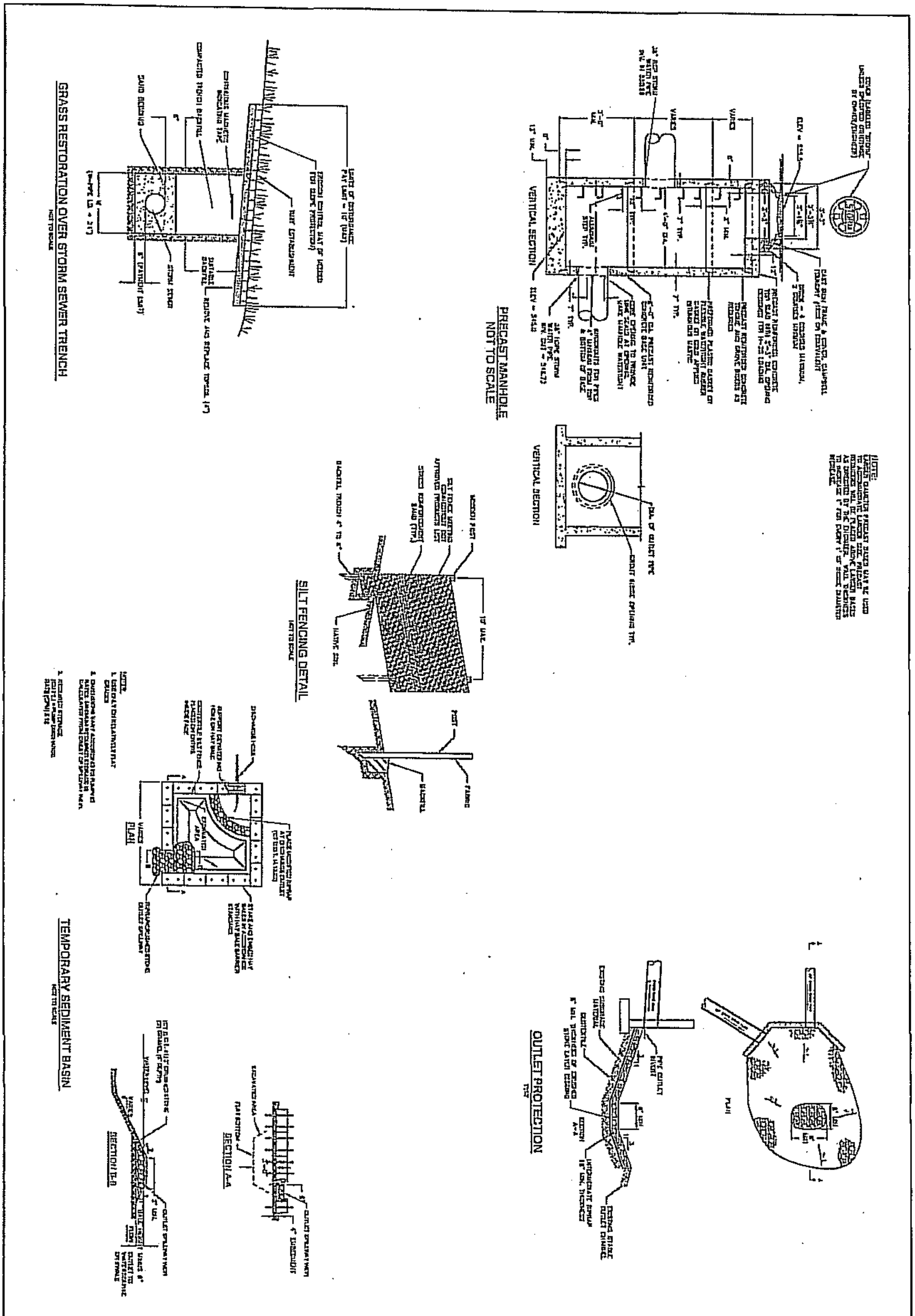
Drawing date: May 7, 2008

Drawing Scale: 1"=10'

Designed By: JCD

Drawn By: JCD

Checked By: JCC



Lenard Engineering, Inc.
Civil, Environmental and Hydrogeological Consultants

WATER HANDLING PLAN

PREPARED FOR

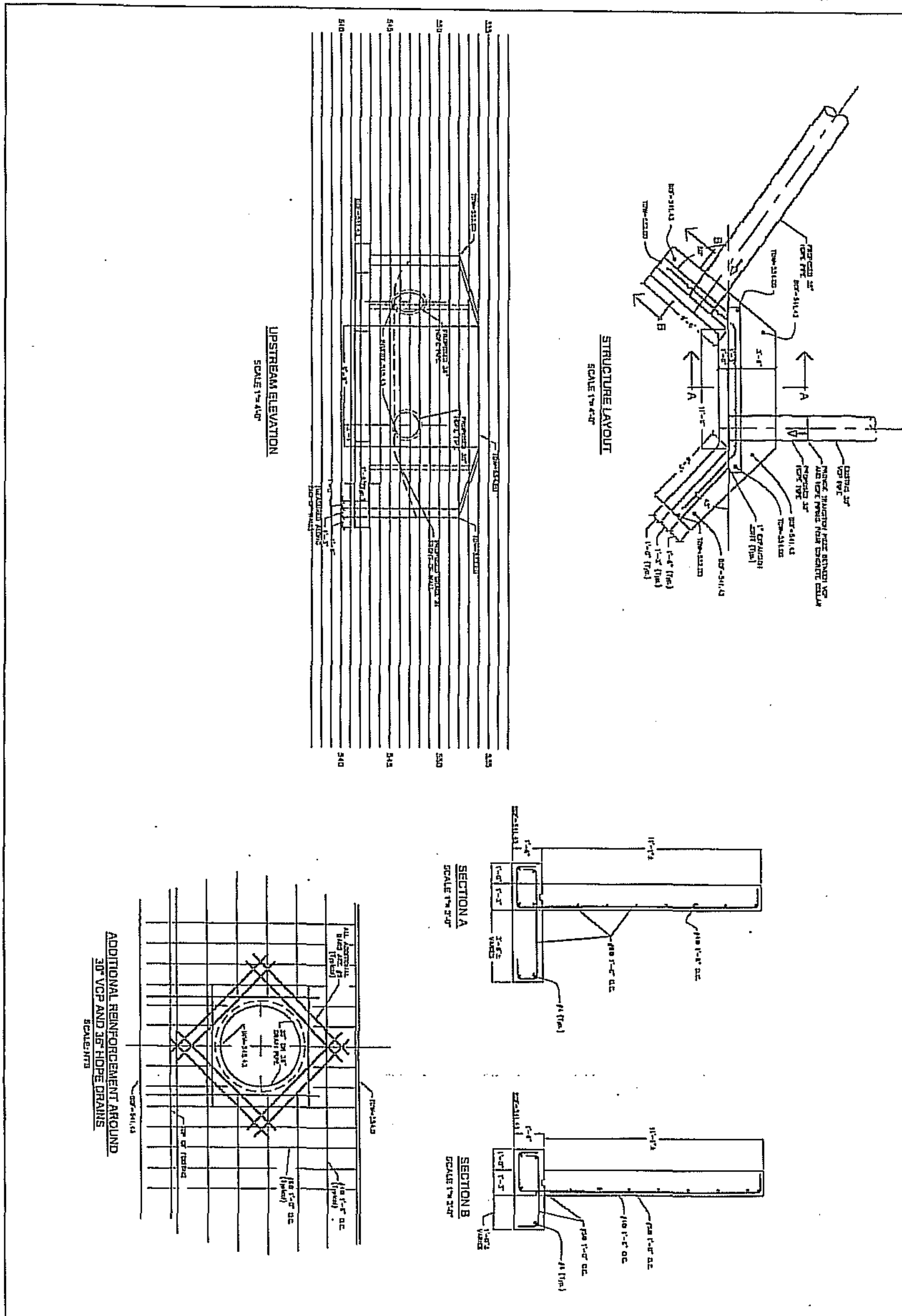
UNIVERSITY OF CONNECTICUT
GURLEYVILLE ROAD
STORRS, CONNECTICUT

Drawing date: JAN. 15, 2009
Drawing Scale: 1"=10'

Rev.	Date	Revision	By
1	[illegible]	REVISED DETAILS	JED

Designed By: JED
Drawn By: JED
Checked By: [illegible]
CAD File:

Drawing #: D1



Lenard Engineering, Inc.

Civil, Environmental and Hydrogeological Consultants

Drawing Date: JAN. 19, 2006	Drawing Scale: 1"=10'

HEAD WALL DETAILS

PREPARED FOR

UNIVERSITY OF CONNECTICUT

GURLEYVILLE ROAD

STORRS, CONNECTICUT

Rev.	Date	Revision	By
1	[illegible]	REVISED FLANGE PIPE	JED

Designed By: JED

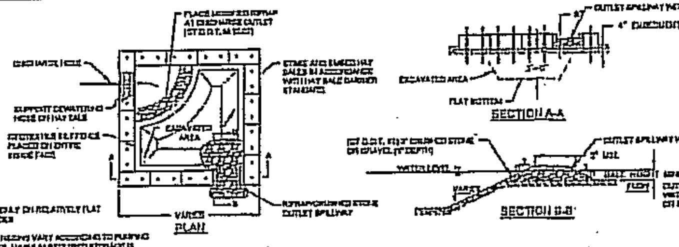
Drawn By: JED

Checked By: JEC

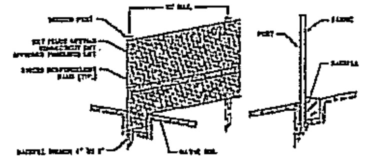
CAD File: Head Wall Detail

Drawing #: D2

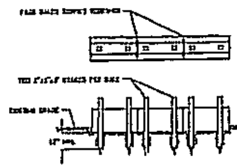
SOIL EROSION AND SEDIMENT CONTROL PLAN NARRATIVE



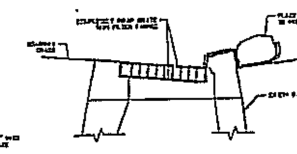
TEMPORARY SEDIMENT BASIN (1/SE1)
NOT TO SCALE



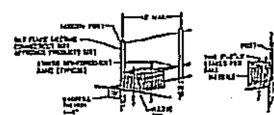
SILT FENCING DETAIL (2/SE1)
NOT TO SCALE



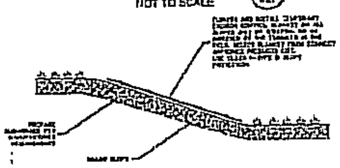
HAYBALE BARRIER (1/SE1)
NOT TO SCALE



CATCH BASIN PROTECTION (5/SE1)
NOT TO SCALE



SILT FENCE/HAYBALE COMBINATION DETAIL (4/SE1)
NOT TO SCALE



TEMPORARY EROSION CONTROL BLANKET (3/SE1)

1. INTRODUCTION AND PERMIT COMPLIANCE

2. PROJECT DESCRIPTION AND SITE CHARACTERISTICS

3. CONSTRUCTION SEQUENCING

4. RESPONSIBILITY

5. PRECONSTRUCTION CONFERENCE

6. DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES

7. DEWATERING

8. GENERAL CONDITIONS

9. CONTRACTOR CERTIFICATION

SEDIMENT & EROSION CONTROL NARRATIVE	
PREPARED FOR	
UNIVERSITY OF CONNECTICUT	
GURLEYVILLE ROAD	
STORRS, CONNECTICUT	
Drawing Date	May 28, 2003
Drawing Scale	AS SHOWN
Leonard Engineering, Inc.	Civil, Environmental and Hydrogeological Consultants
Drawing #	SE1

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Gregory J. Padick

From: wellmme@nu.com
Sent: Monday, November 16, 2009 12:44 PM
To: Gregory J. Padick
Cc: meleap@nu.com; Matthew W. Hart
Subject: Re: CT Siting Council filing

Hi Greg:
In terms of the overall schedule for the proposed Interstate Reliability Project, the current timeline is as follows:
file the application with the CT Siting Council in mid-2010
expect the decision to be issued in the mid-2011
and if granted a certificate, begin construction in early 2012.

Tony and other project representatives recently met with the Hawthorne neighborhood residents to review proposed structure locations and a potential shift in the right-of-way.
It was a positive meeting and the project has gotten agreement from the residents to continue to do any necessary surveying work that would support the potential shift to the south.

As for other plan revisions since the public information sessions, we are continuing to develop our application. Changes between the Municipal Consultation Filing and the application to the Siting Council have yet to be finalized.

On another project issue, I know that Terry Ramborger of AECOM has been in contract with both yourself and Grant Meitzler concerning wetland mitigation properties located in Mansfield.
To date no viable wetland mitigation projects in Mansfield have been identified.
As we continue to refine our application to the Army Corp of Engineers we need to start focusing our efforts at the detail level.
To that end it is important that if Mansfield has any wetland mitigation opportunities we need to identify them as soon as possible so our environmental analysts can take them into consideration as the permit application continues to be developed.
It would be helpful if either yourself or Grant could communicate any ideas you may have to Terry Ramborger at 401.274.5685

Thank you for time.

Sincerely:
Marcia

Marcia E. Wellman
Municipal Relations & External Affairs
NU Transmission
Tel: 860.665.6495
Email: wellmme@nu.com

"Gregory J. Padick" <PadickGJ@mansfieldct.org>		To
	Marcia E. Wellman/NUS@NU	
		cc
	"Matthew W. Hart" <Hartmw@MANSFIELDCT.ORG>, Anthony P. Mele/NUS@NU	
11/16/2009 09:09 AM		Subject
	CT Siting Council filing	

Marcia: Thank you for your notification that additional survey/staking activity will be taking place over the next few weeks along the proposed eastern Ct route for the Interstate Reliability Project. We anticipate some phone calls from neighboring property owners and it would be appreciated if you or Tony could update us on the proposed project filing schedule and whether there have been plan revisions since public information sessions were held in Mansfield and neighboring eastern Ct municipalities. Thanks You

Gregory Padick, Mansfield Director of Planning

DRAFT MINUTES
Mansfield Open Space Preservation Committee
Minutes for November 17, 2009

Members present:
Vicky Wetherall, Jim Morrow, Michael Allison Quentin Kessel, Steve Lowrey, Ken Feathers and
Jennifer Kaufman

1. Chairman Jim Morrow called the meeting to order at 7:38 PM

2. Lowrey/Kessel: Motion to approve the minutes of October 20, 2009, motion carried.

3. Public Comment: No public present.

4. Report from Town Staff::
   Reviewed draft of annual report that Jennifer had submitted; the committee approved it with minor revisions that Morrow would forward to Jennifer.

5. Old Business:
   None discussed

6. New Business:
   - Jennifer summarized the FOI statutes and how they applied to the OSPC. There was some discussion regarding e-mail editing of comments to the Town Manager and Executive Session concerning possible land purchases and field trips on those properties.
   - Approval of proposed meeting dates: Kessel/Wetherall, to approve the proposed dates, motion carried.
   - Appt. of Secretary: Lowrey agreed to take minutes
   - Discussion of presentation to the Town Council: since there are a number of new members on the Council it seemed relevant to com to a meeting and explain to them the function of the Land use advisory Boards (Open Space Protection Committee, Conservation Commission, Agriculture Committee and the Parks Advisory Committee. Kaufman will check with the Town Manager to arrange a date.
   - Discussion of marking trails on the Dorwart Property: There was a discussion of what the Committees goals of a trail system was, the various members would walk the property on their own and then schedule a joint field trip with PAC to layout trails
   - Morrow/Feather to go into Executive Session, motion carried at 8:57 PM
     Wetherall/Morrow to come out of Executive Session, motion carried at 9:07 PM

7. No reports from staff
8. No Communications
9. Future agendas: Next month there will be some referrals to Council to discuss
10. Wetherall/Lowrey to adjourn, motion carried. Meeting adjourned at 9:08

Respectfully submitted

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MINUTES

MANSFIELD PLANNING AND ZONING COMMISSION
Regular Meeting, Monday, November 16, 2009
Council Chamber, Audrey P. Beck Municipal Building

Members present:	R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, P. Plante, B. Pociask, B. Ryan
Alternates present:	G. Lewis, K. Rawn, V. Stearns
Staff Present:	Gregory Padick, Director of Planning

Chairman Favretti called the meeting to order at 7:01 p.m. It was noted that Vera Stearns was present but not acting, as she had not been sworn in by the Town Clerk in time for this meeting.

Election of Officers:

- Holt MOVED, Plante seconded, to nominate Rudy Favretti as Chairman of the Mansfield Planning and Zoning Commission. MOTION PASSED UNANIMOUSLY.
- Holt MOVED, Plante seconded, to nominate Joann Goodwin as Vice Chairman of the Mansfield Planning and Zoning Commission. MOTION PASSED UNANIMOUSLY.
- Plante MOVED, Pociask seconded, to nominate Kay Holt as Secretary of the Mansfield Planning and Zoning Commission. MOTION PASSED UNANIMOUSLY.

Committee Appointments:

Chairman Favretti reviewed the various town committees on which Planning and Zoning members currently serve.

- Town University Relations Committee: Beal agreed to continue serving as the Planning and Zoning member.
- Transportation Advisory Committee: Hall agreed to continue serving as the Planning and Zoning member.
- Regional Planning Agency: Holt agreed to continue serving as the Planning and Zoning member. Rawn expressed interest in the alternate's position vacated by Betty Gardner.
- Design Review Panel: Pociask MOVED, Holt seconded, to re-appoint the current members of the Design Review Panel. MOTION PASSED UNANIMMOUSLY.
- Four Corners Sewer Study Advisory Committee: Plante agreed to continue serving as the Planning and Zoning member.
- Sustainability Committee: Ryan agreed to continue serving as the Planning and Zoning member.
- Regulatory Review: Favretti noted that any and all members are encouraged to attend and partake in the Regulatory Review Committee meetings and a Chairman will be nominated at the next Regulatory Review meeting.

Chairman Favretti welcomed new alternates Kenneth Rawn and Vera Stearns to the Planning and Zoning Commission and thanked them for volunteering their time.

Review of By-Laws:

Chairman Favretti asked members to review the by-laws prior to the next meeting.

Minutes:

11/2/09-Hall MOVED, Plante seconded, to approve the 11/2/09 minutes as written. MOTION PASSED UNANIMOUSLY.

Zoning Agent's Report:

Hirsch noted that there has been progress at the Hall site, noting one trailer body has been removed and Hall told him that the remaining one will be removed in the next few weeks. Plante related that Hall had been given many opportunities to remedy the site and yet he has not done so in a timely manner. He felt that violation notices should be sent instead of extending the deadlines.

Old Business:

1. **Special Permit Application, Proposed Retail Package Store, 153 N. Eagleville Rd, Pesaro's LLC, o/a. File #585-3**

   Hall MOVED, Holt seconded, that the Planning and Zoning Commission approves with conditions the special permit application (File #585-3) of Pesaro's LLC., for a retail package store on property located at 153 North Eagleville Road, as shown on plans revised to 10/26/09, as presented at Public Hearings on10/19/09 and 11/2/09 and as described in other application submissions. This approval is granted because the application as approved is considered to be in compliance with Article V, Section B and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions:

   1. To facilitate safe pedestrian access to the package store entrance, a five (5) foot wide access way between parking spaces shall be designated west of the entrance door. This access way may be incorporated into a new or relocated handicap parking space. The re-striping of the western parking area and installation of an employee parking space sign shall be completed before the issuance of a Certificate of Compliance.

      This approval authorizes the applicant to relocate the existing handicap space to the package store entry area, to relocate the handicap space to an area between the two business entries or to keep the handicap space in the current location. The decision about location shall be approved by the Director of Planning and shall be so indicated on the final plans.

   2. The existing dumpster area shall be screened on all sides as per regulatory requirements. Currently the easterly side is not screened with a fenced gate. A plan for screening shall be submitted to and approved by the PZC Chairman and Director of Planning and installed before the issuance of a Certificate of Compliance.

   3. All applicable Health, Building and Fire Codes shall be addressed and required permits obtained prior to construction/renovation or occupancy by the public for this approved change in use.

   4. This approval grants the requested site plan submission waivers, including an A-2 Survey. The information submitted is adequate to appropriately address approval criteria.

   5. This permit shall not become valid until the applicant obtains the permit form from the Planning Office and files it on the Land Records. The filing on the Land Records shall not occur until the subject site has been authorized by the State Liquor Control Authority.

   MOTION PASSED UNANIMOUSLY.

2. **Site Modification Request, Chuck's Margarita Grill, Proposed Deck, 1498 Stafford Rd, File #303**

   After discussion, Plante MOVED, Hall seconded, that the Planning and Zoning Commission finds that the potential impacts from this proposal are such that it cannot be approved as a modification, and therefore Special Permit approval would be necessary. MOTION PASSED UNANIMOUSLY.

3. **Special Permit Application, Proposed Conversion from one to two family, 1620 Storrs Road, Y. Ghiaei o/a, File #1276-2 M.A.D. 12/23/09**

   Pociask disqualified himself. Holt MOVED, Beal seconded, that the Mansfield Planning and Zoning Commission approves with conditions the special permit application (file #1276-2), of Y. Ghiaei, for converting a single-family home to a two-family dwelling on property located at 1620 Storrs Road, in a RAR-90 zone, as shown on submitted plans, as described in other applicant submissions and as presented at Public Hearings on 9/8/09, 10/5/09 and 10/19/09.

   This approval is granted because the application, as hereby approved, is considered to be in compliance with Article X, Section J, as it existed when the application was filed, Article V, Section B, and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions, which if not met shall lead to revocation of this permit:

1. This approval is granted for a four-bedroom, primary dwelling unit, and a one-bedroom secondary unit to be occupied by not more than two persons, as described in application submissions. Any increase in the number of bedrooms on this property or the occupancy of the secondary unit shall necessitate subsequent review and approval from Eastern Highlands Health District and the Planning and Zoning Commission.
2. This approval is conditioned upon owner-occupancy of the subject dwelling which is a specific requirement for conversions. To ensure that this requirement is met, a notarized affidavit confirming owner-occupancy shall be submitted to the Zoning Agent on or before January 2nd of each year.
3. Occupancy of the primary unit shall comply with all applicable Zoning, Building and/or Town Ordinance provisions.
4. Based on the use, as described, the submitted parking plan is considered adequate for residents and guests. To help ensure that the five (5) designated spaces are used as proposed, concrete or wooden wheel stops, acceptable to the Zoning Agent, shall be installed and maintained. Any change in the parking layout shall necessitate additional PZC review and approval.
5. Existing vegetation along Storrs Road, immediately adjacent to the driveway, shall be trimmed and maintained in a cut-back condition to provide appropriate sightlines for the subject driveway.
6. Pursuant to the provisions of Article X, Section J, this action authorizes a waiver of the front setback requirements for the subject dwelling. The existing setback from Storrs Road is considered adequate to address potential neighborhood impacts and other approval criteria.

   However, setback waivers have not been authorized for on-site parking. Existing parking areas along the southerly side of the driveway shall be permanently blocked with appropriate barriers. The barriers shall be approved by the PZC Chairman and Zoning Agent and installed prior to the issuance of a Certificate of Compliance.
7. This approval accepts the applicant's request for a waiver of certain site plan submission requirements, including an A-2 Survey. The information submitted is considered adequate to address applicable approval criteria.
8. This special permit shall not become valid until filed upon the Land Records by the applicant.

MOTION PASSED with all in favor except Plante who was opposed and Pociask who disqualified himself.

4. **Potential Re-Zoning of the "Industrial Park" zone on Pleasant Valley Rd and Mansfield Ave.**
   Padick informed the Commission that he met and discussed the draft with property owner B. Hussey and his attorney K. Olsen who indicated that they will pass on their comments for the next meeting.
5. **Request to release/reduce bonding for Paideia Project, Dog Lane**
   Hall MOVED, Plante seconded, that the Planning and Zoning Commission does not authorize any change in the bonding requirements for the Paideia Amphitheater project on Dog Lane. The project remains under construction and the subject bonding is needed to help address any sediment and erosion problems and to ensure appropriate site stabilization in the event the project is not completed in accordance with approved plans. MOTION PASSED UNANIMOUSLY.

New Business:

1. **Notice of 11/18/09 Conservation Commission Meeting to discuss Drainage Plans for the UConn Storrs Campus**
   Padick invited PZC members to attend the 11/18/09 meeting which will be held at 7:30 p.m. in Conference Room B unless capacity is exceeded, in which case it will be at the Community Center.

Reports of Officers and Committees:

None.

Communications and Bills:
Noted.

Adjournment:
Favretti declared the meeting adjourned at 8:04 p.m.

Respectfully submitted,

Katherine K. Holt, Secretary

DRAFT MINUTES

MANSFIELD PLANNING AND ZONING COMMISSION
Regular Meeting, Monday, December 7, 2009
Council Chamber, Audrey P. Beck Municipal Building

Members present:	R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, P. Plante, B. Pociask, B. Ryan
Alternates present:	G. Lewis, Kenneth Rawn, Vera Stearns
Staff Present:	Gregory Padick, Director of Planning

Chairman Favretti called the meeting to order at 7:44 p.m. Alternate Lewis was appointed to act.

Zoning Agent's Report:
Hirsch updated that there has been no progress at the Hall site, noting one trailer body remains. He has issued Hall a Zoning Citation for $150.00, and will continue to do so until remedied or he will issue a Cease and Desist Order.

Hirsch informed the Commission that he is in the process of sending out Home Occupation renewals and efficiency unit owner occupancy verifications which both get done every 2 years.

Old Business

1. **By-Laws Review/Revision**
   After discussion, Holt MOVED, Hall seconded, to approve the By-Laws with the elimination of the reference to the sand and gravel ordinance on page 3, Article VII, Section 2, line 3; and the elimination of the last sentence in Article X, Section 4. MOTION PASSED UNANIMOUSLY.
2. **Committee Assignments**
   Holt MOVED, Hall seconded, to appoint PZC Alternate Kenneth Rawn to the WICOG Regional Planning Commission. MOTION PASSED UNANIMOUSLY.
3. **Potential Re-Zoning of the "Industrial Park" zone on Pleasant Valley Rd and Mansfield Ave.**
   Item was tabled, awaiting potential comments from primary property owner.

New Business

1. **Site Modification Request, Sidewalk and Parking Improvements, Hillel Property, 54 N. Eagleville Rd, File #1289**
   Item was tabled pending IWA ruling.
2. **Proposed Telecommunication Tower, Daleville Rd, Willington**
   Padick summarized the proposal and the consensus of the Commission was that no comments were necessary.
3. **11/30/09 Letter from M. Margulies for the American Civil Liberties Union of CT**
   Tabled-awaiting response from Town Attorney.
4. **Verbal Update from Director of Planning RE: Proposed Parking Ordinance for 1,2 and 3 Dwelling Unit Rental Properties; Potential Student Residence Ordinance; Definition of Family**
   Padick referenced the Staff Discussion Notes from the 10/16/09 Meeting on Student Housing/Quality of Life Issues and a 11/9/09 email regarding notes from Poughkeepse, NY. He summarized the proposed ordinances stating that the Town Council hopes to set a public hearing in January for the Proposed Parking Ordinance. Extensive discussion was held and members expressed their concerns, Padick agreed to keep the PZC updated.

Reports of Officers and Committees: Chairman Favretti noted a 12/16/09 Field Trip at 1pm.

Communications and Bills:
Holt MOVED, Hall seconded, to instruct staff to pay the Town Attorney's December 3, 2009 invoice for services provided to the PZC in the amount of $1,395.00. MOTION PASSED UNANIMOUSLY.

Adjournment: Favretti declared the meeting adjourned at 8:22 p.m.

Respectfully submitted, Katherine K. Holt, Secretary

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DRAFT MINUTES
MANSFIELD INLAND WETLANDS AGENCY
Regular Meeting
Monday, December 7, 2009
Council Chambers, Audrey P. Beck Municipal Building

Members present:	R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, P. Plante, B. Pociask, B. Ryan
Alternates present:	G. Lewis, Kenneth Rawn, Vera Stearns (7:08pm)
Staff present:	G. Meitzler (Wetlands Agent)

Chairman Favretti called the meeting to order at 7:04 p.m. Alternate Lewis was appointed to act.

Minutes:
11-2-09 - Hall MOVED, Beal seconded, to approve the 11-2-09 minutes as written. MOTION PASSED with all in favor except Plante who disqualified himself.

Communications:
The 11-30-09 Wetlands Agent's Monthly Business report was noted.

Old Business:
None.

New Renewal Request:
W1442 (W1296) - King - Wormwood Hill Rd
Holt MOVED, Ryan seconded, to grant an Inland Wetlands License under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield to Donald King (file no. W1442), renewal of wetland permit W1296 for a single family house on property now owned by the applicant and located on the west side of Wormwood Hill Road, as shown on a plan dated 3/02/2005, and as described in other application submissions. This action is based on the application submissions, and consideration of applicable regulations.

Based on the above considerations, the Agency hereby finds this project will not cause significant impact, provided the following conditions are met:

1. Appropriate erosion and sedimentation controls, as shown on the plans, shall be in place prior to construction and maintained during construction and removed when disturbed areas are completely stabilized.

This approval is valid for a period of five years (until May 4, 2014), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment. MOTION PASSED UNANIMOUSLY.

W1443 (W1291) - Abbott - Mulberry Rd
Holt MOVED, Ryan seconded, to grant an Inland Wetlands License under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield to Pamela & Steve Abbott (file no. W1443), for renewal of wetland permit W1291 approved at the March 7, 2005 Wetlands Agency meeting, for a single family house on property now owned by this applicant and located on the east side of Wormwood Hill Road on the southeast corner of Mulberry Rd/Wormwood Hill Rd, as shown on a plan dated 2/01/2005, and as described in other application submissions. This action is based on the application submissions, and consideration of applicable regulations.

Based on the above considerations, the Agency hereby finds this project will not cause significant impact, provided the following condition is met:

1. Appropriate erosion and sedimentation controls, as shown on the plans, shall be in place prior to construction and maintained during construction and removed when disturbed areas are completely stabilized.

This approval is valid for a period of five years (until March 7, 2015), after which time a new permit application is required. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment. MOTION PASSED UNANIMOUSLY.

New Modification Request:
W1444(W1237) - Hillel House - sidewalk and parking alternations
Pociask disqualified himself. Henry M. Zachs, HWZ Contracting, LLC, Director of Hillel and John Ianni, Professional Soil Scientist were present. Zachs summarize the modification request to extend the sidewalk. Ianni described the wetlands and brook north of the site, noting no inlet or outlet of the wetland on the site stating that it is not a vernal pool and that in his opinion it is a "left-over" wetland with no functions, value or wildlife.

Goodwin MOVED, Hall seconded, receive the application submitted by Henry M. Zachs, HWZ Contracting, LLC, B'Nai Brith Hillel Foundation of Connecticut (IWA File #W1444) under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield for the extension of sidewalk and parking lot and removal of trees, at 54 North Eagleville Road, on property owned by B'Nai Brith Hillel Foundation of Connecticut, as shown on a map dated 10/16/09 and as described in other application submissions, and to refer said application to the staff and Conservation Commission for review and comment. MOTION PASSED UNANIMOUSLY.

Holt MOVED, Hall seconded, to table action on this item until the next meeting, allowing the agency to re-visit the site on a field trip. MOTION PASSED UNANIMOUSLY.

W1445(W1419) - Chernushek - additional gravel removal and construction haul road
Goodwin MOVED, Holt seconded, receive the application submitted by Henry M. Chernushek (IWA File #W1445) under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield for the removal of 750 cubic yards of gravel, at 473 Middle Turnpike, on property owned by the applicant, as shown on a map dated 10/19/09 revised to 12/3/09 and as described in other application submissions, and to refer said application to the staff and Conservation Commission for review and comment. MOTION PASSED UNANIMOUSLY.

New Applications:
W1446 - Kielbania - Mansfield City R - SF house in buffer
Goodwin MOVED, Holt seconded, receive the application submitted by Bryan and Margaret Kielbana (IWA File #W1446) under Section 5 of the Wetlands and Watercourses Regulations of the Town of Mansfield for the construction of a 3 bedroom single family residence and septic, at 619 Mansfield City Road, on property owned by the applicant's, as shown on a map dated 11/23/09 and as described in other application submissions, and to refer said application to the staff and Conservation Commission for review and comment. MOTION PASSED UNANIMOUSLY.

Field Trip: Chairman Favretti scheduled a field trip for Wednesday, December 16, 2009 at 1:00 p.m.

Reports of Officers and Committees:
Regulation Review Committee: W1447 - IWA Regulation Revisions
The consensus of the Agency was to review the draft regulations and discuss any changes and set a public hearing at a special meeting on 12/21/09.

Other Communications and Bills: Noted.

Adjournment: The meeting was adjourned at 7:43 p.m.

Respectfully submitted, Katherine K. Holt, Secretary

Memorandum: November 30, 2009
To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
Re: Monthly Business

W1419 - Chernushek - hearing on Order

3.10.09: The hearing on the Order remains open and should continue until the permit application under consideration is acted upon.
(The Order was dropped on approval of the application required in the Order.)

4.30.09: Former rye grass seeding is beginning to show green. I spoke with Mr. Chernushek this afternoon who indicated health problems that delayed his starting but indicated he will be working this weekend. I will update on this Monday evening.

5.26.09: A light cover of grass growth has come in. Mr. Chernushek indicates health problems and two related deaths have delayed his start of work since the permit approval was granted. It appears that some light work has started. He has further indicated that he will start a vacation on June 22, 2009 to finish the work.

6.13.09: Work is underway.

6.21.09: Bulldozer work has been completed - finish work remains. The additional silt fencing has been placed along the northerly wetlands crossing, and the additional pipe under the southerly crossing has been installed. Remaining work includes finish grading along edges, spreading stockpiled topsoil, and establishing grass growth.

7.01.09: I spoke with Mr. Chernushek who indicated he expects work to be completed by September 1, 2009. (Site photo attached).

9.03.09: Mr. Chernushek has been working on levelling and grading. The formerly seeded areas have become fairly thick growth surrounding the central wet areas. He has further indicated that with the combination of weather and the slower moving of earth with the payloader compared to the earlier rented bulldozer has led him to contact contractors for earth moving estimates which have not yet been received. The site is not yet finished but has remained quite stable.

9.12.09: I met with Mr. Chernushek today and discussed again what his plans are for stabilizing this work site.

10.01.09: Mr. Chernushek indicated he has not heard back from the contractor he had spoken with about removing material, and is in progress of contacting others. In discussion is removal of material from the site either within the 100 cubic yard limit or obtaining a permit for such removal.

10.28.09: Mr. Chernushek has indicated he has made arrangements with DeSiato Sand & Gravel to remove 750 cubic yards of material. Staff is in the process of clarifying permit requirements.

11.30.09: Packet of information representing submissions by Mr. Chernushek, Mr. DeSiato and myself is in this agenda packet as Mr. Chernusheks's request for modification.

Bell - Bassetts Bridge Rd - Garden Center

11.18.08: No change - site appears closed for the winter.

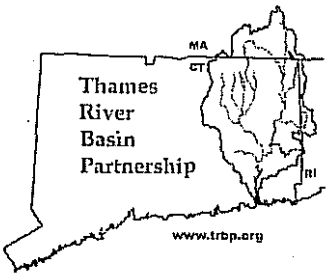
12.08.08: Light snow cover. No site work in progress.

1.08.09: Snow cover frozen. Site inactive.
2.17.09: No change.
4.01.09: Selective logging operation in progress in wooded areas away from the nursery operation. A few loads of wood chips are being spread along edges of ponded area.
4.14.09: As previous, preparations for opening plant sale areas are in progress.
5.08.09: They are open for the season and the site is in good shape.
6.10.09: Site remains in good shape.
7.16.09: Site remains in good shape.
8.12.09: Site remains in good condition.
9.14.09: Site is in excellent condition.
10.27.09: Site is in excellent condition.

This Garden Center site has been consistently in good shape. I request the Agency give consideration to dropping the monthly inspection requirement.

Mansfield Auto Parts - Route 32

12.08.08: Inspection - no vehicles are within 25' of wetlands.
1.16.09: Inspection - no vehicles are within 25' of wetlands.
2.24.09: Inspection - no vehicles are within 25' of wetlands.
3.06.09: Inspection - no vehicles are within 25' of wetlands.
4.14.09: Inspection - no vehicles are within 25' of wetlands.
5.11.09: Inspection - no vehicles are within 25' of wetlands.
6.10.09: Inspection - no vehicles are within 25' of wetlands.
7.16.09: Inspection - no vehicles are within 25' of wetlands.
8.12.09: Inspection - no vehicles are within 25' of wetlands.
9.14.09: Inspection - no vehicles are within 25' of wetlands.
10.27.09: Inspection - no vehicles are within 25' of wetlands.
11.30.09: Inspection - no vehicles are within 25' of wetlands.



Thames River Basin Partnership

Partners in Action Quarterly Report

Fall 2009 Volume 14

The Thames River watershed includes the Five Mile, French, Moosup, Natchaug, Pachaug, Quinebaug, Shetucket, Willimantic, and Yantic Rivers and all their tributaries. We're not just the "Thames main stem."

Greetings from the Thames River Basin Partnership. Once again this quarter our partners have proven their ability to work cooperatively on projects compatible with the TRBP Workplan and in support of our common mission statement to share organizational resources and to develop a regional approach to natural resource protection. I hope you enjoy reading about these activities as much as I enjoy sharing information about them with you. For more information on any of these updates, just click on the blue website hyperlinks in this e-publication, but be sure to come back to finish reading the rest of the report.

Jean Pillo, Watershed Conservation Coordinator
Eastern Connecticut Conservation District

If you missed the fall meeting of the Thames River Basin Partnership at the Wyndham County Extension Center, you missed a joint presentation by Susan Westa, Ed Eramian and Virge Lorents on the Borderlands Project. This exciting project involves an exploration of how to balance development and conservation in the rural CT-RI border region. One strategy is to use the Village Innovation Pilot (VIP), which has engaged the people of the two towns in creating and implementing a vision for their future. Guided by technical experts and local pilot teams, residents participated in visioning and planning exercises to explore how to preserve a meaningful sense of place (the "heart and soul" of the communities) by integrating new development in to town villages and centers. For more information on this project, contact Susan Westa, or visit http://www.borderlandsproject.org.

Special Meeting Announcement

The winter TRBP Quarterly Meeting will take place on January 19, 2010 at the Mansfield Community Center located at 10 South Eagleville Road in Mansfield CT beginning at 9:30 AM. This meeting will feature a very special presentation by Rob Hust of the Connecticut DEP to review the proposed minimum stream flow regulations for our organization two days before the official public hearing is scheduled to take place in Hartford. Seating is limited to 50 participants. Contact Jean Pillo at 860-928-4948 extension 605 to reserve your space as soon as possible.

TRBP News

An Inventory of Existing, Scheduled and/or Planned Implementation Projects in Support of the Eagleville Brook TMDL was delivered to the CT DEP at the end of October 2009. This report was the final task for the Thames River Basin Partnership Coordinator as funded by an EPA Section 319 grant through the CT DEP. The Eagleville Brook watershed is located in Storrs, CT. The brook has been listed as impaired for aquatic life support since 2004 and impervious cover was implicated as the cause of this impairment. Eagleville Brook was the first stream in the nation listed as impaired due to impervious cover. Click here to review this report. The CT DEP may use this report to develop a continual tracking database that could be replicated in other TMDL implementation efforts.

Willimantic storm drain marking project is nearly complete. The TRBP, through the Eastern Connecticut Conservation District (ECCD), was awarded a small grant by the Rivers Alliance of Connecticut to support this effort. The Environmental Committee of a student run group, People Helping People from the Eastern Connecticut State University, assisted the core volunteer team. Custom designed bilingual door hangers were distributed in the neighborhoods where the storm drain markers have been placed. At the October ECCD Annual Meeting, ECCD awarded high school students Celia Guillard and Hannah McMerriman with a Volunteer Project of the Year Award for their committed effort to complete this project.

For those of you who purchased rain barrels during the past 2 TRBP Rain Barrel promotions, The New England Rain Barrel Company wishes to remind you that it is time to store them away for the winter if you haven't already done so.

For the last 3+ years, the Thames River Basin Partnership has benefited from a part time coordinator courtesy of a series of three US EPA Clean Water Act section 319 grants and some funding support through the National Fish and Wildlife Foundation as part of the Long Island Sound Study. With the expiration of those funding sources, the position of TRBP Coordinator is suspended. The ECCD, a core member of the TRBP, will continue to support the organization by committing staff time to schedule meetings and record meeting notes, including the Partners in Action Report. If additional funding for the TRBP Coordinator position is secured, the Eastern Connecticut Conservation District will reactivate the position and partition their staff time to support the Workplan outlined by the funder. The final report submitted to the CT DEP outlines the many successes of the organization during the grant funded period, as well as potential future initiatives that can be completed if funding support is secured. Click here to review this report. If you know of potential funding sources for future TRBP initiatives, please contact Jean Pillo. Let's keep the momentum going.

Partner Reports

The CT DEP has posted a Notice of Intent to Adopt Stream Flow Standards and Regulations and to hold a Public Hearing. The proposed rules establish flow standards and other regulatory requirements for all river and stream systems in the state. To view this public notice, click here. To view a copy of the draft proposed stream flow regulations, click here.

All interested parties are invited to express their views on the proposed regulations at a hearing to be held at the following place and times:

January 21, 2010
9:00 a.m. – until all comments have been heard
Phoenix Auditorium, 5th Floor
Department of Environmental Protection
79 Elm Street, Hartford, Connecticut

National Public Radio recently aired a discussion on the topic of water availability in the northeastern US. To learn more of what was said, click here.

Holly Drinkuth and Mike Altshul of the Green Valley Institute held their first meeting with the Woodstock Conservation Commission to complete a Co-occurring Resource Analysis for planning purposes. The Town of Woodstock is one of the largest land area municipalities in the State of Connecticut with high value forest habitat on the western side and a high concentration prime agricultural land on the eastern side. They are exploring the option of creating 2 separate areas for this project to properly address this unique situation.

Sue Westa, Co-director of the Green Valley Institute is working with the Town of Chaplin to facilitate the update of their Plan of Conservation and Development. An additional focus of the GVI is to help the Town of Coventry develop design guidelines for the Route 44 Corridor. The GVI also presented workshops focused on Family Farms and Forests, focusing on conservation strategies in Killingly and Ashford.

The Green Valley Institute was selected as a finalist by the UCONN Office of the Provost and the Public Engagement Forum in the Program Category for the Provost's Award for Excellence in Public Engagement. They were honored at the Excellence in Public Engagement Reception on December 9, 2009 on the UCONN Storrs Campus.

The Town of Thompson was awarded a CT Department of Agriculture "Farm Viability Grant," to establish an AGvocate Pilot Program in six towns. AGvocate Jennifer Kaufman is working with municipal leaders, agricultural producers, and supportive citizens in the towns of Ashford, Brooklyn, Canterbury, Franklin, Sterling, and Thompson to implement tools and create action plans to help promote farm viability in their towns. The AGvocate is currently involved with assisting the Town of Canterbury with their Plan of Conservation and Development update as well as a review of land use regulations in the Town of Thompson for farm friendliness.

The Thames Valley Chapter of Trout Unlimited reported a very successful 50th anniversary celebration at Hammonasset Beach State Park in October 2009. With Rapid Bioassessment equipment and macroinvertebrate samples borrowed from The Last Green Valley Water Quality Monitoring Program, they were able to raise public awareness on important aquatic life support needs in our rivers and streams of Connecticut. Also, the TU Trout in the Classroom program will be operating in 20 eastern Connecticut schools this year. For more information, please contact Dixie Handfield.

ECCD has hired Sarah Lamagna, a Norwich native, as a Natural Resource Specialist. Sarah has a Bachelors Degree in Forestry and a Masters Degree in Soil Science. She will be working out of the ECCD Norwich office.

ECCD honored Anne Roberts Pierson, President of Avalonia Land Conservancy, Inc and member of the Ledyard Conservation Commission, at their annual meeting in October as their Volunteer of the Year for her outstanding efforts as part of the TRBP Poquetanuck Cove Preservation Committee. Not only has Anne played the major role in the grant administration for the *Phragmites* control project in Poquetanuck Cove, but using her red kayak, she has single handedly removed 25 tires from the important tidal habitat. Congratulations Anne for a well deserved award.

In reporting on USGS project interests, Elaine Trench commented on the USGS funding structure in Water Science Centers, which requires cooperative funding from other agencies for most projects. In CT, a primary cooperator has been CTDEP (which cooperatively funds most of our water-quality monitoring stations), but their recent funding constraints have been substantial.

A number of potential projects have been proposed in the Thames Science Plan. Baseline data in pristine areas is one potential area of investigation, and is related to Nature Conservancy interests in the Thames Basin. Among the projects proposed in the Thames Science Plan, one of the key pieces of information needed is a more quantitative analysis of point sources of nutrients in the Quinebaug River Basin. One part of that project, which does not currently have a funding source, would be to investigate the effects of seasonal or year-round nutrient controls. Another small project that has potential is a public interest fact sheet on nutrients in the Quinebaug River Basin, based on information from existing reports.

At the national level, the USGS is planning to implement a national water census. This may eventually result in projects at the local level, but there is limited information on how this initiative will be implemented at this time. A fact sheet that focuses on the development of a water census of the United States, and how USGS research can strengthen the Nation with information needed to meet the challenges of the 21st century is available.

Celebrating Agriculture Day, held at the Woodstock Fairgrounds on September 26, 2009, was a huge success with attendance topping 5000 people. Many farms were there promoting their goods. Many TRBP partnering organizations were present to conduct outreach on natural resource protection.

The Last Green Valley sponsored their 19th annual Walktober Event, encouraging people to visit many of the great places that make The Last Green Valley special. This year, over 100 free guided hikes, paddles, strolls and other special events were featured.

Tom Worthley, UCONN Cooperative Extension System Forester, was awarded a small grant by the USDA Natural Resources Conservation Service to employ students in order to generate a database of forestry landowners with land in excess of 10 acres. This list exists primarily to notify Connecticut Certified Forest Practitioners about upcoming educational programs that are

approved for Continuing Education Units. Other information of interest to this group will also be disseminated periodically. The list is expected to be completed by March 2010.

The 2008 Farm Bill, managed by USDA Natural Resources Conservation Service, includes more provisions for forestry management that the previous Farm Bill. The Farm Bill may be able to provide financial assistance for the development of a Forest Management Plan or a Conservation Activity Plan. The 2008 Farm Bill also provides cost-sharing for other programs, including invasive species control or a timber stand improvement on private land, including land owned by a land trust. For more information, contact Jav Cruz at 860-887-4163 extension 300.

The Eastern Connecticut Resource Conservation and Development Area (ECRC&D), with EPA Section 319 funding awarded through the CT DEP, hired Wright Pierce in 2007 to develop a marketing plan for excess manure as a value added product in the town of Woodstock. ECRC&D has posted the final outcome report of the Woodstock Nutrient Management Feasibility Study on their website. There may be the potential to work with a local dairy farmer to install an aerobic digester. For the full report, click here.

ECRC&D is also working with area farmers help them apply for energy efficiency grants offered by the USDA Rural Development Agency. They co-sponsored two workshops in early November to introduce the program. Due to the complexity of the grant writing process, grant writing assistance is being offered.

The Last Green Valley volunteer water quality monitoring program, coordinating with the Connecticut Audubon Society Center at Pomfret Citizen Science Program collected macroinvertebrate samples from over 20 rivers and streams in eastern Connecticut and one in the Quinebaug River in Massachusetts this fall. These macroinvertebrate samples were delivered to the CT DEP to serve as part of their evaluation of the aquatic habitat suitability of wadable streams.

The Massachusetts DEP recently published The French & Quinebaug River Watersheds 2004-2008 Water Quality Assessment Report. The report is organized by brook and river segments. Several volunteer water quality monitoring groups associated with The Last Green Valley Water Quality Monitoring Program are referenced in this report. These groups include The French River Connection, the Webster Lake Association and other local river advocates associated with TLGV WQM program.

French River Connection's 2009 Water Quality Monitoring Report is now available online. You can find a Google map Summary here.

The 2008 Comprehensive Conservation and Management Plan (CCMP) Implementation Tracking Report for Long Island Sound is available online. This 2008 report documents the 14th year of implementation of the Long Island Sound Study (LISS) CCMP. It summarizes the continuing work of the LISS Management Conference partners in carrying out the CCMP. The LISS Management Conference is sponsored by the U.S. Environmental Protection Agency (EPA), the New York State Department of Environmental Conservation (NYSDEC), and the state of Connecticut Department of Environmental Protection (CTDEP). This is a long report

(99 pp) but has a lot of useful information and connections to contributing watersheds such as the Thames River basin.

CT DEP recently announced the completion of a riverine habitat enhancement project within the Shetucket River in Sprague adjacent to the DEP-owned Salt Rock Campground. This project involved adding large woody habitat to the river in the form of three "Constructed Log Jam" and three "Floating Log Cover" type habitat structures that were then secured in place. During the last decade, the Inland Fisheries Division has been actively adding large woody habitat to river systems as a component of individual stream habitat restoration projects. Large wood provides a multitude of benefits including the enhancement of in-stream fish habitats, channel stabilization and entrapment of organic materials such as leaves that provide an important food source for aquatic insects. The Inland Fisheries Division received grant assistance from the Natural Resources Conservation Service (NRCS) Wildlife Habitat Incentive Program (WHIP) to fund project implementation. Additional funding was provided by the U.S. Fish and Wildlife Service, Partners for Fish and Wildlife Program. The Thames Valley Chapter of Trout Unlimited also provided support. The DEP Wildlife Division's Wetland Habitat and Mosquito Management (WHAMM) Program was responsible for all habitat enhancement work associated with this project, while habitat construction management oversight was provided by DEP and NRCS biologists. The Shetucket River supports a highly diverse fish community due to the presence of both inland and diadromous species. The river is managed as a Trophy Trout stream with a daily creel limit of 2 fish and an open season from the 3rd Saturday in April to the last day in February. In addition, the stretch of river from the Scotland Dam (Scotland) to the Occum Dam (Norwich) is also managed as an Atlantic salmon broodstock fishery. More information on fishing and fishing regulations can be found in the 2009 CT Angler's Guide. The Thames Valley Chapter of Trout Unlimited has announced plans to develop a special TLGV Walktober event to feature this project in October 2010.

CT DEP Water Bureau and Natural Resources Bureau staff submitted study review comments pertaining to fish passage options, as well as water quality, recreation, and aquatic habitat conservation parameters, as part of the Scotland Dam Hydropower Generation Project dual applications to the FERC licensing process (competing applicants are Norwich DPU and FirstLight Power Resources, Inc.) The FERC license is on schedule to be issued in 2012, and will have fish passage conditions as part of the license agreement.

On November 23, 2009, the U.S. Environmental Protection Agency (EPA) issued effluent limitations guidelines (ELGs) and new source performance standards (NSPS) to control the discharge of pollutants from construction sites. This rule requires construction site owners and operators to implement a range of erosion and sediment control measures and pollution prevention practices to control pollutants in discharges from construction sites. The agency believes this rule, which takes effect in February 2010 and will be phased in over four years, will significantly improve the quality of water nationwide.

Construction activities like clearing, excavating and grading significantly disturb soil and sediment. If that soil is not managed properly it can easily be washed off of the construction site during storms and pollute nearby water bodies. The final rule requires construction site owners and operators that disturb one or more acres to use best management practices to ensure that soil disturbed during construction activity does not pollute nearby water bodies. In addition, owners

and operators of sites that impact 10 or more acres of land at one time will be required to monitor discharges and ensure they comply with specific limits on discharges to minimize the impact on nearby water bodies. This is the first time that EPA has imposed national monitoring requirements and enforceable numeric limitations on construction site stormwater discharges. Soil and sediment runoff is one of the leading causes of water quality problems nationwide. Soil runoff from construction has also reduced the depth of small streams, lakes and reservoirs, leading to the need for dredging. To download a fact sheet on this topic, click here.

The FarmLink Program is a program designed to find farmland partners, to transition and plan, and help keep farming in Connecticut, for generations to come. Farm owners or farm seekers can use this site to share information with other owners and seekers registered with the FarmLink Program. If you have any questions, or need further assistance, please call the Connecticut Department of Agriculture, Marketing Division at (860) 713-2503.

News from the Municipalities

The Town of Woodstock is actively soliciting public input as they prepare an update to their Plan of Conservation and Development. The Town is in the information gathering stage. Contact Woodstock Planner, Delia Fey for more information.

The Thompson Together Committee recently sponsored a road side cleanup project. This project helps to keep floatable debris out of the rivers and streams in town. The French River Buffer Project in Town of Thompson is nearly complete.

Also in the Town of Thompson, a new building is being constructed to house the Thompson Ecumenical Empowerment Group (TEEG), a non-profit human services organization that benefits area families in need. They are in the process of constructing a new building to operate out of. This building will meet LEED standards and incorporate Low Impact Design principles.

Other news

EPA's "National Water Program Strategy: Response to Climate Change," provides basic information on climate change, the water-related effects of climate change, and the implications for EPA's National Water Program.

NEIWPCC and the Massachusetts Department of Environmental Protection are pleased to announce the dates of the 21st Annual Nonpoint Source Conference. The conference will take place at the Radisson Hotel in Plymouth, MA on May 17 – May 19, 2010. For more information, please visit the conference website at http://www.neiwpcc.org/npsconference

EPA's Nonpoint Source Grants Reporting and Tracking System (GRTS) is the primary tool for management and oversight of state Nonpoint Source (NPS) Management Programs under Section 319 of the Clean Water Act. EPA recently added new tools to the GRTS database to enable the public to search for information about NPS pollution control projects. One way to search the database is to perform a criteria-based query. This method is best for finding 319 projects that meet certain conditions; for example, NPS projects that implement a Total Maximum Daily Load to control mine waste, or projects implementing best management practices for waters polluted by urban runoff. To search for projects, visit

http://iaspub.epa.gov/grts/projects. Another new search tool is the interactive map, which enables browsing for project information by watershed. Simply use the find, pan, and zoom buttons to navigate to the location of interest, and the 319 projects will appear, summarized by watershed. At a regional scale, projects are displayed by sub basins (8-digit hydrologic units), and at a local scale, by sub watersheds (12-digit hydrologic units). Check out the GRTS Map Viewer at: http://iaspub.epa.gov/grts/map

A USGS Fact Sheet that highlights findings in a series of articles published in the *Journal of Environmental Quality* on agricultural chemicals in the environment is now available at http://water.usgs.gov/nawqa (see "Featured Headlines" and "National Maps").

The USGS information summarizes investigations in five agricultural areas across the U.S., providing a watershed approach to understanding the movement of chemicals and water through agricultural lands. The five watersheds represent important agricultural practices in different environmental and hydrologic settings and, therefore, findings are relevant to agricultural areas throughout much of the Nation.

Approximately 40 percent of the land in the U.S. is used for agriculture. Often, natural hydrologic processes are modified toward optimizing agricultural production, such as in areas of extensive tile drains or irrigation, which can have unintended environmental impacts on water quantity and quality. Understanding the movement of water and chemicals in streams, ground water, and the atmosphere is critically important in evaluating and tracking effects of agricultural practices on water quantity and quality. Detailed information on the agricultural studies can be accessed at: http://in.water.usgs.gov/NAWQA_ACT/. For questions, contact Paul Capel, capel@usgs.gov , (612) 625-3082 or Kathleen McCarthy, mccarthy@usgs.gov, (503) 251-3257.

The Center for Watershed Protection(CWP) is working with the UCONN Extension Center for Landuse Education and Research (CLEAR) program on a project in the Eagleville Brook watershed in Mansfield, CT. They featured their recent work in the Eagleville Brook watershed in their recent national e-newsletter. The CLEAR program has developed a website devoted to Eagleville Brook which includes a video of their recent investigatory work on the UCONN campus to locate potential stormwater retrofit opportunities. Click here to visit this website.

CWP recently circulated this bit of information. If you look around in the stormwater world these days, volume seems to be the buzz. The September, 2009 issue of Stormwater Magazine has an excellent article by Andrew Reese entitled "Volume-Based Hydrology". If you have any questions or doubts about the role of volume in stormwater management, start with this article.

EPA is proposing to disseminate a survey to owners, operators, developers, and contractors of developed sites, owners and operators of municipal separate storm sewer systems (MS4s), and states and U.S. territories, which is designed to inform a rulemaking to strengthen stormwater regulations and to establish a comprehensive program to reduce stormwater from newly developed and redeveloped sites. Stormwater discharges from developed sites can harm water quality through increases in stormwater volume and pollutant loadings into nearby waterways. Generally, as sites are developed there is an increase in areas where water cannot infiltrate, so stormwater volume increases. The resulting stormwater flows across roads, rooftops, and other surfaces, transporting pollutants that are then discharged into waterways.

EPA intends to propose a rule to control stormwater from, at minimum, newly developed and redeveloped sites, and to take final action no later than November 2012. In order to support the rulemaking EPA is proposing to require three separate questionnaires focusing on gathering data about current stormwater management practices, including those used at newly developed and redeveloped sites. EPA's proposed survey would gather data from three groups: 1) the owners, operators, developers, and contractors of newly and redeveloped sites; 2) the owners and operators of municipal separate storm sewer systems; and 3) states and territories. The draft survey would require detailed information about stormwater management and control practices, local regulations, and baseline financial information. For additional information, click here.

Recent reports indicate that over 30% of the water and wastewater professionals will be retiring in the next 5-7 years. To address this growing concern, the U.S. Environmental Protection Agency's Office of Water has collaborated with the Water Environment Federation, the American Water Works Association, and the Department of Labor to develop the Water Sector Competency Model. A competency model is one of the tools used by the Department of Labor to provide a clear description of what a person needs to know and be able to do (such as knowledge, skills and abilities) to perform well in a specific job, occupation or industry. Having this model in place will help promote the water sector and ensure its recognition as a high growth/ high demand green job sector among other federal agencies, job seekers and academic institutions. For more information http://www.careeronestop.org/competencymodel/default.aspx.

The 2010 ELA Conference & Eco-Marketplace theme this year will be "Expanding the Ecological Landscape: Maximize Biological Potential, Minimize Environmental Impact and LOVE IT!" with Keynote Speaker Toby Hemenway. The conference is scheduled for February 25, 2010 at MassMutual Center at Springfield, MA. Conference attendees will learn how to maximize biological potential, minimize environmental impacts, and obtain spectacular results. Seventeen sessions offer multiple tracks focused on water use, landscape design, pest control, and application of practical skills. Experienced educators and practitioners provide sessions covering many aspects of ecological, sustainable, and organic landscaping (CEUs available). The concurrent Eco-Marketplace presents opportunities to explore new options in landscaping products and services. Dinner features a keynote address by Toby Hemenway, author of *Gaia's Garden, a Guide to Home-scale Permaculture*. Adjunct professor at Portland State University and Scholar in Residence at Pacific University, Hemenway will share his design approach based on ecological principles that create sustainable landscapes, homes, and workplaces.
Full brochure and online registration available late December at www.ecolandscaping.org or call 617-436-5838.

Grants

A new funding opportunity exists for the Five Star/NRT Restoration Program! Applications are due via Easygrants (www.nfwf.org/easygrants) by Thursday, February 11, 2010. The Five Star Restoration Program seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships for wetland, riparian, and coastal habitat restoration. The 2010 RFP and proposal narrative are attached and are also available for viewing on our website at www.nfwf.org/fivestar.

Since 2001, American Rivers and NOAA have provided financial and technical assistance for more than 100 river restoration projects across the country through their Community-Based Restoration Program. We are looking for new projects that will help communities as well as fish that live in both marine and freshwater habitats. Learn more about this program and how to apply.

The New England Grassroots Environmental Foundation (NEGEF) small grants program provides grants to groups working on community level issues in Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island. The Fund interprets the word 'environment' broadly and will provide funding for a wide range of activities. Whole systems-thinking is critical to initiatives focused on making our environment better, healthier and more sustainable. Small grants are intended to support community groups who represent the most exciting energy in the environmental movement that are not being reached by traditional funders. The next grant application deadline is February 15, 2010.

If you would like your organization's efforts included in the next edition of the TRBP Partners in Action Report, consider attending one of our quarterly meetings. It includes a Plan of Work activity reporting session, which is an informal "round the table" discussion of Partner activities. It is a great time to network with like-focused organizations. All meetings begin at 9:30 AM. Generally, the TRBP meeting quarterly on the 3rd Tuesday of the month.

- January 19, 2009 CT DEP Senior Staff will give a presentation on the proposed Minimum Stream Flow Regulations in CT. This meeting will begin at 9:30 AM at the Mansfield Community Center located at 10 South Eagleville Road, Mansfield CT.
- April 20, 2009 The Northeast Connecticut, Windham Region and Southeast Connecticut Council of Governments' GIS staff will give a joint presentation on the newly available online GIS data developed through a CT Office of Policy and Management grant. Meeting location TBD.

Please mark your calendars to save these dates. Meeting content and locations will be posted on the TRBP Calendar of upcoming events, or contact Jean Pillo at (860) 928-4948 for more information or to be added to the TRBP distribution list.

If you are not already on the e-distribution list for this publication, contact Jean Pillo by email and request to be added, or you can download the most current version of this quarterly publication from the TRBP website.

The Thames River Basin Partnership is a voluntary, cooperative effort to share resources, and strives to develop a regional approach to resource protection. The Partnership is made up of a variety of agencies, organizations, municipalities, educational institutions, companies, and individuals interested in the environmental health of the Thames River basin. Sources of funding are being sought to continue the TRBP Coordinator position. Please consider making a donation to the Eastern Connecticut Conservation District and designate it to support the Thames River Basin Partnership Coordinator position. Without your support, future services available from the TRBP Coordinator will be extremely limited.

STATE OF CONNECTICUT

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NEWS RELEASE

December 7, 2009

NEWS RELEASE

FOR IMMEDIATE RELEASE

Contact: Karl Wagener, Executive Director
860-424-4000
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CONNECTICUT'S FORESTS: THE BEST WENT FIRST

HARTFORD – Connecticut's most valuable forests – those furthest from the destabilizing influence of development – have been declining at a faster rate than forests overall. This was the conclusion of the Council on Environmental Quality when it examined new data from the University of Connecticut.

The University's Center for Land Use Education and Research (CLEAR) recently released new data, based on analysis of satellite imagery, on trends in Connecticut's woodlands. The Council on Environmental Quality reviewed the new data at its most recent meeting and decided to use it in all future reports on the state's environment.

"The information about 'core' forests is superior to other data sources we have been using," said Council Chair Barbara Wagner. "*Core* forest acres are those at least 300 feet away from roads and development. As the CLEAR staff has said, these are the forests that are most useful for wildlife, recreation and other uses, and we should be paying particular attention to them."

"In our next report to Governor Rell and the General Assembly," continued Wagner, "we will show the total extent of forests but we will highlight the trend in *core* forests. Unfortunately, because of development patterns, core forest is declining significantly faster than overall forests. This reinforces the Council's recommendations for a more strategic approach to open space conservation."

"Forests are much more than a collection of trees," Wagner concluded. "They

are complete ecosystems, but the forests next to roads and developments are not so complete."

For more information, look for the Featured Indicators for December on the Council's home page at www.ct.gov/ceq.

The Council is a nine-member board that is independent of the DEP except for purely administrative functions. Established in 1971 alongside the DEP, the CEQ has published dozens of reports on state environmental problems and solutions – including Environmental Quality in Connecticut, the official annual state report on the condition of Connecticut's environment – and has resolved hundreds of citizen complaints. The Council monitors and reports on important state actions that affect the environment, and, pursuant to state law, advises other state agencies on projects and policies.

END

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Phone: (860) 424-4000 Fax: (860) 424-4070
http://www.ct.gov/ceq

Joshua's Tract
Conservation and Historic Trust, Inc.

JOSHUA'S MARK

WINTER NEWSLETTER

www.joshuaslandtrust.org

A Love Of The Land Comes Natural To Them

Photo and story by Suzanne Zack

Wolf Rechlin's respect for trees seems to be genetically ingrained in him.

His paternal grandfather carefully shaped planks of wood into the staves for revolutionary, elongated barrels that aerated water as they moved, enabling live fish to be successfully transported in Germany in the mid-1800s. His father, Emil Rechlin, taught him how to plant and then fell a tree with a handsaw, and plane the lumber to build barns for the family's dairy farm on Waterman Road in Lebanon.

For the last 24 years, Rechlin and his wife, Edwina, have lived three miles down the road from his family's

Continued on Page 3

Edwina and Wolf Rechlin of Lebanon

Members — The Bedrock of Conservation

Joshua's Trust has been fortunate in having a wide base of loyal support from members since its inception in 1966. Some members, like Sam Dodd and Trudy Lamb, have been there from the start, and have been active volunteers as well.

Others are new comers, who after taking a walk on one of the trails, have joined to express their appreciation. There are even 47 who do not live in the area, but who support JT's efforts.

As a private, non-profit organization, Joshua's Trust relies on membership dues and contributions to operate. Almost every penny goes directly to conservation because with the exception of one part-time staff person, all the work is done by volunteers.

Everything from the first discussions with a potential land donor to the keeping of complex financial records to the making and maintaining of trails – all are carried out by an extensive corps of volunteers.

Without an increasing base of membership support, Joshua's Trust will not be able to thrive. A campaign to attract business supporters and life memberships has been underway. And as 2010 approaches, all our members are encouraged to renew their support.

Life Members: Honey and Harry Birkenruth, Peggy & Warren Church, Margaret Joy Daentl, Mary Ellen and Michael Ellsworth, Linda & Shawn Fisher, Margaret & Quentin Kessel, Corine and Richard Norgaard, Nancy Polydys, Dan Reilly, Richard Schleicher, Donna & Richard Skaats, R. Patricia Schoppe, Ann & Winn Smith, William Stallman, Roxanne Steinman, Jack Summers.

Business Sponsors: Landon Tire, Shane & Navratil, New England Design, Fuss and O'Neill, and the Gardens at Bassetts Bridge.

Use form on back to join, renew, or give a gift membership.

Joshua's Tract Conservation And Historic Trust, Inc.

P.O. BOX 4
MANSFIELD CENTER, CT 06250

Email: joshuastrust@snet.net
www.joshuaslandtrust.org

Joshua's Tract Conservation and Historic Trust was formed in 1966 to receive gifts of money and land, or to buy land of historic, aesthetic, or scientific value, for the benefit of future generations.

It is designed to supplement the open space efforts of federal, state and local governments. The Trust protects over 4,000 acres in the region, maintains trails which are open to the public, and publishes *The Joshua's Tract Walk Book.*

The office is located in the historic Eagleville Schoolhouse, South Eagleville Rd., in Mansfield. Office hours: Thurs.1:30-3:30 pm.
Phone: 860-429-9023

Thanks To Hard Work And Generosity, We Now Protect More Than 4,000 Acres

With the final acceptance of the 110-acre Wolf property in Windham, the Trust has surpassed 4,000 acres of protected properties and easements!

It was only four short years ago that we passed the 3,000-acre mark. There are several reasons for this success, including the generosity of our donors, the hard work of our volunteers, and the incentives provided by the IRS. I think that we can look forward to continued success in protecting valuable open space in the Quiet Corner as we move toward the 50th anniversary of the founding of the Trust in 2016.

Warren's Word
By Warren Church
Joshua's Trust President

There is one important Trust acquisition activity that is not reflected in the above acreage totals. That is the land protected through our collaborative activities with towns, other conservation trusts and state agencies.

A good example is the 104-acre Rechlin property in Lebanon (see article on page 1). The Trust usually helps a town obtain a property or conservation easement by contributing a sum of money toward the project. In the case of the Rechlin property, we also used our experience in negotiating conservation easements to help broker an agreement between the Town of Lebanon and the Rechlins.

Other examples of collaborative projects include the Crooke Orchard (153 acres in Ashford), the Knowlton property (134 acres in Willington), and the Olsen property (60 acres adjacent to the Coney Rock Preserve in Mansfield).

Currently, the Trust has pledged $15,000 to the Town of Ashford, which is purchasing development rights on 423 acres of the Knowlton Farm. Collaborations such as these are a powerful tool for leveraging our modest budget for land acquisition.

We try to recoup some of the contribution through various fund-raising activities so that we will be able to continue these projects.

For example, a copy of this newsletter is being sent to every household in Lebanon with the hope of contributions and new memberships.

If you are not now a member, please join us and help to protect the rural character of our region.

Corrine Rueb Named Regional Coordinator

Corrine Rueb has become a regional coordinator for a number of preserves in Mansfield, where she lives.

She brings to her new role considerable skills and experience, including GPS, work parties, and boundary marking. Corrine has been the steward at Michael's Preserve for several years.

The position of regional coordinator was established in 2007 when stewardship operations were reorganized. Prior to that time, one person had been in charge of stewards at the 57 properties owned by the Trust. There are now five regional stewards, each responsible for ten or more preserves. Their job is to communicate with and assist the individual stewards in monitoring and maintaining the properties.

The regional coordinators have also been instrumental in developing the written management plans for all properties.

Trust Property Trail Maps Now Available To Download

Updated trail maps for Trust properties are now available for download from our website: www.joshuaslandtrust.org.

They cover several new trails (Couch, Pappenheimer) and re-routes and new color blaze systems on several others. The new color system is to lessen confusion on properties where in the past multiple trails were all blazed yellow.

Updated descriptions for these trail changes will soon also be added as a one page download, and will be similar to the usual descriptions found in the Walk Book.

The computer and GPS unit, and software on which the maps were prepared were acquired in the past several years by grants from the Norcross Foundation and Environmental Systems Research Institute (ESRI) respectively.

Nurme Joins Board

Ray Nurme, a Chaplin resident, has been appointed to the Board of Trustees to fill a vacancy.

Ray brings to the Board considerable skills, having retired ten years ago from his position as Planning and Zoning Director of Darien, and having previously worked on the Adirondack Park Agency legislation.

Since joining the Board, he has chaired the Long Range Planning Committee. He and his wife, Marilyn, live adjacent to the Natchaug River on a property that has been in his family for about 50 years.

Sale Of Development Rights To Their Homestead Land Assures A Lasting Legacy For The Rechlin Family Name

Continued from Page 1

homestead in a home they built in the middle of a 104-acre woodland sanctuary, on land that's been in his family since 1949. There, they've served as stewards of the land, planting, thinning, and harvesting timber and operating a Christmas tree farm, all of which earned Rechlin the "State Tree Farmer of the Year" designation by the National Tree Farm Association in 2002.

In October, the couple made certain their property would retain its pristine character -- lush with stands of red oak, white and black oak, hickory, birch, and larch – intersected by two brooks and a pond, and home to bird species ranging from Baltimore orioles to tanagers,.

They sold the development rights to the town, the Connecticut Forests and Parks Association, and Joshua's Trust. The plan was to create a lasting legacy that honors the memory of Rechlin's late father.

"He'd certainly approve of it," Rechlin simply says.

Both Wolf and Edwina graduated from the University of Connecticut and moved to Glastonbury in 1965. They raised their son and daughter there and lived for two decades while watching their rural environment give way to dozens of houses. It made them feel "closed in," Edwina says.

Long interested in preserving the land, the Rechlins were among the first people in Lebanon to take advantage of Connecticut's Public Act 490, enacted in 1963, which allows farm, forest, or open space land to be assessed at its use value rather than its fair-market or highest and best-use value.

"The Trust feels that collaborative projects with towns, land trusts and State agencies is becoming an important tool in the preservation of valuable open space," said Joshua's Trust President Warren Church.

"Last year the Trust helped Ashford and the DEP to preserve the Crooke Orchard. Joshua's Trust is currently working with the towns of Ashford, Willington, and state agencies to preserve over 500 acres of valuable farm and forest land in those towns."

For the Rechlins, the conservation easement allows them to continue living in their house, and actively enjoy all the pleasures their woodland sanctuary affords: hiking, bird watching, and an abundance of flora and fauna.

"You're close to nature; you're very aware of what's going on and you don't take it for granted," Edwina Rechlin says.

Focusing on conservation in Lebanon

JOSHUA'S MARK

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2010 Membership Form — Renew, Join, or Give a Gift

Membership in Joshua's Trust expires at the end of the calendar year. Sending your renewal now will save us the cost of mailing a reminder later. Thank you for your support.

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Address_____

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Dues ($10 individual; $20 family; $50 sustaining; $100 patron; $250 benefactor $1,000 life)

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Year-end contribution $_____ Unrestricted $_____ Specifically for_____

Mail form and check to Joshua's Trust, P.O. Box 4, Mansfield Center, CT 06250

Connecticut Wildlife

Eye on the Wild

New Subscription Rates for 2010

As you are probably aware, budget constraints have been affecting state government, and the Wildlife Division has not been immune. In addition, printing and mailing costs have been steadily rising over the years for Connecticut Wildlife, *yet we haven't raised the subscription price since 1995. Starting in 2010, the price will go up minimally to $8 for one year, $15 for two years, and $20 for three years. However, even though the cost is increasing for subscribers, you will actually be getting more.* Connecticut Wildlife *magazine will now be printed in full color, with more photographs and improved layouts. We believe that the magazine is still a great bargain and it will continue to provide wildlife information that is pertinent to our state.*

There is an opportunity for current subscribers to extend their subscriptions at the lower rate before the prices increase in 2010. Just fill out the coupon on page 19 and send in your payment to have your subscription extended for up to three years. Renewal notices sent out in 2010 will reflect the new price.

Please feel free to contact us if you have any questions about your subscription. You can call the Sessions Woods office (860-675-8130; Monday-Friday, 8:30-4:30) or email katherine.herz@ct.gov.

Making Bird Feeding Safe for Birds

Winter is the perfect time to take up a very popular activity – feeding and watching birds from the comfort of your own home. Getting started is easy. Buy a feeder or two, regularly stock them with seed to attract various birds, and sit at your window and wait for the birds to come. However, your responsibility doesn't stop there. Once you make a commitment to feed birds, you also have to make sure that you are keeping the visiting birds safe from disease, predators, and window strikes. The article on page 8 provides some tips for taking those extra steps to protect feeder birds. My motivation for including the article in this issue stems from my own concern about birds visiting the feeders in my backyard. Window strikes were becoming too common and I dreaded hearing each "thump" as a bird struck one of the windows. Last winter, I tried using falcon silhouettes, but there were still too many window strikes. This year, I did some research and decided to try a few different methods. Right now, I'm using a combination of hanging ribbons and UV static decals placed on the outside of the windows. My research revealed that the decals are most effective if placed on the outside of windows. I was able to purchase the decals at a local bird supply store, but they also are available on the internet. So far, the decals and ribbons seem to be making a difference. Another motivation for the article was an increase in disease reports to the Division late last winter of salmonellosis in pine siskins visiting thistle feeders and even some reports of finch eye disease. The steps for trying to prevent disease are actually very easy and not too time-consuming. Next challenge, what to do about the neighborhood cats that are hanging around my bird feeders . . .

Kathy Herz, Editor

Cover:

Due to the new system that requires hunters to report their deer harvest via the DEP website or by telephone, a running tally of the 2009 archery deer harvest can be viewed at www.ct.gov/dep/hunting.

Photo courtesy of Paul J. Fusco

Connecticut Wildlife

Published bimonthly by

State of Connecticut
Department of Environmental Protection
www.ct.gov/dep

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The Federal Aid in Wildlife Restoration Program was initiated by sportsmen and conservationists to provide states with funding for wildlife management and research programs, habitat acquisition, wildlife management area development, and hunter education programs. Connecticut Wildlife contains articles reporting on Wildlife Division projects funded entirely or in part with Federal aid monies.

The DEP is an affirmative action/equal opportunity employer providing programs and services in a fair and impartial manner in conformance with the Americans with Disabilities Act. Individuals with disabilities who need this information in an alternative format or who need to request a reasonable accommodation to participate in the agency's programs and services, should call 860-424-3011 or 860-418-5910, or email Monica Z. Bonnie, ADA Coordinator at Monica.Bonnie@ct.gov. Requests for accommodations must be made at least two weeks prior to the program date.

ISSN #1087-7525

State-land Habitat Projects Continue Despite Cuts to WHIP

Written by Paul Rothbart, State Lands Management Program

The 2009 field season for the Wildlife Division's State Lands Management Program has been challenging but extremely productive and rewarding. The goals of the program are to create the habitat diversity required to maintain stable, healthy, and diverse wildlife populations throughout Connecticut and to maintain and enhance the properties through boundary marking, proper signage, and creating public access for improved wildlife-based recreational opportunities.

During the past season, management activities continued to emphasize early successional habitats, which have been identified in Connecticut's Comprehensive Wildlife Conservation Strategy as priority habitat types in need of conservation and active management to assure abundant and diverse wildlife populations. Additionally, this need and associated management have been brought to the forefront through the Wildlife Division's participation with the Connecticut Woodcock Council and a regional initiative to restore areas essential for the New England cottontail. These declining habitats (i.e., young forests, old fields, grasslands) are critical to a large array of species, including American woodcock, New England cottontail, ruffed grouse, indigo bunting, blue-winged warbler, northern oriole, rufous-sided towhee, wild turkey, bluebird, American goldfinch, deer, bats, bobolink, savannah sparrow, and eastern meadowlark.

Over the past decade, the principle funding source for state land habitat activities has been through the U.S. Department of Agriculture's Wildlife Habitat Incentives Program (WHIP). This valuable program was the first Farm Bill conservation program specifically developed to address wildlife resource needs on non-federal lands. Through 2008, the Wildlife Division had received $1,752,288 via WHIP grants, resulting in the development of 81 contracts encompassing 1,868.65 acres. Projects have included warm and cool season grass establishment, riparian native tree and shrub plantings, water control structure replacement/enhancements, aspen/young forest regeneration, and old field enhancement/non-native plant management targeting invasive species, such as autumn olive, multi-flora rose, asiatic bittersweet, tartarian honeysuckle, and tree-of-heaven. Management practices included brush mowing, heavy-duty brush and tree removal with specialized equipment (i.e., brontosaurus, fecon mower, and feller buncher), prescribed burning, no-till fluffy grassland seedings, and selective herbiciding.

Tree harvesting operations at Roraback WMA are part of an early successional habitat initiative funded in partnership with the Connecticut Woodcock Council, Wildlife Management Institute, and Beardsley Zoo.

Unfortunately, commencing in 2009, the state, along with municipal governmental entities, are no longer eligible for funding via WHIP. Although this is obviously a tremendous blow to the Wildlife Division's current funding opportunities, contracts are still in place for several years into the future, which will provide continued management while new partnerships and opportunities to conduct critical habitat practices are developed.

State Land Projects – April to September 2009

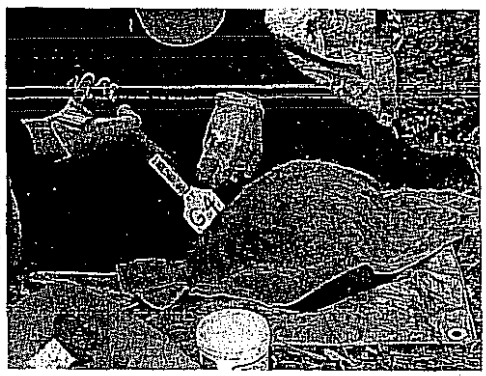
Early Successional Stage Forest Habitat Creation	**Total: 24 acres**	**Native Warm Season Grass Planting**	**Total: 12 acres**
Spignesi WMA	Scotland	Tunxis State Forest	Hartland
Roraback WMA	Harwinton	Machimoodus State Park	East Haddam
Bear Hill WMA	Bozrah		
		Brush Mowing of Old Fields/Grasslands	**Total: 250 acres**
Herbicide Treatment of Non-native Invasive Plants	**Total: 270 acres**	Tunxis State Forest	Hartland
Tunxis State Forest	Hartland	Centennial State Forest	Easton, Weston, Redding
Mad River Flood Control Area	Winchester		
Roraback WMA	Harwinton	Roraback WMA	Harwinton
Quinnipiac River State Park	North Haven	Flaherty Management Area	East Windsor
West Rock State Park	New Haven	Higganum Meadows WMA	Haddam
Simsbury WMA	Simsbury	Bear Hill WMA	Bozrah
Flaherty Management Area	East Windsor	Mad River Flood Control Area	Winchester
Nipmuck State Forest	Union	Skiff Mountain WMA	Sharon
Machimoodus State Park	East Haddam	Goshen WMA	Goshen
Talbot WMA	Scotland	Simsbury WMA	Simsbury
Cockaponset State Forest	Haddam		
Pachaug State Forest	Voluntown	**Presorlbed Burning**	**Total: 48 acres**
Barn Island WMA	Stonington	Pease Brook WMA	Lebanon
Pease Brook WMA	Lebanon	Verkades State Park	Waterford
Bear Hill WMA	Bozrah	Higganum Meadows WMA	Haddam

What's the Story Behind the Ear Tags on Bears?

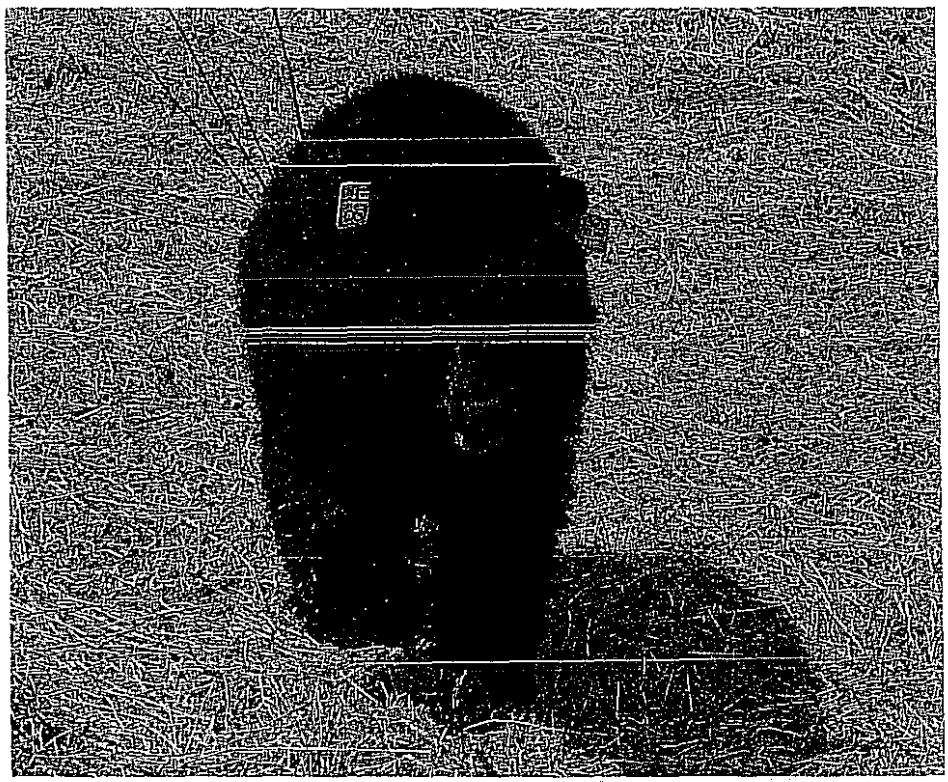
Written by Paul Rego, Furbearer Program

If you have seen a bear in Connecticut, particularly in the northwest portion of the state, there is a chance that you also may have noticed tags on its ears. About 2,700 bear sighting reports were received by the Wildlife Division in 2008 and, in more than one fifth of those, the reporter noticed ear tags on the bear.

DEP WILDLIFE DIVISION FILE PHOTO



A biologist uses special pliers to attach ear tags to a drugged bear.



Sighting reports with details on the unique ear tag numbers and/or letters help document the movements of bears.

A common misconception is that if a bear is tagged, it must have been a problem bear, and a bear with two tags (one in each ear) was caught on two different occasions because it was causing problems. In reality, every bear receives a tag in each ear the first time it is handled. Most tagged Connecticut bears were not caught as problem bears but, rather, as part of a project researching the state's population. Bears removed from urban areas and those caught at problem sights also are tagged.

A. MACHEN, FURBEARER MANAGEMENT PROGRAM

In 2006, both female and male bears were marked with pink ear tags. This young sow also was fitted with a radio collar so that biologists could track her movements and find her winter den site.

Bears observed with only one tag have somehow lost a tag, possibly due to fighting with another bear or snagging it on brush. Rarely, a bear may lose both tags and, therefore, appear as if it had never been handled. Large male bears are more likely to lose tags as compared to females and smaller males. Boars probably do more fighting and bull their way through thicker brush.

The tag color used to mark the bears is changed each year. For example, a bear with red tags was handled in 2007, one with yellow tags was handled in 2008 and one with white tags was handled in 2009. Each of the colored tags has a two digit number and/or letter code. The second digit indicates the year, while the first indicates the sequence in which it was caught ("1" through "9" then "A" through "Z"). Thus a bear with ear tag "2-9" would be the second bear handled in 2009, and a tag with "B-8" would be the eleventh bear handled in 2008.

Ear tags help biologists track bear movements and dispersal. Bears tagged in Connecticut have traveled as far as Vermont. Bears tagged in New York, Massachusetts, and even Pennsylvania have shown up in Connecticut. The ramblings of individual bears through multiple towns have been revealed via sightings with tag information. Tags also can reveal whether individual bears have a propensity for problem behavior. Approximately 150 bears have been tagged in Connecticut since 2001. Research bears have been caught and tagged in Barkhamsted, Hartland, Colebrook, New Hartford, and Burlington.

One Bird in Hand Tells More than Two Singing in the Bush

Written by Shannon Kearney-McGee, Bird Program

For the second season, Wildlife Division staff spent spring nights chasing the phantom call of the whip-poor-will in an effort to capture the noisy little singers. The whip-poor-will is easily identified by its distinctive call, heard most often at dusk or dawn, along woodland edges – "*whip-poor-will*!" There are very few, however, who can claim to have ever seen this phantom caller.

Whip-poor-wills are elusive ground nesting birds that are often heard and not seen. Unlike most songbirds, they are active only at night, hiding by day among the branches of trees or nesting, perfectly camouflaged, in leaf litter on the forest floor. In Connecticut, whip-poor-wills are a state species of special concern, and, regionally, they have been disappearing from the New England landscape. In an effort to understand the species' decline and how remaining habitat can be managed, the Division tracked individual birds with the use of radio telemetry equipment to determine which habitat features are most important for Connecticut's breeding whip-poor-wills.

To assess which management activities might be most beneficial for the birds, staff focused on a study site where there were a variety of different management practices, including burning, cutting, and powerline right-of-way clearing, as well as areas with natural wind and fire disturbance.

Calling birds were located in late April and early May. Mist nets for capturing whip-poor-wills were set up between mid-May and the end of June. Two birds, one male and one female, were captured and fitted with radios. Both birds were found in managed shrubland habitat. The female was adjacent to an eight- to nine-year-old clearcut and the male was captured in a forest stand that had undergone a final shelterwood cut in 2007. Clearcuts of approximately eight to nine years of age often consist of sapling size trees that are the same age. The structure created by these young trees resembles an early successional shrubland. The final shelterwood cut had a mixture of upland hardwood species that were even-aged saplings, again resulting in an early successional shrubland. The shrubby habitat created by these forest cuts is typical of areas statewide where whip-poor-wills are often heard singing, and it is not a surprise that the birds were captured from these managed areas.

The two whip-poor-wills with radio transmitters were tracked by staff and volunteers during their night-time activity periods. Night-time activities included foraging for invertebrates, singing, or incubating eggs and young. The radio transmitter allowed the confirmation of the female's nesting location. This female, however, did not move much, and no foraging range information was collected from her movements.

The male bird was more active at night, allowing for the determination of 22 foraging locations. The foraging home range for the male was then calculated. Surprisingly, the male did not seem to forage in the same area where it was heard singing. The foraging range was concentrated in mature old growth, consisting primarily of chestnut oak. This area had steep and rugged terrain with exposure to natural disturbances, such as wind and other weather elements. The chestnut oak habitat also was more reminiscent of pitch pine/scrub oak communities in Cape Cod and New Jersey where whip-poor-wills are more numerous. This type of habitat is quite different from the managed shrubland areas with a variety of vegetation species, sandier soils, and increased overstory cover. These differences may result in a preferred invertebrate community from which to forage, or increased protection from predation while foraging. This more natural foraging habitat also is rare in Connecticut and may help explain why whip-poor-wills are uncommon.

This disparity between the singing location and the foraging location for a male whip-poor-will reinforces radio tracking research results from Massachusetts, where a similar contrast between singing and foraging habitat was found on the Massachusetts Military Reservation on Cape Cod. Foraging whip-poor-

continued on page 7

P. J. FUSCO

Whip-poor-wills are elusive ground nesting birds that are often heard and not seen. Unlike most songbirds, they are active only at night, hiding by day among the branches of trees or nesting, perfectly camouflaged, in leaf litter on the forest floor.

This project was completed with funds from the State Wildlife Grants Program and with the assistance of the following staff and volunteers: Jeremy Leifert, Patrick Bukowski, Shannon Kearney, Christina Kocer, Patrick Deane, Sarah Van de Berg, Laura Saucier, Nicki Hall, Larry Fischer, Katelyn Hope, Stephen Pelletier, Nicole Azze, Corrie Folsom, Laurie Fortin, Jen Pacelli, Rebecca Schwart, and the University of Connecticut Summer Ornithology Course of 2009.

State Wildlife Grants

High-tech Moose Traversing Connecticut

Written by Andrew LaBonte, Deer Program

J. VEALE, DEER PROGRAM

Deer Program Resource Assistant Bill Embacher with the 700-pound bull moose captured in Southbury and relocated to northwestern Connecticut in September 2009.

Anyone who observes a moose in **urban areas** *of Connecticut should contact the Division's Franklin Wildlife office at 860-642-7239 or Sessions Woods office at 860-675-8130 during office hours (Monday through Friday, 8:30 AM-4:30 PM), or DEP Emergency Dispatch (860-434-3333) after hours. All other observations can be reported on the DEP website at www.ct.gov/dep/wildlife.*

Since initially capturing two moose during winter 2009 as part of a moose research project, Wildlife Division staff members have been tracking moose movements on a weekly basis. The technological advances in tracking equipment (GPS collars) have allowed the Division to use satellites to record the locations of the moose every three hours. The GPS devices placed on the Connecticut moose search for satellites and download location, elevation, and temperature data, and emit a VHF signal on specific days of the week. The VHF signal allows an individual with a hand-held receiver and antenna to locate the animal in the field if they are in close proximity (approximately 2 miles line-of-sight). Once the animal is located, a hand-held computer with a special antenna can be used to download the data from the collar to the computer, but only at a distance of 300 yards or less. Moose, with home ranges that can exceed 10 square miles, can be difficult to locate in the hilly terrain of northwestern Connecticut.

Tracking the High-tech Moose

The adult bull moose (#2) captured in the Hartland/Barkhamsted area has ventured on several occasions into Massachusetts for a day or two, but has never traveled south of the area where it was originally captured. Since January 2009, a total of 705 GPS locations have been recorded. The acquisition rate of the GPS was low (<50%) when leaves were on the trees, but it is expected to increase now that the leaves have dropped from the trees.

In late September and early October, when moose begin to rut, two attempts were made to locate the bull and determine if he was courting a cow. On October 2, the bull was observed bedded with a large cow (approximately 1,000 pounds, based on the size of the bull) and a calf. Biologists were able to get within close range of the calf, but were unable to get near enough to the cow to capture it as well. Another attempt was made to locate the bull on October 5. Unexpectedly, while searching for the collared bull, another small, rogue bull passed close by, but did not provide an opportunity for capture.

The female calf moose captured in March was monitored up until late May. The calf stayed in the general area where she was captured. However, in late May, her VHF signal was no longer audible. Based on a report received through the DEP website, a resident on the Connecticut/Massachusetts border observed the collared calf later that week heading north. Several attempts were made throughout Connecticut and Massachusetts to locate the collared calf;

however, her whereabouts at this time are unknown.

Capturing a Wayward Moose

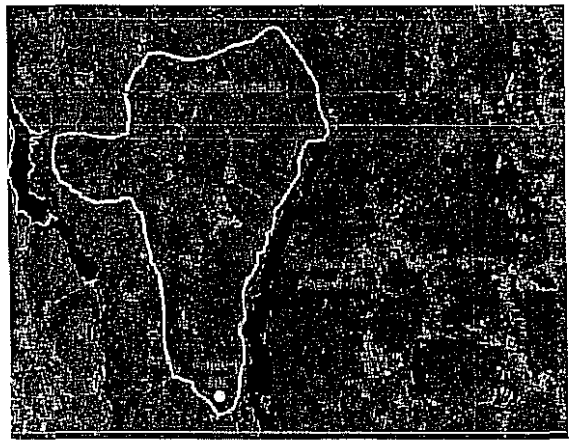
On September 9, 2009, a moose sighting was received via a phone call regarding a young bull on Route 8 near the water treatment plant in Winsted. Six additional website reports and a few phone calls about a young bull came in over the next two weeks from Watertown and Middlebury. Reported sightings indicated the moose was near Interstate 84. DEP staff was prepared to immobilize the moose at the earliest opportunity to prevent the possibility of a moose-vehicle collision. On September 25, the moose was observed in an office park, 150 yards north of Interstate 84 in Southbury. DEP Environmental Conservation Police officers arrived on the scene and warned motorists and onlookers of the potential concerns regarding the moose. The DEP Tranquilization Team was fortunate to immobilize the moose in a safe location. The Team and several local police officers carried the bull from the woods to the back of a pick-truck where it was prepared for transport. Coordinated efforts between local police, ENCON police, and Wildlife Division staff were critical to the successful relocation of this animal.

This five-point bull, which had traveled over 20 miles in roughly five days, was estimated to weigh about 700 pounds, based on body measurements. It was fitted with a GPS collar and ear tags (#6). The moose was transported to northern Connecticut. Since its relocation, the moose's whereabouts have been unknown. However, in early November, a forester found the GPS collar while working in Grandville, Massachusetts, just over the Connecticut border. The collar appeared to have malfunctioned and, unfortunately, the information stored in the collar cannot be accessed until it is returned to the manufacturer.

During late September/early October, the Department received two reports of another bull in Washington. Two days later, a motorist reported hitting the moose on Interstate 84 on the Danbury/Bethel line. Neither the motorist nor the moose suffered any injuries. The moose continued to travel further into Bethel that day, but surprisingly turned northward back across Interstate 84 that evening. The following morning, the moose was observed heading north through Southbury, Roxbury, and Woodbury. It is noteworthy that this is the first documentation in Connecticut of a dispersing moose changing its direction of travel. Typically, dispersing moose continue to travel southward until they are either struck by a motor vehicle or captured and relocated.

B. EMBACHER, DEER PROGRAM

A bull moose captured in Southbury in September 2009 browses on vegetation after being relocated to northwestern Connecticut. The animal was marked with a radio collar and ear tags before it was released.



This map depicts the area in northwestern Connecticut and part of Massachusetts in which bull moose #2 traveled after being captured in January 2009 along the Barkhamsted Reservoir.

It is expected that as Connecticut's moose population continues to increase, more moose will find their way into urban areas and require intervention. The capture, collaring, and monitoring of moose in Connecticut is an ongoing project between the Department, University of Connecticut, and the Northeast Wildlife Damage Management Cooperative, with additional assistance from the Metropolitan District Commission. This project should help us better understand moose movements, habitat use, and survival of Connecticut moose.

Anyone who observes a moose in urban areas of Connecticut should contact the Division's Franklin Wildlife office at 860-642-7239 or Sessions Woods office at 860-675-8130 during office hours (Monday through Friday, 8:30 AM-4:30 PM), or DEP Emergency Dispatch (860-434-3333) after hours. All other observations can be reported on the DEP website at www.ct.gov/dep/wildlife.

Whip-poor-will Project

continued from page 5

wills in Massachusetts also used mature forests. The results of the Massachusetts study combined with Connecticut's also demonstrate that radio tracking was vital for the discovery that the bird was using mature forest habitat for foraging as opposed to the shrublands in which it sang. As a result of this research, management recommendations for this species will now consider the structure of the surrounding forest, in combination with shrubby openings, to meet both the early season courtship and singing requirements as well as the later season foraging requirements.

Provide a Safe Environment When Feeding Birds

Now that winter is here, many Connecticut residents are actively feeding and watching birds in their yards. Feeding birds can be as easy as putting up a window feeder filled with sunflower seeds to maintaining several styles of feeders and offering a variety of food types so as to attract a wide diversity of birds. However, there is more to bird feeding than just putting up a feeder and supplying food. It also is important to provide a safe feeding environment for the birds that you invite to your feeders.

Keep Feeders Clean

When selecting a feeder, keep in mind that it should be easy to refill and clean. Feeders and feeding areas should be cleaned often throughout the cold months. A poorly maintained feeder can spread diseases among birds. To prevent the spread of disease, feeders should be cleaned about once every two weeks by scrubbing in hot, soapy water, and then sanitized by being dipped into a one part bleach, nine parts water solution. Let the feeder dry thoroughly before refilling. It also is important to shovel or rake up seeds hulls that fall on the ground beneath feeders on a regular basis. This material should be disposed of properly (e.g., bagged for garbage disposal).

The use of weatherproof feeders that protect the seed from getting wet is suggested. Use only clean, dry bird seed and discard seed that becomes moldy. Keeping seed in a waterproof container helps prevent mold from spoiling the seed. In wet weather, put out only enough seeds that can be consumed in several hours.

If you have a bird bath, be sure to flush the water every day.

While these measures won't entirely solve the problem of bird diseases, they can help to slow down their spread.

Bird Diseases

Even if you are diligent about keeping your feeders and feeding areas clean, you should always be on the lookout for sick birds. If you observe sick birds, thoroughly clean your feeders and leave them down for at least a week.

There are a few common diseases, with varying symptoms, that may be affecting birds at your feeders:

- **Aspergillosis:** A potentially fatal bird infection, aspergillosis is caused by a fungus that grows in wet bird seed. Symptoms include difficulty breathing, emaciation, and increased thirst.
- **Salmonellosis:** The spread of salmonellosis has been linked to bird feeders, causing widespread deaths in the Northeast. Symptoms are not always noticeable and some infected birds may not show any signs of sickness, but can spread the infection to other birds. Salmonellosis is transmitted through fecal contamination of food and water by sick birds.
- **House Finch Eye Disease:** This disease was first documented in 1994. Infected birds have red, swollen, runny, or crusty eyes. In extreme cases, the eyes may be swollen shut. Some infected birds may recover, but many die from starvation, exposure, or predation. The disease mainly affects house finches, although American goldfinches, evening grosbeaks, and purple finches also have been affected.
- **Avian Pox:** This virus can be spread by direct contact with infected birds or contaminated surfaces (like feeders), and by ingesting contaminated food or water. Infected birds usually have wart-like growths on the featherless parts of the body, such as around the eye, beak, and on the legs and feet. Another form of avian pox, which is not as common, causes plaques to develop on the mucous membrane of the mouth, throat, trachea, and lungs. Infected birds have difficulty breathing and feeding.

Predators at Bird Feeders

Many feeder watchers are dismayed when they observe one of their visiting birds being preyed upon by free-roaming cats or raptors. Predation by cats is not a natural situation and should not be tolerated. The best solution is to keep house cats indoors and let them watch birds through the windows. If neighborhood cats are hanging around your feeders, try to talk to your neighbors about their free-roaming cats and explain why cats should be kept indoors.

Predation by hawks, on the other hand, is part of the natural predator-prey relationship. Plus, observing a Cooper's or sharp-shinned hawk flying over your feeders may be a big enough thrill to overshadow the realities of predation. However, it is important to provide thick cover (shrubs, conifers, brush piles) near the feeders for protection. If a hawk becomes a regular visitor to your feeding area and scares feeder birds away, take down the feeders for a few days, and hopefully the hawk will move on.

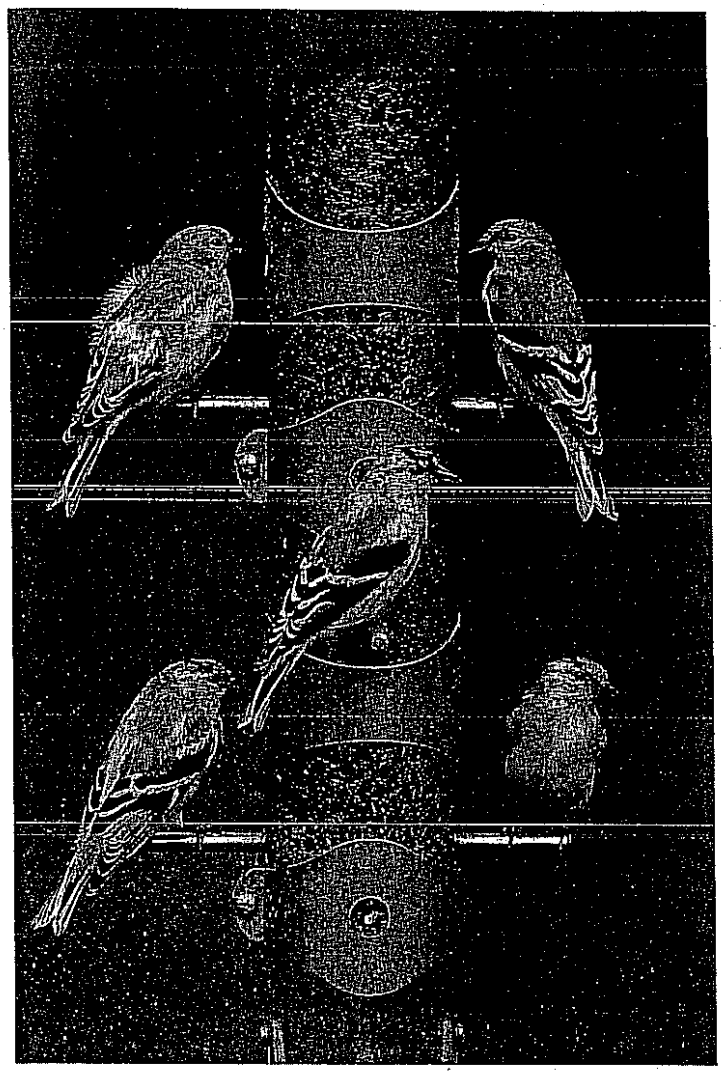
Prevent Window Strikes

It has been estimated that millions of birds are killed each year from striking windows on buildings and homes. Unfortunately, window strikes are a common cause of death associated with feeders. Studies have shown that one out of every two strikes results in death. Birds involved in collisions may die instantly, be injured and die eventually from their injuries, or be taken by a predator as they recover. If you feed birds, you should make a commitment to reduce the chance for window strikes as much as possible.

Research has shown that bird feeders placed within three feet of windows reduces or eliminates the number of fatalities from window strikes. Birds leaving feeders placed close to windows are not able to gain enough momentum to cause serious injury if they hit a window. Placing feeders at least 30 feet away from windows can be helpful in reducing collisions as well.

It also is important to break up reflections in windows or reduce their transparency. Several options are available and you may have to experiment to see which ones work best:

- Decals of any shape and size can be helpful. These can include falcon silhouettes or spider web designs. Several decals should be placed on the window to break up the appearance of the window. The use of UV reflective static cling decals is becoming more popular. These special decals are placed on the **outside** of windows and, although transparent to humans, reflect a solid blue (ultraviolet) image to birds. A good number of these small UV static cling decals need to be placed on larger windows. These decals are available commercially through the internet or at bird feeding supply stores. Although not 100% effective, the decals seem to make a difference in reducing bird strikes at windows.
- Another option is to use physical barriers at windows near feeders, such as commercial window screens, awnings, garden netting, or insect screening.
- Hanging several ribbons or streamers, spaced apart, in front of windows has had some success. The ribbons break up



American goldfinches tend to concentrate at thistle feeders, increasing the possibility of disease transmission.

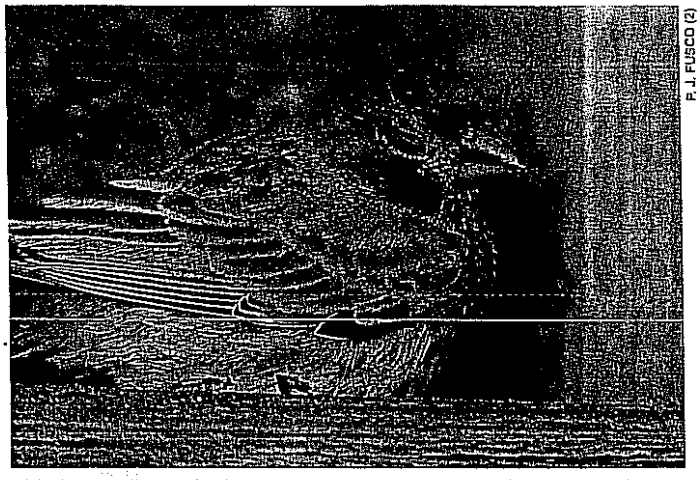
the reflection and movement in the wind may also be a deterrent.

- You can use blue painter's tape or a yellow highlighter marker to make a grid on the outside of windows. The highlighter is less visible to humans, but appears to keep birds from striking windows. The painters tape works well, also, but will definitely be a source of questions to anyone who sees your windows.

In some cases, when a bird strikes a window, it is probably just stunned and will eventually fly away when it recovers. In this situation, you should carefully pick up the bird, with gloved hands, and place it in a safe area away from cats and other predators. It should fly away shortly. If it does not fly away and it appears to be more seriously injured, you should seek the assistance of an authorized wildlife rehabilitator.

Dealing with Sick or Injured Birds

No matter how hard you try to keep your feeders and feeding area safe, you will probably find sick and/or injured birds. What do you do in such a situation? First of all, you need to remember that it is illegal for any person, other than a state-authorized wildlife rehabilitator, to care for wildlife. If you think a bird (or any other animal) needs help, you should contact a wildlife rehabilitator that is authorized to care for sick, injured,



P. J. FUSCO (2)

This house finch displays symptoms of finch eye disease – red, crusty, swollen eyes.

or orphaned animals with the intent of returning them back to the wild. The Wildlife Division maintains a list of rehabilitators on the DEP website (www.ct.gov/dep/wildlife). Most birds are protected by federal and state laws and these volunteers have the necessary permits for handling protected birds.

The Mount Vernon Songbird Sanctuary, a non-profit organization based in Southington, is an authorized rehabilitator that specializes in caring for small migratory songbirds. The sanctuary offers some excellent advice on its website (www.mvssanctuary.org) about what to do if you find a sick or injured bird. In the case of a bird exhibiting disease symptoms, you should make every effort to catch it. A sick bird is usually found on the ground, in the same position for long periods of time, quite often near a bird feeder or bird bath.

In the case of injured songbirds, you should look for broken wings, broken legs, wounds, head trauma, or spinal trauma. Observe both wings. Are they positioned evenly, or is one wing drooping lower than the other? Is the bird standing on both legs or is one leg held up because the bird cannot bear weight on it? Is a leg dangling uselessly? These symptoms may indicate a break. Missing or matted areas of feathers are signs of a wound, the result of being caught by a cat or other predator. Cat bites can be fatal if not treated with antibiotics. (The Sanctuary recommends that any bird that has been handled by a cat be rescued.) Head and spinal trauma can be caused by colliding with a window or being hit by a car, resulting in a bird being found on the ground stunned and unable to fly.

In these situations, use gloves to gently place the bird in a ventilated box with a towel, keeping it warm and away from people and pets. Nothing should be put in the bird's mouth or container. An authorized rehabilitator should be contacted immediately so that the bird can be brought to them for care.

For More Information

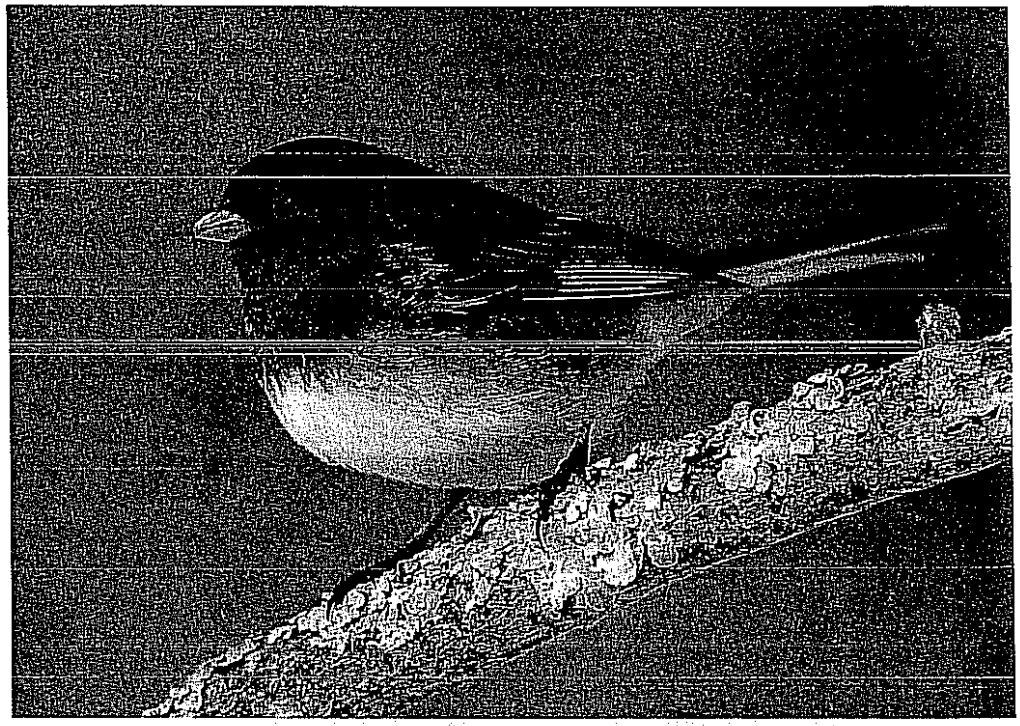
There is a wealth of information available about bird feeding and safety at bird feeders. The following websites were used as reference and you may also consult them for more detailed information:

Cornell Lab of Ornithology: www.birds.cornell.edu
Project FeederWatch: www.birds.cornell.edu/pfw/
National Bird Feeding Society: www.birdfeeding.org
American Bird Conservancy: www.abcbirds.org

The Little Snowbird

Article and photography by Paul Fusco, Wildlife Outreach Program

Every fall in Connecticut, there is a little gray bird that suddenly becomes very common all across our state. Woodlands and forest edges in parks and backyards are sometimes inundated with them. They are familiar favorites among many backyard birders, while others dread the sight of them. The little birds are dark-eyed juncos, sometimes referred to as "snowbirds." Those that dread the "snowbirds" do so because the juncos are harbingers of the cold and snowy days of fall and winter that are soon to come. They get the name "snowbird" from their plumage coloring of "gray skies above, and snow below."



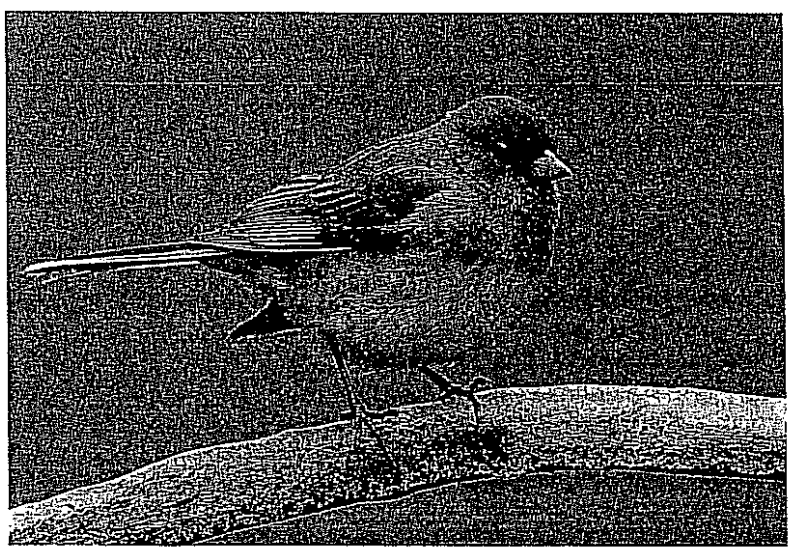
This adult male slate-colored junco shows the striking dark gray upper plumage set against a white belly and pink bill.

Description

Juncos are small sparrows that are distinctly marked with drab shades of gray, brown, and white. They have a pink bill, plain gray head and breast, white belly, and white outer tail feathers. Females and immature birds have duller plumage than males.

The typical junco song is a cheery, musical trill, "*tililililililil.*" Simple and slow, the trill may vary up or down in pitch, and a series of multiple pitches may be joined together to form one continuous song. Listen in late winter for the junco song, as it is most frequently sung before pair formation and breeding.

There are five subspecies of dark-eyed junco – the slate-colored, Oregon, pink-sided, white-winged, and gray-headed races. All are basically similar in appearance. One, the white-winged, has a restricted range, breeding only in the Black Hills of South Dakota.



Female juncos are duller than males and have brownish tones in their upper plumage.

Range

Of the five subspecies, only slate-colored juncos are normally found in the eastern United States. They are very common and widespread in open wooded habitats.

Slate-colored juncos breed in cool coniferous and mixed woodlands, along a broad swath of northern North America from Alaska, across Canada to New England, and south along the Appalachian highlands. It is estimated that two-thirds of the junco population breeds in the broad band of boreal forest that extends from Newfoundland across Canada and Alaska, to the Bering Sea. In winter, juncos move south, ranging from southern Canada, to every state in the United States, but are absent from extreme southern Florida, southern Texas, and the desert southwest.

Slate-colored juncos are uncommon breeders in Connecticut. Breeding occurs in mature conifer forest habitat in northwestern and, to a lesser extent, in northeastern parts of the state. Juncos tend to favor areas with little undergrowth and somewhat of a rocky or sloped surface.

Nests are built on the ground, often in a depression and hidden under vegetation or against a log, rock, or upturned tree root. The cup-shaped nest is made of grass, moss, rootlets, and little twigs, with a lining of fine grass, feathers, and hairs. Young birds have well-developed legs and feet. This allows them to run before they can fly in order to escape from nest predators. Slate-colored juncos typically raise two broods per year.

Behavior

Juncos prefer to forage on the ground,

where they scratch the surface for seeds. They often can be seen using a "double-scratch" method where they hop forward, and then kick the ground backwards with both feet to expose food. In summer, they also will consume insects, including caterpillars, beetles, and ants. Ragweed, chickweed, and crabgrass are among a long list of grass and weed seeds that juncos eat.

Winter flocks often consist of five to 40 individuals. Social structure within the flock establishes a pecking order in which dominant birds (usually adult males) attempt to maintain a small foraging territory. Rivals are warned away by the prominent display of the white outer tail feathers. If displays don't settle a dispute, a fight may ensue in which two birds will kick and claw at each other. Sometimes the combatants will face off while rising up into the air.

This slate-colored junco exhibits an uncommon variation of white wingbars that may be noteworthy but not prominent.

Males juncos generally spend the winter farther north than the females and immature birds. By enduring harsher winter conditions, mature males will gain the benefit of being closer to the best breeding territories in spring. The most favorable territories will be claimed by the birds that get back to the breeding grounds the fastest.

In winter, flocks feeding on the ground may be sent diving for cover at the sight of a sharp-shinned hawk coursing toward them. In such situations, juncos will give a sharp call note and flash their white tail feathers to signal other members of the flock to the danger.

Members of a flock regularly sound a "*tsip*" call, used to keep in contact with one another while the flock forages within their regular feeding area. At night, flocks will roost together, frequently in a conifer that affords them shelter from cold and protection from predators.

Conservation

Slate-colored juncos are widespread and abundant. They have adapted well to human development, and have taken advantage of the proliferation of backyard bird feeders all across the country. The best seed to offer juncos at feeders is a combination of black oil sunflower, white millet, and nyjer thistle. Because juncos prefer to feed on the ground, it is best to spread some seed on the ground to accommodate them. Ground seed also can be provided by allowing spillage from a pole mounted feeder.

Thick cover should be near any food source. By placing seed near cover, juncos will have a route to escape from hawks and other predators. A distance of six to 12 feet between food and cover works well to give the birds enough space to become aware of any threats and to quickly escape.

Despite having an abundant population and a wide range, dark-eyed juncos have declined at a rate of two percent per year according to breeding bird surveys during the 1980s and 1990s. The species is heavily dependent on the boreal forest zone of North America. This huge region is still largely intact, but it is facing increasing pressures from industrial development and logging interests. Millions of acres of boreal forest are clearcut each year, primarily for paper products.

Not only is the boreal forest zone an important breeding habitat for dark-eyed juncos and many other birds, but it also is a globally important carbon storage zone, one of the world's best natural defenses against increased global warming. Carbon storage is a natural process where plants absorb carbon from the atmosphere, thus helping to reduce the rate of global warming. The rich mosaic of forests, lakes, wetlands, peat, and tundra in the boreal zone hold a large percentage of the planet's carbon. The beneficiaries of responsible and sustainable forest management and large scale protections of the boreal forest would not only include the little slate-colored junco, but likely the planet itself.

There Are Many Races of Dark-eyed Junco

In Connecticut, the slate-colored race of dark-eyed junco is the only regularly-occurring junco to be found. In other parts of the United States, there are four other subspecies of dark-eyed junco, including gray-headed, Oregon, pink-sided, and white-winged juncos, all of which have smaller breeding ranges than the slate-colored.

Gray-headed juncos breed in the southern Rocky Mountains from Nevada to Colorado, and northern Arizona and New Mexico.

Oregon juncos breed from California north to British Columbia, and east to parts of Idaho and Montana.

Pink-sided juncos breed in the central Rockies from Montana to Arizona.

White-winged juncos have the most limited breeding range, and are found only in the Black Hills of South Dakota.

Unfavorable Weather Took Its Toll on Nesting Plovers & Terns

Written by Orla Molloy, Wildlife Division Resource Assistant

The 44 pairs of piping plovers that nested along the Connecticut coastline this past summer laid 202 eggs, but only fledged 74 chicks, down 25% from 2008 when 102 chicks fledged.

The 2009 piping plover nesting season began with high aspirations of achieving greater numbers than that of last year's 102 chicks. Human disturbance, predation, and Mother Nature, however, had different plans for the Connecticut coastline.

Sandy beaches are imperative for the survival of the state and federally-threatened piping plover. This shorebird prefers to make its nest in high, dry sections of beach that contain little to no vegetation and are away from the water. Piping plovers return to Connecticut from their wintering grounds in late March and early April to begin nesting. At this time, DEP staff, along with U. S. Fish and Wildlife Service staff and volunteers, scout shoreline beaches in search of these birds. In these early months, male plovers make their territories and defend them from intruders by hunching their backs and running after trespassers. When a mating pair is formed, the male makes several depressions (scrapes) in the sand. The female then evaluates the scrapes to find the one that is most desirable for laying eggs. She also may line the nest with broken shells to help camouflage it.

Once a good nesting site is established, the courting rituals begin. The pursuit consists of loud vocalizations, with the males puffing their chests and performing what many call a "can can" dance. Females will lay one egg every other day until there are four eggs. However, if the first nest fails, renest attempts may only have two to three eggs. Both male and female plovers participate in the incubation of the eggs.

Protecting Nesting Areas

Once pairs designate a breeding location, the Division uses string fencing as a buffer to discourage people from disturbing the birds. Bright yellow signs stating "Keep Away" and "No Dogs Allowed on Beach" also are posted. When nests are found with a total of four eggs (in some cases three eggs), a wire fenced exclosure is put around the nest and mesh netting is placed over the top. The exclosure helps prevent predation from foxes, dogs, skunks, raccoons, cats, and avian predators such as gulls and herons. However, it does not inhibit the breeding pair from entering or exiting. The wire exclosures have proven to be a valuable tool in providing higher hatching success where predators and human disturbance is high. The beaches, on average, are assessed twice a week for nesting activity.

Disturbance, Predation, and Weather Hamper Success

Every summer, piping plovers and state-threatened least terns struggle to maintain their nesting sites, putting great effort into establishing nests and laying eggs. Although human disturbance and predation are the usual culprits in nest failures, Mother Nature threw in its own twist this season. The unseasonable weather in June took a toll on plover and tern numbers. Twenty-six of the 30 days in June had continuous rainfall. Nesting plover and tern pairs were forced to incubate eggs or brood young in the unseasonable weather with mixed results. Although small, piping plovers are relentless when caring for eggs and broods. They will withstand the elements to ensure hatching success. Unfortunately, the constant rainfall and high tides washed out many nests.

Piping Plovers

The 44 pairs of piping plovers that nested along the Connecticut coastline this past summer laid 202 eggs, but only fledged 74 chicks, down 25% from 2008 when 102 chicks fledged. Some nest sites had unique problems, such as at Long Beach in Stratford where thieves made it difficult to keep the barriers up as they pilfered the wooden stakes used to cordon off the nesting areas. Wooden stakes are often pulled up and used as firewood on beaches. The constant theft of these stakes interfered with the security of Long Beach's nesting pairs. The number of plover fledglings from Long Beach fell

from 14 in 2008 to 10 in the 2009 season.

Beaches from Groton to Westport were used for nesting. They included Long Beach in Stratford; Milford Point, Cedar Beach, Laurel Beach, and East Broadway Beach (all in Milford); Sandy Point (West Haven); Hammonasset Beach State Park (Madison); Griswold Point (Old Lyme), Harkness State Park (Waterford); and Bluff Point Coastal Reserve (Groton). For the first time since DEP conservation efforts began, a pair was reported nesting at Sasco Hill Beach in Fairfield.

Piping plovers have many predators, including foxes, rats, dogs, raccoons, skunks, night herons, and gulls. A pair at Laurel Beach in Milford made three efforts to successfully nest. The first nest was not able to be protected by an exclosure before it was lost to predation. An exclosure was erected for the second nesting attempt; however, a predator (most likely a skunk) dug around and underneath the exclosure and took the plover eggs. Fortunately, these losses occurred early enough in the season that the pair was able to renest a third time and eventually fledge two chicks.

Nesting success for plovers at Harkness State Park decreased by 50% from last year. Only nine fledglings were recorded by Denise Bouchard, a DEP Parks patrolman.

Multiple plover pairs from across the state exhibited a change in their normal behavior when they began nesting in dunes and among beach vegetation. Traditionally, plovers prefer open, sandy areas because they provide better viewing for predators. Why the change? Is it because of the continuous loss of their beach nesting habitat? Could it be that human disturbance is less intrusive farther inland? Are these birds being forced to adapt to ever-changing breeding grounds? These are questions that will hopefully be answered with the continued monitoring of this species.

Terns Abandon Sandy Point

For the past 20 years, Sandy Point has been the site of the largest least tern colony in the state. It also plays a vital role for piping plovers. This year, Sandy Point was more of a ghost town than a vibrant and flourishing colony. The area was submersed with high water levels that flooded into the colony, causing undesirable breeding grounds for terns, black skimmers, oystercatchers, and plovers alike. The vigorous tern colony that once existed there had been completely eliminated. The flooding also had a negative effect on piping plovers. Normally, plovers need distance (approximately 30 feet) between their nests to ensure success. Plovers that would normally nest on the lagoon side of the point were forced to compete with each other for limited habitat on the ocean side. Adult plovers were actually seen attacking other adults over territory. To make matters worse, a brush fire was started at Sandy Point, right next to a nesting pair. This disturbance caused the adult to abandon its nest and eggs. These mishaps and habitat changes caused plover numbers to plummet at this site to almost one-half of last year's results (12 fledglings in 2009 compared to 20 fledglings in 2008). These changes also may be the reason why least terns didn't nest at Sandy Point at all. In 2008, 80 pairs of least terns nested at Sandy Point.

P. J. FUSCO

Only 11 least terns fledged this year from Connecticut beaches, a very dismal number. Of the eight sites in the state where least terns have routinely nested, chicks only fledged from two sites – Griswold Point and Hammonasset Beach State Park.

Least Terns

In 2009, 98 pairs of least terns nested on Connecticut beaches, fledging only 11 chicks. Of the eight sites in the state where least terns have routinely nested, chicks only fledged from two sites – Griswold Point and Hammonasset Beach State Park. These numbers are down considerably from just one year ago. In 2008, 252 pairs of least terns produced 76 fledglings. During one visit to Long Beach in Stratford, approximately 60-70 least terns were counted. When the site was monitored a few days later, the birds were gone and the nests were destroyed. The nests had washed away when the high tides reached abnormally elevated levels.

Thanks Extended

Efforts to protect and monitor piping plover and least tern nesting areas would not be possible without the assistance provided by volunteers, interns, and private landowners. The Division would like to thank all the private landowners who consented to having exclosures on their properties. Their cooperation allowed for the success of multiple nests. Thanks are also extended to Vanessa Lester, a University of Massachusetts student and U.S. Fish and Wildlife Service intern, and Denise Bouchard and Joel Stocker whose assistance was invaluable. The Division also would like to recognize the Master Wildlife Conservationists and other volunteers who worked hard and spent countless hours monitoring these shorebirds, purely because of their passion for wildlife and conservation.

Funding for the Piping Plover Recovery Project is provided by Section 6 of the federal Endangered Species Act.

Nesting Terns Holding Strong at Falkner Island

Since the 1960s, Falkner Island, a small, crescent-shaped piece of land just off the coast of Guilford, has been the site of the largest common tern and roseate tern colonies in Connecticut. This 4.5-acre island was once owned by the U.S. Coast Guard until it became part of the U.S. Fish and Wildlife Service's (USFWS) Division of Refuges in 1985. It is now considered part of the Stewart B. McKinney National Wildlife Refuge.

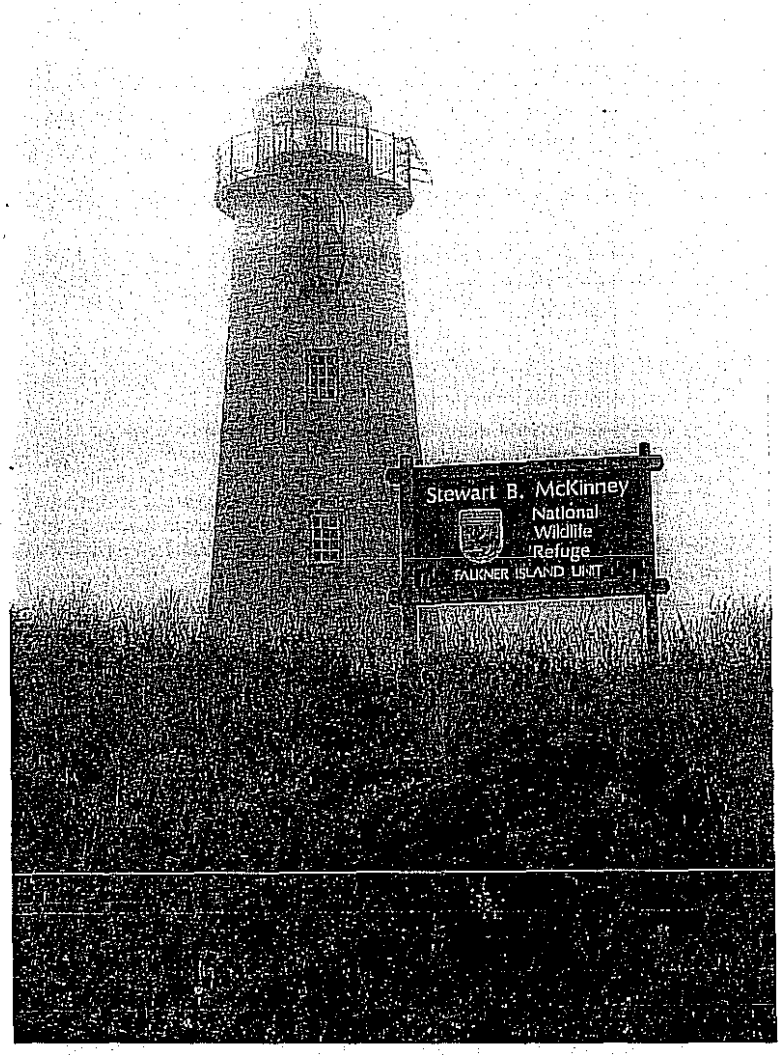
The roseate tern colony on the island is part of a northeastern regional population that nests at various sites along the coastlines of Maine, Massachusetts, Connecticut, and New York. This breeding population was declared endangered by the USFWS in 1987. With the passage of Connecticut's Endangered Species Act in 1992, the roseate tern also was listed as state endangered. The common tern is considered a Connecticut species of special concern. Because of the endangered status of roseate terns, their productivity is continuously monitored at Falkner Island, as well as at other breeding sites in Massachusetts and New York.

The 2009 roseate and common tern nesting season was considered successful. The daily presence of the biological team at Falkner Island and constant monitoring of the tern colony, as well as proactive predator control, all contributed to the colony's reproductive success.

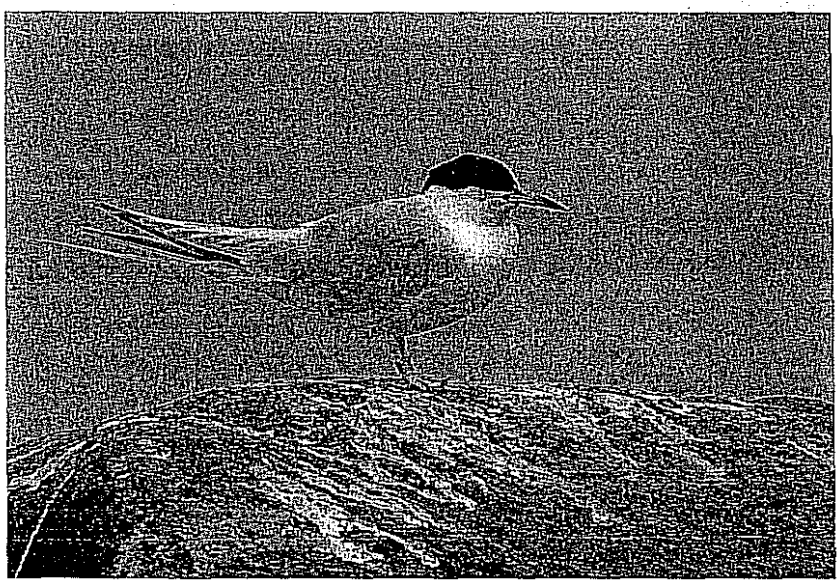
This year's annual census demonstrated that the number of common terns nesting on the island had increased compared to last season. However, the overall fledge rate remained identical to that of the previous year. During the 2009, 2,311 nests were recorded. This is an increase of 249 nests in comparison to the 2008 census results.

There also was an increase in the number of roseate tern nests, as well as in the number of roseate chicks that fledged. A total of 38 roseate tern chicks are presumed to have fledged. This number is much higher than the 23 recorded roseate tern fledglings of 2008 and is the highest number documented for the past three years. The increased nest success may be due to higher prey concentrations, predator control efforts, and the lack of observed predation on roseate nests.

R. J. FUSCO (2)



The crowning glory of Falkner Island is the white octagonal lighthouse that has four-and-a-half foot thick base walls and a red Victorian dome that rises 94 feet above sea level. Built in 1802, it is the second oldest lighthouse in Connecticut and it is listed on the National Register of Historic Places.



(Left) Falkner Island has the largest breeding roseate tern colony in Connecticut. Roseate terns are listed as federal and state endangered species.

Due to the efforts of the biological team based at Falkner Island, 186 roseate and common terns were fitted with leg bands. Banding allows for a more efficient method of monitoring the movements and reproductive behaviors of the common and roseate tern populations on the island.

Thank you to Richard Potvin of the U.S. Fish and Wildlife Service for providing the tern nesting season results for 2009.

Mosquito Testing Revealed EEE in Connecticut in 2009

Written by Roger Wolfe, Mosquito Management Program

When this year began, we could have predicted that it would be an active mosquito season, but we had no idea what was in store. As you may recall, Connecticut had a very wet, mild spring. As a result, there was a bumper-crop of spring mosquitoes. "Spring, floodwater mosquitoes" hatch from eggs that were laid the previous fall. After overwintering, the eggs are then flooded as snow melts and water tables rise in spring. As the days grow longer and the water warms up, these eggs hatch into larvae and eventually emerge as adult mosquitoes, usually just in time for Memorial Day weekend.

To add to the already high population of spring mosquitoes, red maple/white cedar swamps stayed wet throughout the summer. This habitat is home to a mosquito known as *Culiseta melanura*. *Culiseta spp.* primarily feed on birds. However, recently, through blood meal analysis at the Connecticut Agricultural Experiment Station (CAES), this mosquito has been found to also feed on mammals, including humans. In addition, *C. melanura* is known to be the driving force for amplifying eastern equine encephalitis (EEE) in the wild bird population. This year, *Culiseta* populations were high and stayed high well into fall.

As part of Connecticut's Mosquito Management Program, the CAES began trapping and testing mosquitoes in early June for EEE, West Nile virus (WNV), and other mosquito-borne diseases. Mosquito traps were set at 91 sites throughout the state and attended by staff every 10 days on a regular rotation. Two trap types are used at all trapping stations: 1) a CO^2-baited CDC Light Trap, designed to trap host-seeking adult female mosquitoes (all species); and 2) a Gravid Mosquito Trap, designed to trap previously blood-fed adult female mosquitoes (principally *Culex* spp.).

By mid-October, the CAES had trapped, counted, and processed over 289,243 mosquitoes – kudos to the folks behind the microscopes! From this collection, 33 WNV-positive pools of mosquitoes were isolated. There also were 118 EEE isolations which encompassed the eastern half of the state and, by late summer, parts of Fairfield County as well (check the Mosquito Management Program website at www.ct.gov/mosquito for final numbers). This was a remarkably high amount of EEE activity and, with several weeks of warm weather still anticipated, there was need to be concerned for the public's health.

In mid-September, Governor M. Jodi Rell convened a meeting in Hartford with members of the Mosquito Management working group, the Commissioners of Environmental Protection, Public Health, and Agriculture, the Director of the CAES, and the state Director of Homeland Security. This group had a conference call with 55 local health officials to update them on the situation, relay the risk involved, and inform them of plans to get through the season, hopefully without any human infection of EEE. Connecticut did not have a confirmed human case of EEE, although horse and non-native bird deaths were reported.

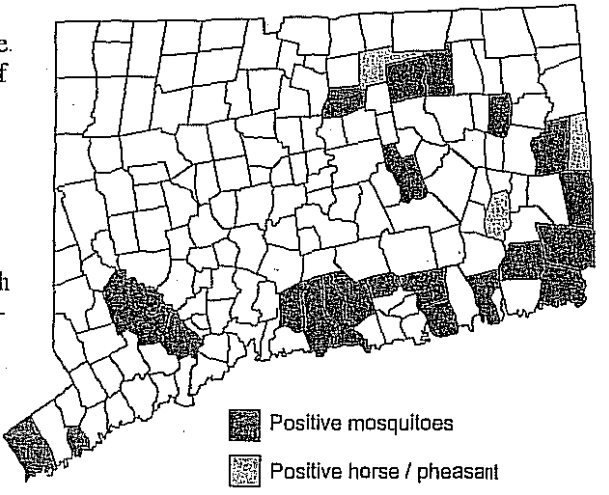
The CAES increased its trapping efforts, press releases were announced through various media, and parks and public areas were posted to warn visitors to avoid exposure to mosquitoes and use repellents, especially at dusk when mosquitoes would be most active. Some towns opted to spray (adulticide) for mosquitoes on their public lands, but the DEP did not. Because the virus was so widespread, it was logistically unfeasible at the state level to spray, short of an aerial application which was not recommended at the time.

West Nile virus and EEE are bird viruses that are naturally present and amplified in the wild bird population. Wild birds have a natural immunity to these viruses and normally aren't affected. On the other hand, non-native or exotic birds (e.g., emus, ostriches, pheasants) do not have these built-in immunities and can be very susceptible to these diseases. If these penned birds become sick or die (especially in large numbers), they can act as effective sentinels to alert health officials that a virus is present in the area. This was the case in September when a number of dead pheasants from the Norwich area were analyzed at the Connecticut Veterinary Medical Diagnostic Laboratory at the University of Connecticut and confirmed to have EEE. Soon after, the virus was isolated from a flock of pheasants in Ellington. With the help of Wildlife Division staff, additional announcements were sent out to pheasant breeders, game clubs that stock birds, hunters, and other outdoorsmen to be on the lookout for sick birds and to take precautions against mosquito bites when in the field.

In early October, diagnostic results confirmed EEE in a horse that died in Plainfield a few weeks earlier. Although unfortunate, it was not surprising considering the amount of virus activity that was present in the area for several weeks prior. Furthermore, this high level of EEE activity was not just confined to Connecticut. There were confirmed horse cases in New Jersey, Rhode Island, Maine, and Massachusetts. A three-year-old girl from New Hampshire became ill from EEE and a 70-year-old man from upstate New York died in September from EEE after being bitten by an infected mosquito. Although the risk of contracting EEE from an infected mosquito is very low, the mortality rate is over 50% in humans and over 90% in horses. In short, when EEE is prevalent, it should not to be taken lightly. You should heed all precautions being given by health officials.

The mosquito season cannot be predicted from year to year. However, to help prevent human health outbreaks when these arboviruses emerge, we can learn from the past, look for long-term trends, be better prepared, and use new technology for surveillance and control as it becomes available.

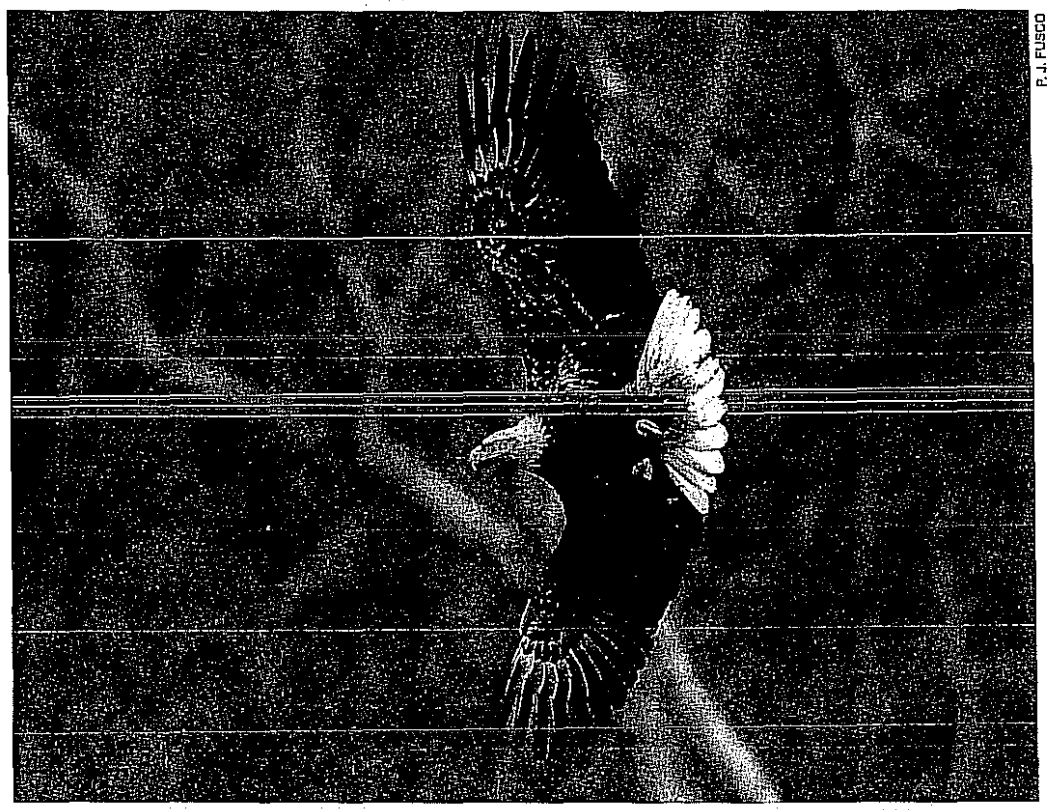
2009 Eastern Equine Encephalitis Activity



2009 Midwinter Bald Eagle Survey Yielded 80 Eagles

The weather was clear and cold but not cold enough to stop 227 volunteers from observing 98 survey areas during the 2009 Midwinter Bald Eagle Survey, which took place on January 9-10. Survey numbers collected from the volunteers revealed that 80 bald eagles were counted – 48 adult and 32 immatures. Eagles were observed at 20 of the survey locations.

Thanks are extended to all of the volunteers for their time and efforts to survey the eagles.



R.J. FUSCO

Volunteers are needed for the 2010 Midwinter Bald Eagle Survey, which will be conducted in early January. A total of 80 eagles were counted during the 2009 survey.

Volunteers Needed for the 2010 Midwinter Bald Eagle Survey

The Wildlife Division is looking for volunteers to assist with the 2010 Midwinter Bald Eagle Survey in Connecticut. The 2010 survey period target date is Saturday January 9, from 7:00 -11:00 AM.

Bald eagles migrate south from the northern states during winter to areas of open water where they are able to catch fish, their main food item. Cold weather conditions, which keep most waterways to the north covered with ice, mean that higher numbers of eagles will be counted in Connecticut.

Each year since 1979, volunteers from private conservation organizations, the DEP, and the general public have helped conduct the Midwinter Bald Eagle Survey by recording all eagles seen at areas traditionally used by the birds and at areas of suitable wintering habitat.

The Midwinter Bald Eagle Survey is not a complete census of the entire wintering population in Connecticut, but an index of the species' use of the state, which can be compared from year to year. The survey is conducted nationwide during a target time period. The purpose of this survey is to monitor the status of bald eagle wintering populations in the contiguous United States by estimating national and regional count trends, overall and by age class.

If you would like to participate in the 2010 survey, please contact Wildlife Division biologist Julie Victoria by email only (julie.victoria@ct.gov) and provide your name and mailing address.

2009 Midwinter Bald Eagle Survey January 9-10, 2009

Location	Adults	Immatures
Connecticut River*	16	10
Housatonic River	6	9
Lake Gaillard	1	0
Lake Saltonstall	1	1
Candlewood Lake	7	5
Farmington River	0	1
Quinnipiac River	2	0
Pomperaug River	1	0
Barkhamsted Reservoir	1	0
Groton Reservoir	2	0
Congamond Lakes	2	0
Knowlton Pond	0	1
Quinebaug River	1	0
Alexander's Lake	1	2
Morris Reservoir	1	0
Thames River	2	2
Aspetuck Reservoir	1	0
Naugatuck River	0	1
Burlington Hatchery	2	0
Easton Reservoir	1	0
Total	48	32

Statewide Total = 80 Bald Eagles

**Old Saybrook to Massachusetts line*

Midwinter Bald Eagle Survey Results 1979-2009

	Immature	Adult	Unknown	Total
1979				20
1980				11
1981				26
1982	18	13	0	31
1983	18	17	0	35
1984	17	22	0	39
1985	14	24	0	38
1986	22	18	0	40
1987	15	18	0	33
1988	23	28	1	52
1989	30	58	0	88
1990	53	23	0	76
1991	31	27	0	58
1992	34	27	1	62
1993	31	29	1	61
1994	46	29	0	75
1995	40	26	0	66
1996	83	45	0	128
1997	64	50	0	114
1998	20	29	0	49
1999	27	33	0	60
2000	37	35	0	72
2001	43	34	0	77
2002	20	33	1	54
2003	45	31	1	77
2004	41	50	1	92
2005	25	20	1	46
2006	19	44	3	66
2007	20	42	0	62
2008	32	49	0	81
2009	32	48	0	80

Tree-of-Heaven's Name May Be Endearing, But the Tree Is Not

Written by Peter Picone, Habitat Management Program

Tree-of-heaven (*Ailanthus altissima*) is a non-native invasive tree that was imported to North America in the late 1700s from Asia. It was imported with good intentions because of its use as an ornamental and in the silkworm industry. However, what was not known about the species was its propensity to reproduce and displace native plants as it escaped into the forests and fields of New England and other areas.

Tree-of-heaven is able to grow well in most temperate climates throughout the world. Because of its ability to grow quickly to a height of 70 feet or more and clone itself and disperse its prolific seeds, tree-of-heaven has become a vigorous, non-native invasive that competes for sunlight, space, and nutrients to the detriment of Connecticut's native plants. To make matters worse, the tree produces allelopathic chemicals which are concentrated in the roots and young sprouts. These chemicals inhibit the survival of native plants in areas where tree-of-heaven is established. Tree-of-heaven is flourishing in North America, especially because there are no natural enemies (insects, pathogens, disease) in this region to keep it in check.

P. PICONE (2), HABITAT MANAGEMENT

Tree-of-heaven overtops staghorn sumac at Simsbury Wildlife Management Area in Simsbury.

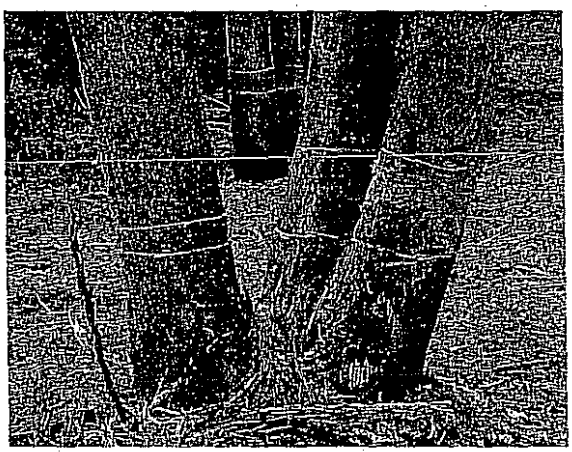
Identifying Tree-of-heaven

This deciduous tree has smooth stems with pale gray bark and twigs that are light chestnut brown, especially in the dormant season. It has large compound leaves that are alternate and have smaller leaflets. Tree-of-heaven is dioecious, meaning that male and female flowers occur on separate plants. Female trees can be identified by the winged fruits containing a single seed that are seen hanging from the branches in fall.

Elimination at State WMAs

Tree-of-heaven has been found growing, in increasing frequency, at state wildlife management areas (WMA). Two habitat management projects aimed at eliminating tree-of-heaven have been implemented at Housatonic River WMA in Kent and Simsbury WMA in Simsbury.

At Housatonic River WMA, a female patch of tree-of-heaven was invading a field and forest edge. The seeds were not only dispersing into the field, but also falling into the Housatonic River and being transported downstream. The river's sandy shoreline is a prime area for tree-of-heaven seeds to sprout and take hold. To eliminate this invasive tree, small saplings were pulled up by hand while the larger stems (8 inches in diameter and smaller) were chopped up using a brontosaurus drum-chop mower. Trees that were too large for the brontosaurus mower were girdled using a chain saw and then the herbicide Glyphosate was applied to the grooves. Follow-up herbicide treatments to stump sprouts and runners were done for two growing seasons.



Tree-of-heaven has been girdled by a chain saw and hatchet and treated with a herbicide at the Housatonic River WMA in Kent.

Several satellite populations of tree-of-heaven also were killed using girdling and herbicides on the 500-acre Housatonic WMA. Currently, at the area, no seeds are being produced and more than 98 % of the trees have been removed.

At Simsbury WMA, a one-acre patch of large trees adjacent to the Farmington River was managed using the same techniques. A smaller patch that was found shading out staghorn sumac along a field edge was managed using girdling and herbicide.

Invasive non-native plants and animals are second only to habitat loss as the largest threat to biodiversity. A list of invasive non-native plants found in Connecticut is available on the University of Connecticut Plant Science Department's website (www.hort.uconn.edu/CIPWG/invplantsCT09commonname.pdf). This list was compiled by the Connecticut Invasive Plant Working Group.

FROM THE FIELD

Subscription Price to Increase in 2010 – Magazine to Go Full Color

As you are probably aware, budget constraints have been affecting state government, and the Wildlife Division has not been immune. In addition, printing and mailing costs have been steadily rising over the years for *Connecticut Wildlife*, yet we haven't raised the subscription price since 1995. Starting in 2010, the price will go up minimally to $8 for one year, $15 for two years, and $20 for three years. However, even though the cost is increasing for subscribers, you will actually be getting more. *Connecticut Wildlife* magazine will now be printed in full color, with more photographs and improved layouts. We believe that the magazine is still a great bargain and it will continue to provide wildlife information that is pertinent to our state.

There is an opportunity for current subscribers to extend their subscriptions at the lower rate before the prices increase in 2010. Just fill out the coupon on the next page and send in your payment to have your subscription extended for up to three years. Renewal notices sent out in 2010 will reflect the new price.

Please feel free to contact us if you have any questions about your subscription. You can call the Sessions Woods office (860-675-8130; Monday-Friday, 8:30-4:30) or email katherine.herz@ct.gov.

Nature Drawing Classes for Students & the Public

School groups and the general public have the opportunity to attend "Nature Drawing" classes at the Wildlife Division's Sessions Woods Conservation Center in Burlington. Artist Judy Bird will teach Nature Drawing to small groups (25-50 students), coupled with a wildlife-related presentation by the Division's Outreach Unit staff. There is no charge for this program as long as funding is available. If you are a teacher and would like to enhance your science and/or art curriculum with a guided program at Sessions Woods, please contact Natural Resource Educator Laura Rogers-Castro (laura.rogers-castro@ct.gov or 860-675-8130).

A **"Nature Walk and Drawing Workshop"** will be held for the general public at Sessions Woods on Saturday, February 6, 2010, from 1:00 to 3:00 p.m. (Snow date is February 7). Pre-registration is required for this free program. (Call 860-675-8130, Monday through Friday, from 8:30 AM-4:30 PM.) Sessions Woods is located at 341 Milford Street (Route 69) in Burlington.

"Bears" Coming to a Library Near You

What is it about bears that attract a crowd? Ask Master Wildlife Conservationist Felicia Ortner if she has the answer. Felicia has spent the past year traveling throughout the state presenting programs on black bears and transporting a tabletop display board about bear management from one Connecticut library to another. Over 30 libraries have hosted bear programs and the display board since the beginning of 2009.

The tabletop display board was purchased by the Friends of Sessions Woods. Wildlife Division Outreach Program staff designed the display. It features photos and results of bear research conducted by the Furbearer Program over the past several years. Libraries in Connecticut are able to show the display for two weeks. Demand from the various libraries throughout the state has been keeping Felicia busy. Interest in bears never seems to wane. The Division receives numerous requests for black bear presentations throughout the year. Having a skilled presenter and bear enthusiast in Felicia has proven to be very helpful in getting the Division's science-based information out to the public. The Division would like to extend its appreciation to Felicia for all her efforts with this initiative.

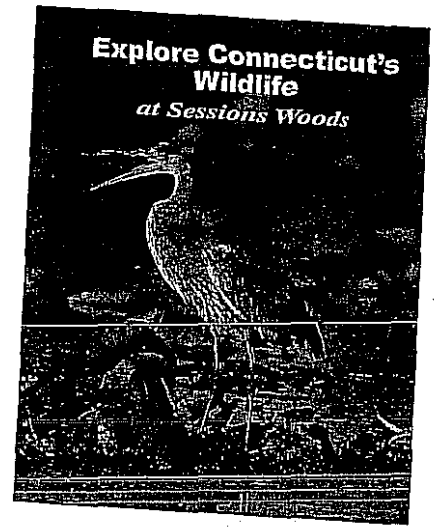
Laura Rogers-Castro, Outreach Program

Become a Master Wildlife Conservationist

The next Master Wildlife Conservationist Program (MWCP) training program for adults is slated to begin in late March 2010 and will continue into early May. This free program consists of 40 hours of classroom study on topics such as the history of wildlife conservation; ecological principles; population ecology; interpretation; wildlife management; nuisance wildlife; and wetland restoration. Most of the classes are held on weekdays at the Wildlife Division's Sessions Woods Conservation Education Center in Burlington.

Once candidates complete the classes and pass the final exam, the Division asks that they perform 40 hours of volunteer service during the next year and 20 hours each subsequent year.

If you think you have the time and commitment to assist the Division as a Master Wildlife Conservationist, contact Laura Rogers-Castro (860-675-8130; laura.rogers-castro@ct.gov) to obtain an application packet. Candidates will be selected by mid-January.



Two Special Gifts from Newman's Own

The Friends of Sessions Woods has been fortunate to receive two grants over the past two years from the Newman's Own Foundation. Each grant supports the efforts of the Wildlife Division's Outreach Program by providing funding for educational programs and publications. Newman's Own, Inc., was founded by the late actor and philanthropist Paul Newman. The company produces items such as salad dressings, popcorn, salsa, and pasta sauces. Newman's Own Foundation donates all net royalties and profits from the sale of these products, after taxes, for educational and charitable purposes. Paul Newman and the Foundation have given over $280 million to thousands of charities worldwide since 1982. The Friends of Sessions Woods was invited to submit a grant proposal from a past Friends board member. Newman's Own Foundation only accepts grant proposals from invited applicants.

The first grant, received in 2008, was a $5,000 gift to provide funding for printing a wildlife activity booklet for children called *Exploring Connecticut's Wildlife at Sessions Woods* (see the May/June 2009 issue of *Connecticut Wildlife*). To date, over 2,100 booklets have been provided to various schools, libraries, Scout groups, and Nature Centers throughout the state. The 2008 gift also included a "transportation fund" to be used by inner city schools to pay for bus transportation to Sessions Woods for a guided program. Three schools from the Hartford area have used the transportation funding for field trips to Sessions Woods.

The second grant, received earlier in 2009, is a $7,500 gift to reprint the wildlife activity booklet; enhance the "transportation fund;" and provide funding for a series of "Nature Drawing" classes with Artist Judy Bird at Sessions Woods. The Friends of Sessions Woods and the Division are very grateful to the Newman's Own Foundation for providing these wonderful opportunities that enhance the educational offerings at Sessions Woods.

Laura Rogers-Castro, Outreach Program

Wildlife Calendar Reminders

Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by calling 860-675-8130 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.

Dec. 30 ..... **Children's Program: Wildlife Tracks & Signs,** starting at 10:00 AM. Learn about wildlife tracks indoors with Natural Resource Educator Laura Rogers-Castro and then head outside for a short walk to look for animal signs. Children also will make a wildlife track to take home. An adult must accompany all children. Meet in the small classroom in the exhibit area at Sessions Woods.

Jan. 20 ..... **Bear Aware,** starting at 6:30 PM. Connecticut is home to several hundred black bears. What do we know about the state's black bear population? Where are most bears seen in Connecticut? What do you do if you see a bear? Join Wildlife Division biologist Paul Rego as he discusses the history of bears in our state, research activities, and current management practices.

Feb. 6 ..... **Nature Walk and Drawing Workshop,** 1:00 PM-3:00 PM. Natural Resources Educator Laura Rogers-Castro will lead an interpretive walk focusing on Connecticut's wildlife and the conservation of wildlife habitat. Artist Judy Bird will teach a nature drawing class focusing on personal observation and expression of nature. Rain date is February 7.

March 3 ..... **Wildlife Tales,** starting at 6:30 PM. When the European settlers arrived in Connecticut, which mammals did they encounter? How have habitats changed since the first settlers arrived in the 1600s to the present? Are coyotes native to Connecticut? What is the wild turkey and fisher connection? Join Natural Resource Educator Laura Rogers-Castro for this indoor presentation to learn about some of the wildlife species found in Connecticut.

Hunting Season Dates

Sept. 15-Dec. 31 ..... State Land Bowhunting Only Areas

Dec. 9-22 ..... Deer muzzleloader season on state land.

Dec. 9-31 ..... Deer muzzleloader season on private land.

Jan. 15-Feb. 10 ..... Special late Canada goose season in the south zone only.

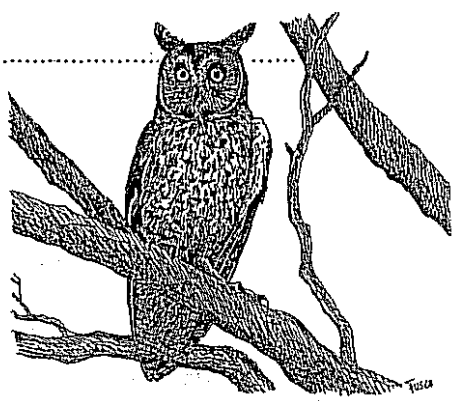
..... Consult the 2009 Connecticut Hunting and Trapping Guide for specific season dates and details. The 2009-2010 Migratory Bird Hunting Guide contains information on duck, goose, woodcock, rail, and snipe seasons. Both guides are available at Wildlife Division offices, town halls, and on the DEP website (www.ct.gov/dep/hunting). The 2010 Connecticut Hunting and Trapping Guide will be available by mid-December.

Shepaug Bald Eagle Observation Area

The Shepaug Bald Eagle Observation Area, in Southbury, will be open to the public on Wednesdays, Saturdays, and Sundays, from December 26, 2009, through March 17, 2010, from 9:00 AM to 1:00 PM — strictly by advance reservation. All individuals and groups wishing to visit the site to view eagles must make a reservation for a particular date, as there will be a limited number of visitors allowed per open day.

Beginning on December 8, 2009, reservations can be made on Tuesdays through Fridays, from 9:00 AM to 3:00 PM, by calling 1-800-368-8954.

Due to the new system that requires hunters to report their deer harvest via the DEP website or by telephone, a running tally of the 2009 archery deer harvest can be viewed at www.ct.gov/dep/hunting.



Coupon and prices expire on 12/31/2009

Connecticut Wildlife

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MANSFIELD CONSV/INLD WETLANDS
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Virginia creeper berries are an important food source for songbirds like the hermit thrush. The berries ripen in fall and are available into the winter. The hermit thrush changes its diet from mostly insects in summer to a combination of insects and fruits in fall and winter. Persistent winter fruits are important to songbirds that spend the winter in Connecticut.