

## **AGENDA**

Mansfield Conservation Commission

Wednesday, February 16, 2011

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. January 19, 2010
- 5. New Business**
  - a. IWA Referrals:
    - W1471 - Savin Foods LLC - 153 N.Eagleville Rd - sewer connection
    - W1472 - White Oak Condominiums - footing drain modifications
  - b. Draft Natchaug River Basin Conservation Compact (memo from Director of Planning)
  - c. Other
- 6. Continuing Business**
  - a. Draft Report: Water Source Study for the Four Corners Area
  - b. Swan Lake Discharge Mirror Lake Dredging and other UConn Drainage Issues
  - c. UConn Agronomy Farm Irrigation Project
  - d. Eagleville Brook Impervious Surface TMDL Project
  - e. UConn Hazardous Waste Transfer Station (no new information)
  - f. Ponde Place Student Housing Project (no new information)
  - g. CL&P "Interstate Reliability Project" (no new information)
  - h. Other
- 7. Communications**
  - a. Minutes
    - Open Space (1/25/10) • PZC (1/19/11 & 2/7/11) • IWA (1/19/11 & 2/7/11)
  - b. Inland Wetland Agent Monthly Activity Report
  - c. Winter 2011 CLEARscapes Newsletter
  - d. January/February CT Wildlife
  - e. CFL News-December 2010
  - f. Other
- 8. Other**
- 9. Future Agendas**
- 10. Adjournment**

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Town of Mansfield  
**CONSERVATION COMMISSION**  
Meeting of 19 January 2011  
Conference B, Audrey P. Beck Building  
**(DRAFT) MINUTES**

*Members present:* Joan Buck (Alt.), Robert Dahn, Peter Drzewiecki, Neil Facchinetti (Alt.), Quentin Kessel, Scott Lehmann, John Silander. *Members absent:* Frank Trainor. *Others present:* John & Suzanne Listro, Joseph Boucher (Towne Engineering), Grant Meitzler (Wetlands Agent).

1. The meeting was **called to order** at 7:32p by Chair Quentin Kessel.
2. The draft **minutes of the 15 December meeting** were approved as written.
3. **IWA referrals.**
  - a. **W1467 (Listro, Candide La)** The planned 12 January IWA field trip to this site was cancelled by snow, and no map was included in the packet for this meeting. Joseph Boucher of Towne Engineering outlined the proposal to the Commission on behalf of the applicants.

John & Suzanne Listro propose to split off, from their two lots near the intersection of Candide La and Stearns Rd, a third lot fronting on Candide La. The driveway would snake between wetlands along the east edge of this lot, cross an old bulldozed ditch between the western wetland and another one to the east, and ascend diagonally northwest up a slope (11% grade, fun in winter) to a house site at the rear of the lot. The application calls for an unpaved driveway, crossing the bulldozed ditch on a culvert, with a level spreader on the slope beyond to disperse runoff into the wetland below. Conservation easements (comprising about 44% of total area) are proposed for the wetlands on the three lots. After some discussion, the Commission agreed on the following **motion** (Buck, Facchinetti; all in favor save Dahn and Drzewiecki, who abstained to avoid appearance of a conflict of interest):

In view of the specified level spreader and pervious surface for the driveway, the Commission foresees no significant impact on wetlands, provided standard erosion controls are in place during construction. Given the driveway's close proximity to wetlands, the Commission hopes that the homeowner will continue to maintain a porous surface.

Mr. Boucher and the Listros left the meeting.

- b. **W1469 (Town of Mansfield, Statutory Regulation Revision)** A change in state statutes requires revision of language in the Town's wetlands regulations concerning conservation or preservation restrictions. The new language makes clear that if a state agency holds such a restriction, the agency must be notified of any permit application concerning land to which it applies (save in certain limited cases). Since the change is mandated, no action by the Commission appears called for.
4. **Storrs Center project.** Some modifications have been proposed for Phase 1 construction,

but they appear to be in line with the general plan for the Storrs Center development, which the Commission has endorsed (cf. comment to PZC, approved 17 April 2007).

**5. Four Corners water supply.** A study of water supply options for the 4-Corners area by Environmental Partners Group concludes that the water supply potential of Cedar Swamp is probably too limited to meet the needs of this area. Its 6 Jan draft report recommends additional wells on the Willimantic River near Mansfield Depot or below Eagleville Lake as the best water-supply option.

**6. Proposed revisions to subdivision regulations.** Changes suggested by the Commission in the draft language regarding preliminary review and shared driveways were largely incorporated into the final proposal. Kessel will communicate the Commission's support of these provisions to the PZC.

**7. Commission vacancy.** Joan Stevenson has resigned, leaving the Commission with one vacancy. Perhaps one of the Alternates would like to fill it. Drzewiecki will ask Kathleen Carlson, a hydrologist at ECSU, if she's interested in joining the Commission as an alternate or member.

**8. Adjourned** at 8:44p. Next meeting: 7:30p, Wednesday, 16 February.

Scott Lehmann, Secretary, 22 January 2011.

APPLICATION FOR PERMIT  
MANSFIELD INLAND WETLANDS AGENCY  
4 SOUTH EAGLEVILLE ROAD, STORRS, CT 06268  
TEL: 860-429-3334 OR 429-3330  
FAX: 860-429-6863

FOR OFFICE USE ONLY

File # 1471  
W \_\_\_\_\_  
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 Savin Foods LLC (John MacNeil)

Mailing Address 77 Sterling Road

East Hartford, CT Zip 06108

Telephone-Home \_\_\_\_\_ Telephone-Business 860 282-0655

**Title and Brief Description of Project**

Sewer Improvements: Installation of sewer pump tank and force main connection to

UConn force main. Closure of existing septic systems.

Location of Project 153 North Eagleville Road

Intended Start Date March 2011

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

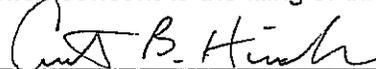
Name Pesaros LLC

Mailing Address 795 Stafford Road

Storrs, CT Zip 06268

Telephone-Home 860-487-0880 Telephone-Business 860-429-3341

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

Signature  date 1-24-11

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

Install sewer pump tank and associated force main connection to UConn force main running along north side of North Eagleville Road. Tank and piping installation located within 150 ft upland review area. Excavation and trenching located in existing paved parking areas.

- 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

0 SF of wetland disturbance

590 SF of upland disturbance area on-site

600 SF of upland disturbance area off-site

- 3) Describe the type of materials you are using for the project:

Ductile iron force main, fiberglass pump tank, and concrete grease trap.

- a) include **type** of material used as fill or to be excavated Pipe bedding & excavated soil  
b) include **volume** of material to be filled or excavated 250 CY

- 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).

Hay bales and pavement cleaning as needed during trenching.

**Part D - Site Description**

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

Flat paved parking areas.



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 \_\_\_ 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.)

\_\_\_ \$1,000. \_\_\_ \$750. \_\_\_ \$500. \_\_\_ \$250.  \$125. \_\_\_ \$100. \_\_\_ \$50. \_\_\_ \$25.

\$30 State DEP Fee (\$60 State DEP fee)

*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.**

Applicant's Signature

Date

1-24-2011

**Mark H. Sullivan**  
**Land Surveying and Environmental Consulting, LLC**

30 Pleasant View Cove  
Lisbon, CT 06351

Phone (860) 376-8525  
Fax (860) 376-3855

January 12, 2011

Mr. John R. MacNeil  
Construction Manager  
Aldin Associates  
77 Sterling Road  
P.O. Box 280404  
East Hartford, CT 06128-0405

Re: Wetland Investigation, 153 North Eagleville Road, Storrs, CT

Dear Mr. MacNeil,

Per your request, I conducted an on-site soil investigation on the property located at 153 North Eagleville Road in Storrs, Connecticut. This soil investigation was performed for the purpose of identifying those soil types that are defined as wetlands by the Connecticut General Statute, Public Act 155. This legislation defines wetlands as ".....any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soil Survey, as may be amended from time to time....." and watercourses as ".....rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water, natural or artificial, public or private....." This investigation was performed on January 11, 2011. No inland wetlands or watercourses were observed on the subject property. The limits of watercourses proximate to the site across the roadways to the west and north were delineated with consecutively numbered blue and pink surveyors flagging numbered WL-1 through WL-6 and WL-1A through WL-12A respectively (See enclosed sketch).

The identification of soil on this site was based on field observations and the guidelines at the National Cooperative Soil Survey Program. The wetlands identified and delineated adjacent to this site are subject to Connecticut Inland Wetlands and Watercourses legislation, as implemented by the local Inland Wetlands and Watercourses Commission.

If you have any questions, or if I can be of any further assistance, please do not hesitate to contact me.

Sincerely,



Mark H. Sullivan, L.S.  
Soil Scientist

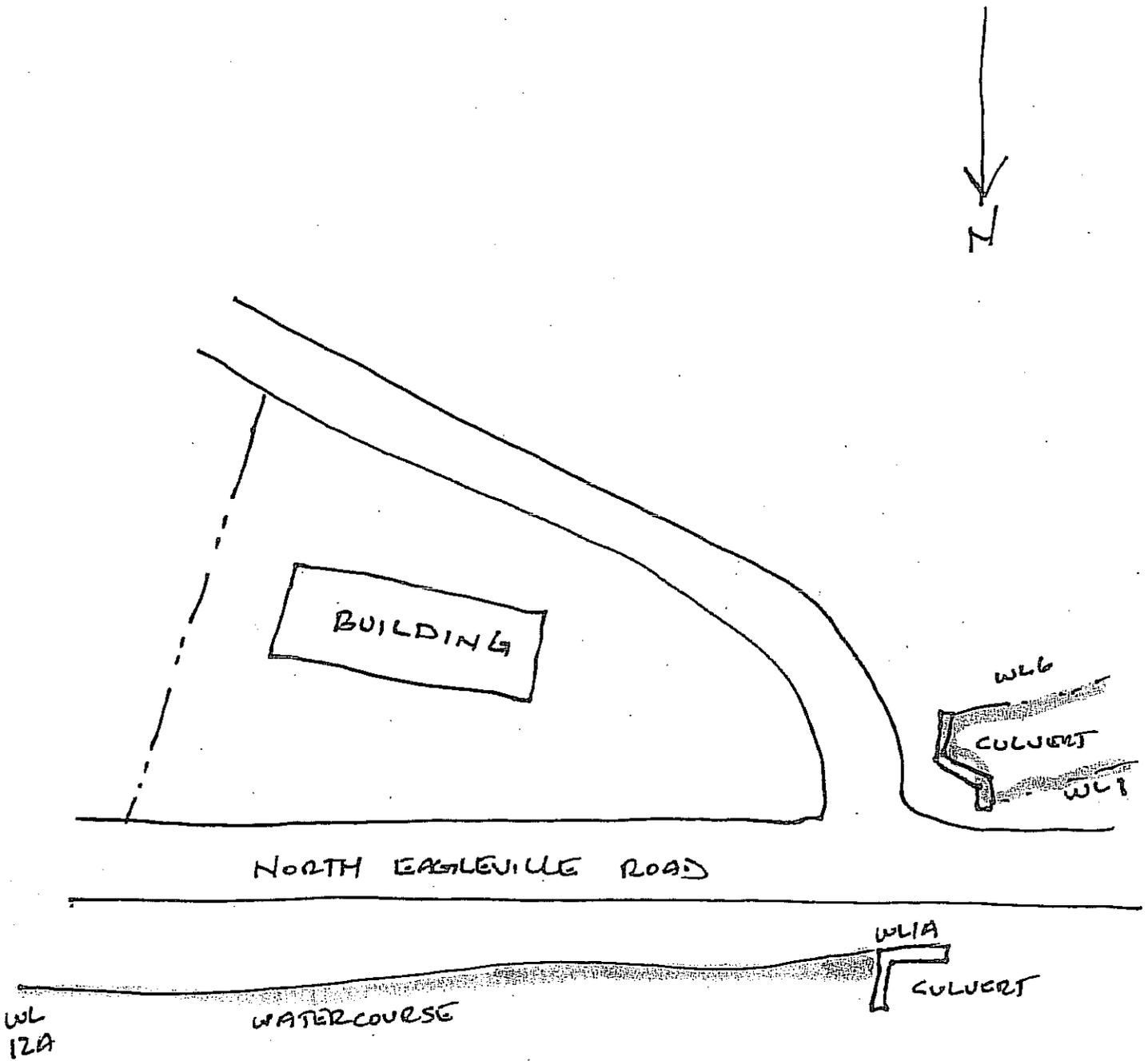
SKETCH OF WETLAND

DELINEATION

153 NORTH EAGLEVILLE ROAD

STORRS

1/11/2011



NOT TO SCALE

W1472

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 # W1420 modif  
W \_\_\_\_\_  
Fee Paid 185 (rebate 135)  
Official Date of Receipt \_\_\_\_\_

MODIFICATION OF PERMIT

*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 White Oak Condominiums

Mailing Address c/o White & Katzman Management, Att: Adam White

111 Roberts Street, Suite G1 Zip 06108  
East Hartford, CT

Telephone-Home \_\_\_\_\_ Telephone-Business 860-291-8777

Title and Brief Description of Project

Drainage plan for Building #4 White Oak Condominium

Drainage improvements to prevent water damage within units

Location of Project Building #4 - White Oak Condominiums

Intended Start Date ASAP

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)



**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.

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**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 3-31-2010 revised to 11-04-10

3) Zone Classification RAR-90

4) Is your property in a flood zone?  Yes  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

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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 x 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 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.)

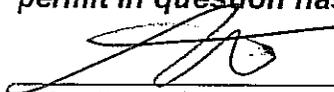
**Part L - Filing Fee**

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

~~\_\_\_ \$365. \_\_\_ \$110. \_\_\_ \$60. \_\_\_ \$25~~ *modification \$50*

*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.**

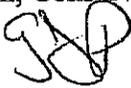
  
\_\_\_\_\_  
Applicant's Signature

*1/25/11*  
\_\_\_\_\_  
Date

**TOWN OF MANSFIELD  
OFFICE OF PLANNING AND DEVELOPMENT**

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GREGORY J. PADICK, DIRECTOR OF PLANNING

Memo to: Mansfield Planning and Zoning Commission, Conservation Commission  
From: Gregory Padick, Director of Planning   
Date: February 3, 2011  
Re: Draft Natchaug River Basin Conservation Compact

Over the past few years a group of individuals, including representatives from municipalities; federal, state and regional agencies; and conservation and land use organizations; have been meeting to study and plan for land use activities within the Natchaug River drainage basin. Mansfield representatives include: Q. Kessel, Conservation Commission Chairman; L. Hultgren, Town Engineer/Director of Public Works; D. Burchsted, Naubesatuck Watershed Council; S. Westa, Green Valley Institute; P. Bresnaham, UConn Water Resources Institute; M. Reich of the Willimantic River Alliance; and myself. Our work has not yet finished and future efforts will focus on best management practices for public works departments, model land use regulations and public education.

The attached draft compact is now being finalized and will soon be distributed to the Chief elected officials within the Natchaug River drainage basin for review and hopefully, endorsement. The goal is to have every Town in the basin support the compact by April. Before presenting the compact to the Mansfield Town Council, it is considered appropriate to seek the support of the Planning and Zoning Commission and Conservation Commission. It is recommended that the draft compact be reviewed and if considered acceptable, a motion to recommend approval by the Town Council would be appropriate.

DRAFT

## The Natchaug River Basin Conservation Compact

**We, the undersigned chief elected officials, on behalf of our municipalities, recognize that:**

1. The sparkling rivers and expansive forests of the Natchaug River Basin are a treasure in The Last Green Valley, respected and valued by people within the basin and beyond. The eight towns in the watershed share a common interest in working to preserve the quality of the streams, their interconnected corridors and natural areas, and the basin that encompasses them;
2. The Fenton, Mount Hope and Natchaug Rivers and their tributaries are officially designated state greenways of Connecticut, identified by the watershed communities for their natural, historic and cultural importance;
3. The basin contains a rich diversity of plants and animals in its forests and streams and supplies drinking water to over 65,000 people. The Natchaug River is recognized for its outstanding water quality and the basin contributes remarkably clean water downstream to the Thames River and Long Island Sound; and
4. The ecological health of the watershed is vital to the economic livelihood, physical and social well-being of those who live in, work in and visit our communities. It determines the quality of our drinking water, enhances property values, provides protection from storms and floods, offers recreation and education opportunities, and is integral to sustaining our quality of life.

**Furthermore, we understand that:**

1. Management of land and water uses throughout the eight watershed communities is key to sustaining watershed health. Therefore, municipal policies that support wise land use decisions and best management practices are essential;
2. Clean air and water, flood security and ample recreational opportunities provided by a well managed watershed are essential for maintaining public health and welfare; and
3. A healthy watershed ecosystem is consistent with each municipality's goals of promoting a vibrant community, preserving town character, fostering ecological integrity, maintaining public health and safety and nurturing sustainable economic growth.

**Therefore, the towns of the Natchaug River Basin enter into this voluntary compact that acknowledges their commitment to work cooperatively to balance conservation and growth by:**

1. Protecting and restoring the natural resources of the watershed;
2. Reviewing land use regulations and municipal practices and adapting them to be compatible with the goals of this conservation compact;
3. Supporting efforts to link and maintain ecologically viable habitats and rural landscapes; and
4. Ensuring the long-term environmental health, vitality and security of the watershed to enhance the social and economic strength of our communities.

**Mansfield Open Space Preservation Committee**  
Draft Minutes of January 25, 2010 meeting (postponed from January 18)

Members present: Jim Morrow (chair), Vicky Wetherell, Ken Feathers, Michael Allison, Susan Westa.

1. Meeting was called to order at 7:35.
2. Minutes of the December 21 2010 meeting were approved.
3. Opportunity for Public Comment: none present.

**4. New Business**

The committee discussed possible open space initiatives and information resources that could be useful as background material.

**5. Old Business**

- Proposed revisions to subdivision regulations – The committee reviewed the final draft of their comment on the proposed regulations, which has been submitted to PZC for a February 7 public hearing.
- Penner property – The committee reviewed comments from the December meeting and their recommendation, which has been forwarded to the Town Council.

6. Meeting adjourned at 9:10.

7. Next meeting on February 15, 2011.

Respectfully submitted,  
Vicky Wetherell, acting secretary

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## MINUTES

MANSFIELD PLANNING AND ZONING COMMISSION  
Regular Meeting  
(scheduled for 1/18/11 but postponed until 1/19/11 due to snow storm)  
Wednesday, January 19, 2011  
Council Chamber, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, G. Lewis  
Members absent: P. Plante, B. Pociask, B. Ryan  
Alternates present: F. Loxsom, K. Rawn, V. Stearns-Ward  
Staff Present: Gregory J. Padick, Director of Planning, Curt Hirsch, Zoning Agent

Chairman Favretti called the meeting to order at 7:20 p.m. and appointed Loxsom, Rawn and Stearns-Ward to act in members' absence.

### **Minutes:**

1-03-11 - Hall MOVED, Rawn seconded, to approve the 1/3/11 minutes as written. MOTION PASSED UNANIMOUSLY. Beal noted that he listened to the recording of the meeting.

### **Continued Public Hearing:**

#### **Application to amend the Zoning Regulations, Article VII, Section P, Uses Permitted in the Planned Business-5 Zone (proposed addition of Veterinary Hospitals) W. Ernst, applicant, PZC File # 1294**

Chairman Favretti opened the continued public hearing at 7:21 p.m. Members present were Favretti, Beal, Goodwin, Hall, Holt, Lewis, and alternates Loxsom, Rawn and Stearns-Ward who were appointed to act. Padick read into the record a 1-5-11 communications received from WINCOG Regional Planning Agency.

Favretti noted no comments or questions from the Commission or the public. Holt MOVED, Hall seconded, to close the Public Hearing at 7:24 p.m. MOTION PASSED UNANIMOUSLY.

Hall MOVED, Holt seconded, to approve the application of Wendy Ernst, (File #1294), to amend Article VII, Section P.2. of the Zoning Regulations to add as a new permitted use in the Planned Business-5 (PB-5) zone "Veterinary Hospitals provided potential noise impacts are addressed in association with the required special permit application", as submitted to the Commission and heard at Public Hearings on January 3 and January 19, 2011. A copy of the subject regulation shall be attached to the Minutes of this meeting, and this amendment shall be effective as of February 1, 2011. Reasons for approval include:

1. The revision is considered acceptably worded and suitably coordinated with related zoning provisions. The proposed wording has been found legally acceptable by the Town Attorney.
2. The subject PB-5 zone contains a number of parcels that are considered potential sites for a veterinary hospital. Mansfield's Special Permit approval process will ensure that potential land use impacts will be addressed.
3. The revision is considered to be consistent with Plan of Conservation & Development goals and objectives and the provisions of Article I of the Zoning Regulations. The revision could promote economic development in one of the Town's limited "Planned Development Areas".

MOTION PASSED UNANIMOUSLY.

### **Zoning Agent's Report:**

Hirsch noted a citation hearing was held regarding the \$2,700 in fines at the Hall site. No decision has been made at this time, but one is expected prior to the next PZC meeting.

**Old Business:**

**1. Consideration of Action, Proposed revision to the Zoning Regulations as noted above, PZC File #1294**

See approved motion above.

**2. Special Permit Modification Request, Proposed Commercial/Residential Mixed Use on Dog Lane. Storrs Center Alliance, LLC, applicant, PZC File #1246-3**

Padick noted the 1-13-11 report from G. Padick, Director of Planning; a 1-13-11 report from G. Meitzler, Assistant Town Engineer; and a 1-13-11 report from J. Jackman, Fire Marshal.

Attorney Tom Cody of Robinson & Cole, Andy Graves and Geoff Fitzgerald of BL Companies, Macon Toledano of Storrs Center Alliance, Tom Trubiana of EDR, and Howard Kaufman of Leyland Alliance, were present to answer questions from the Commission or the public.

Trubiana reviewed the plan for the multi-family housing part of the project, emphasizing that they will be appealing to a broad spectrum of residents.

Holt suggested some interior design changes to make the apartments more appealing and user-friendly, and questioned subletting controls.

Favretti questioned Andy Graves about the conflict between parking and traffic on the north side of the DL-1 building and suggested changes to eliminate this conflict.

Favretti noted no further comments or questions from the Commission or the public.

Beal MOVED, Rawn seconded, that the PZC Chairman and Zoning Agent be authorized to approve the modification request of Storrs Center Alliance, LLC, for building and site improvements on Dog Lane as depicted on plans dated December 21, 2010 as prepared by BL Companies and as described in other application submissions, subject to the following conditions:

1. All applicable conditions contained in the PZC's 7/5/06 Special Permit approval, including but not limited to conditions 2,5,6,7 and 8, shall remain in effect and be addressed in association with the issuance of a Zoning Permit.
2. The site plan revisions cited in the Director of Planning's 1/13/11 report shall be addressed on final plans submitted for Zoning Permit approval.
3. Storefront signage and lighting improvements shall require subsequent PZC review and approval.
4. No work shall begin until a Zoning Permit is issued.

This approval authorizes the proposed automobile repairers use at the subject Dog Lane site and the use of an existing Bishop Center parking area for the subject mixed use project.

MOTION PASSED with all in favor except Hall who was opposed.

**3. 3-Lot Re-Subdivision Application (1 New lot), Property on Candide Lane and Stearns Road, J. Listro o/a, File #1296**

Tabled pending 2/7/11 Public Hearing.

**4. Special Permit Application, proposed Sale of Alcoholic Liquor at Randy's Wooster Street Pizza, 1232 Storrs Rd, PZC File #1295**

Tabled pending 2/7/11 Public Hearing.

**5. 12/1/10 Draft Revisions to the Subdivision Regulations, PZC File #907-34**

Tabled pending 2/7/11 Public Hearing.

**New Business:**

**1. Zoning Permit Review: Storrs Center Project Phases 1A and 1B**

Padick reviewed his 1-13-11 memo and highlighted the key components. Cynthia van Zelm, Executive Director of the Mansfield Downtown Partnership, invited member to attend the January 25<sup>th</sup> Planning and Design Meeting at the Downtown Partnership office.

**2. Draft Report: Water Source Study for the Four Corners Area**

The draft report was noted.

**Reports from Officers and Committees:**

Chairman Favretti noted a 1/26/11 Regulatory Review Committee meeting at 1:00 p.m.

**Adjournment:**

Chairman Favretti declared the meeting adjourned at 9:00 p.m.

Respectfully submitted,

Katherine Holt, Secretary

PAGE  
BREAK

MINUTES  
MANSFIELD INLAND WETLANDS AGENCY  
Special Meeting  
Wednesday, January 19, 2011  
Council Chambers, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, G. Lewis,  
Members absent: P. Plante, B. Pociask, B. Ryan  
Alternates present: F. Loxsom, K. Rawn, V. Stearns-Ward  
Staff present: G. Meitzler (Wetlands Agent)

Chairman Favretti called the meeting to order at 7:00 p.m. Alternates Loxsom, Rawn and Stearns-Ward were appointed to act in member's absence.

W1468 - Storrs Center Alliance LLC - Modification Request-Phase 1A & 1B

Attorney Tom Cody, Robinson & Cole; Andy Graves, BL Companies; Geoff Fitzgerald, BL Companies; Macon Toledano, Storrs Center Alliance; and Howard Kaufman, Leyland Alliance, were present representing the applicant. Fitzgerald discussed Grant's memo and noted that the hand dug retention swale around the garage is still in place and a more detailed plan including it will be submitted when final plans are presented at that stage of the project. Holt asked who's responsibility it is to maintain the catch basins. Fitzgerald responded that during construction it would be the responsibility of the contractors and upon acceptance of the road it would become the Town's responsibility.

Holt MOVED, Stearns-Ward seconded, that the Inland Wetlands Agency hereby modifies its 10/1/07 license granted to Storrs Center Alliance, LLC, by accepting, as updated plans for Phases 1A and 1B of the Storrs Center project, a series of site plans dated 12/29/10 as prepared by BL Companies. These plans have been determined to be consistent with the Agency's 10/1/07 approval. This modification approval is subject to the following conditions:

1. Except for a minor revision to Condition #1 (noted below), all of the conditions cited in the Agency's 10/1/07 license approval shall remain in effect. Whereas the open space areas will now be deeded to the Town, Condition #1 shall be revised to replace the word "construction" with "occupancy". This condition is designed to ensure a timely dedication and monumentation of the open space area.
2. Upon preparation, design plans for the garage/intermodal center and associated streets, drainage and other site improvements shall be submitted to the Agency for review and a subsequent determination that the plans are consistent with the 10/1/07 license approval. It is expected that the "hand dug retention" area east of the garage will be included in the garage plans.
3. All future Storrs Center Phases shall be submitted to the Agency for a determination that the plans are consistent with Agency's 10/1/07 license approval.

MOTION PASSED UNANIMOUSLY.

Adjournment:

Favretti declared the meeting adjourned at 7:18 p.m.

Respectfully submitted,

Katherine Holt, Secretary

PAGE  
BREAK

Memorandum:

January 26, 2011

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.

**W1445 - Chernushek - application for gravel removal from site**

- 11.30.09: Packet of information representing submissions by Mr. Chernushek, Mr. DeSiato and myself is in this agenda packet as Mr. Chernushek's request for modification.
- 12.29.09: Preparation of required information for PZC special permit application is in progress. Tabling any action until the February 1, 2010 meeting is recommended.
- 1.12.10: 65 day extension of time received.

- 2.18.10: No new information has been received.
- 2.25.10: This application has been **withdrawn**.
- 6.30.10: As viewed from the adjacent property, the upstream and downstream areas have grown to a decent protected surface. I did not see indication of sediment movement.
- 10.26.10: A sale of the East portion of the Chernushek property has been in negotiation.
- 12.27.10: The property exchange has been completed. The owner is now the neighboring property owner Bernie Brodin. He has indicated his intention to stabilize the area as weather permits.

**Mansfield Auto Parts - Route 32**

- 12.28.09: There are two cars that need to be moved. Mr. Bednarczyk indicates their payloader is down for repairs and the cars will be moved as soon as it is repaired.
- 1.27.10: No change - the payloader is apart with parts on order to complete repairs. It is of 1986 vintage and finding parts is a major proposition.
- 2.18.10: Same - they are in the process of rebuilding the engine on the payloader.
- 3.30.10: Same - Mr. Bednarczyk indicates a continuing problem finding engine parts.
- 4.13.10: Owner indicates the payloader is operating again.
- 4.15.10: Owner indicates he will have the cars moved this week.
- 4.23.10: No vehicles are within 25' of wetlands.**
- 5.17.10: Inspection - no vehicles are within 25' of wetlands.
- 6.02.10: Inspection - no vehicles are within 25' of wetlands.
- 6.23.10: Inspection - no vehicles are within 25' of wetlands.
- 7.15.10: Inspection - no vehicles are within 25' of wetlands.
- 9.01.10: Inspection - no vehicles are within 25' of wetlands.  
Mr. Bednarczyk has started removing tires from the westerly part of his site using roll-off containers. With this arrangement a moderately steady rate of removal of the tires should be possible to maintain until the tires are completely removed.
- 9.28.10: Inspection - no vehicles are within 25' of wetlands.  
Tire removal is continuing with 1 to 2 roll-off containers being removed per month.
- 10.07.10: Inspection - no vehicles are within 25' of wetlands.  
Tire removal has been continuing.
- 11.29.10: Inspection - no vehicles are within 25' of wetlands.  
Owner has been trucking cars for crushing with 6 tires per vehicle. He indicates 3 cars per day or 18 tires per day. The actual number is probably lower than 18.
- 12.23.10: Inspection - no vehicles are within 25' of wetlands.
- 1.07.11: Inspection - no vehicles are within 25' of wetlands.
- 1.20.11: Vehicle storage areas are snowed in and inaccessible.
- 1.26.11: Snows remain, although some clearing has been done I could not count on being able to get out.

## In This Issue

**Research**  
Riparian Corridors & Agricultural Fields & Soils Studies

**Outreach**  
Stormwater in the City

**Program Updates**  
Read about recent projects, webinars, websites and other updates.

# CLEARSCAPES



## Outreach

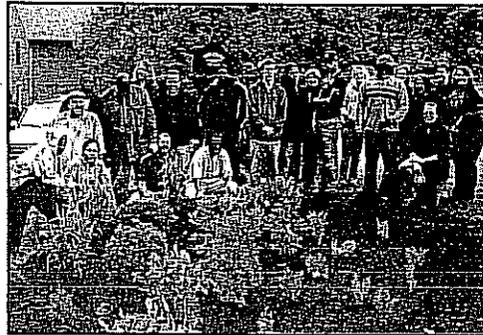
### Stormwater in the City

#### Rain Gardens Blossom in the Urban Landscape

Stormwater management is a tough nut to crack for any community. In recent years, an increasing number of Connecticut towns have been turning to *low impact development* (LID) techniques, which largely rely on soil and vegetation to minimize or eliminate water resource impacts from new development. But does LID—the focus of which has been largely on suburban settings—have anything to offer our state’s cities?

The Center’s signature outreach program, *Nonpoint Education for Municipal Officials* (NEMO), has been working with Connecticut communities for almost two decades (see *Program Updates*, page 3). For the past two years, much of this work has been in some of the state’s largest urban centers. Stormwater management in these areas presents a number of challenges, the most obvious of which is that they are largely covered with “impervious surfaces” like cement, asphalt and rooftops that greatly contribute to the increased quantity and decreased quality of runoff. In addition, most of our larger urban centers are

in some phase of separating and/or mitigating combined sewer systems handling both sanitary sewage and stormwater. Thus cities like Bridgeport and Hartford are looking for any strategy that can help to



Participants of NEMO’s two-day rain garden workshop after completing a new rain garden at Bridgeport’s Beardsley Zoo.

reduce the amount of runoff getting into their combined sewers.

LID can help, but it must be used within a different framework in our urban centers. **Restorative redevelopment** replaces preventative planning as the framework for action, with an emphasis on things like stream restoration, enhancement of the

... continued on pg 2

## Research

### Riparian Areas and Agricultural Lands

Two new additions to the **Connecticut’s Changing Landscape** (CCL) Project have been added to the Center website. The CCL tracks changes to the state’s land cover over time, beginning in 1985 and running to 2006 (an update to 2010 is planned for this spring). In addition to the basic land cover change and CLEAR’s forest fragmentation analysis, the Center has added studies on land cover change in riparian (streamside) corridors, and over prime and important agricultural soils. An extremely brief summary of some of the highlights of the research follows. Readers interested in these studies are encouraged to visit the project websites, where research summaries and data, maps and charts are available.

**Riparian corridors** are known to be environmentally important areas critical to stream stability, pollutant removal, and both aquatic and terrestrial wildlife habitat. These areas are sometimes known as “buffers,” but are not to be confused with the regulatory review zones overseen by local land use commissions. CLEAR looked at land cover change during the 21-year project period for corridors 100 feet and 300 feet to either side of Connecticut’s streams, as determined by the state hydrography (waterways) data layer.

During the 1985–2006 period new development totaled about 5,100 acres in the 100-foot corridor, and about 19,000 acres in the 300-foot corridor. During that

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**ON NATURAL RESOURCES**  
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March 7th  
2011

Details on the web  
[www.ccnr.uconn.edu](http://www.ccnr.uconn.edu)

# Stormwater in the City

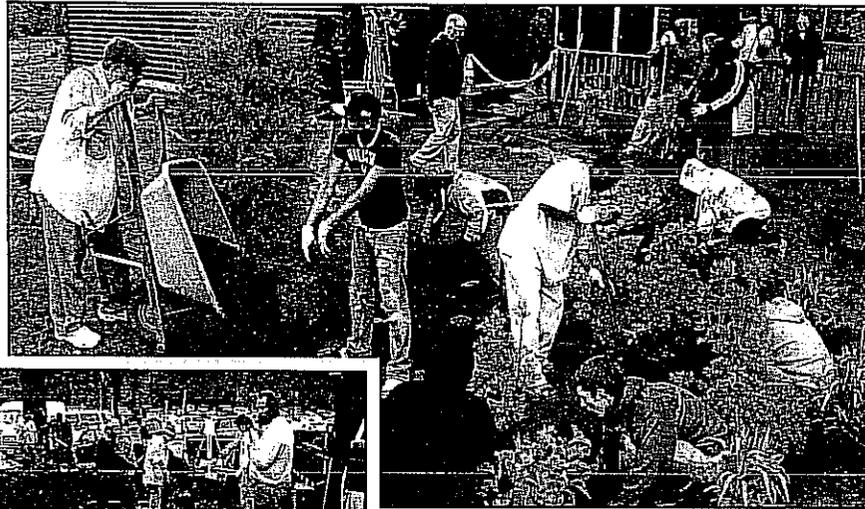
## NEMO Conducts Rain Garden Workshops in Hartford and Bridgeport

...continued from page 1

urban tree canopy, and low impact development “retrofits” installed during renovation and redevelopment of brown fields or existing developed sites. Some common suburban LID elements, such as engineered grass swales for road runoff, are not well suited for the tight confines of the cityscape. However, other LID practices can work well in these settings, like permeable pavements for parking lots and sidewalks, “green street” techniques, and cisterns and vegetated “rain gardens” that receive roof runoff.

Rain gardens are small vegetated depressions that collect runoff from a roof, road or other paved area, allowing infiltration of the runoff into the ground, and in the process also provide some renovation of the water through plant uptake and microbial activity in the soil. Although the first wave of interest in rain gardens has been from homeowners in suburban settings, the small size, relative ease of installation, and low cost of these small “bioretention” areas can be put to good use in the city. Ease of installation, however, does not mean that one can build a rain garden without training. As with all LID practices, proper design, construction and maintenance is key to making these practices work.

In the past six months, led by new NEMO Director Mike Dietz (see page 3), the NEMO program has conducted two rain garden workshops targeted at small contractors in urban areas looking to increase the range of services that they can offer to clients. These workshops combine a day of classroom teaching with a day of in-the-field training that results in the construction of a working rain garden. Two workshops have been conducted—and rain gardens built—in Bridgeport and Hartford. In Bridgeport, NEMO worked with EPA Region One, CT DEP, Rutgers University and Horsley Witten Associates to create a new rain garden at the Beardsley Zoo. The Hartford workshop,



(Above) Participants of NEMO's two-day rain garden workshop plant a new rain garden at Bridgeport's Beardsley Zoo. (Left) Participants of NEMO's second rain garden workshop in downtown Hartford on the grounds of the Classical Magnet School.

just this past November, involved the same cast plus the City of Hartford and Metropolitan District Commission (MDC) as partners. The resultant rain garden is in the downtown area on the grounds of the Classical Magnet School at 85 Woodland Street.

NEMO has also taken the lead in the construction of rain gardens at two educational institutions, where student involvement and the day-to-day visibility of these practices will help to spread the word about LID. Again, the locations were in the Hartford and Bridgeport areas. With CLEAR partner CT Sea Grant in the lead, a rain garden was installed at the Vocational Aquaculture High School in Bridgeport. NEMO also collaborated with Bruce Morton at the Goodwin College in East Hartford to provide training and install another rain garden. At both locations, the rain gardens are placed at very public sites, and will become part of the teaching curriculum for courses on sustainability.

New ways for dealing with stormwater in the city are in their early stages, and the interweaving of LID, smart growth and environmental justice is still evolving. However, there is no doubt that LID has much to offer Connecticut's cities, and the NEMO Program hopes to continue to play a major role in making it happen. ☉

# Program Updates

## ► NEMO Turns 20!

The Nonpoint Education for Municipal Officials (NEMO) Program turns 20 in 2011. When it was first developed in 1991,



NEMO's focus on land use planning and better site design as the principal strategies to protect water resources was

considered heretical, and its use of geospatial technology for outreach was unique. Twenty years later, "impervious surfaces" has entered the general lexicon (well, at least in our circles...) and GIS and remote sensing imagery are a part of everyday life. So, the world has changed, and of course so has NEMO. The program's first decade was spent largely on helping local officials to understand the land use/water resource connection. And, although we will never lose our focus on land use planning, our second decade has been increasingly about helping communities embrace low impact development (LID). As noted in the lead article on page 1, the future of NEMO seems very likely to focus on working in urban communities, as well as continuing its work with as many Connecticut municipalities as we can serve. There is much work to be done, and we're glad that new NEMO Director Mike Dietz is here to lead the charge! For more information contact: Mike Dietz, 860-345-5225, michael.dietz@uconn.edu.

## ► The Land Use Academy

The Land Use Academy is soldiering on, despite the loss of state support and the retirement/ departure of two of its CLEAR-based instruc-



tors. With partial support from our parent College of Agriculture and Natural Resources, CLEAR was able to hire Bruce Hyde, an experienced Connecticut land use planner, to keep the Academy doors open. Our partnership with CT Office and Policy and Management, Office of Responsible Growth continues. At present, we are conducting two full-day basic training



New CLEAR members Mike Dietz, CT NEMO Director (top) and Bruce Hyde, Land Use Academy Director.

courses per year, and are working on development of new courses, including one on affordable housing. The basic training has been revamped and is much more interactive than in years past. The new edition was tested out successfully at the November training, held at Central Connecticut State University (CCSU) in partnership with the CCSU Center for Public Policy and Social Research. In attendance were 77 commissioners from 39 communities. Many thanks to our major partners, the Connecticut Bar Association Planning and Zoning section and our sister CLEAR program

the Green Valley Institute, for their essential contributions of instructional expertise. For more information contact: Bruce Hyde, 860-345-5229, bruce.hyde@uconn.edu.

## ► National NEMO Network

CLEAR's National NEMO Network, a coalition of program in 30 states modeled after the Connecticut NEMO program, held its seventh national conference, NEMO U7, in Portland, ME Sept. 29 – Oct. 1. The conference was very well attended with over 100 registrants from 24 states, representing many diverse organizations



## Websites & Webinars

### 2011 CLEAR Webinar Series

The Center is rolling out a series of one-hour webinars that will cover a wide range of land use planning, land cover research, natural resource protection and geospatial technology topics. Beginning in February we plan to do one webinar a month. (They're free!)

- February 8 - Riparian Corridors
- March 15 - Affordable Housing
- April 19 - Rain Gardens

Visit the website for more information and full schedule: [clear.uconn.edu/webinars/CLEARseries](http://clear.uconn.edu/webinars/CLEARseries).

### CTView.org

The Center, along with MAGIC (UConn's Map and Geographic Information Center) was recently successful at gaining membership to AmericaView, a nationwide program that focuses on satellite remote sensing data and technologies in support of applied research, K-16 education, workforce development and technology transfer. A new website, [ctview.org](http://ctview.org), will soon be completed to promote the access and use of remote sensing imagery in Connecticut. Currently there are 37 states participating in the AmericaView program.

### Impervious Cover TMDL

Connecticut was the first state in the nation to base a Clean Water Act "Total Maximum Daily Load" (TMDL) program not on a specific pollutant, but on impervious cover. The Impervious Cover TMDL Project, a partnership of CT DEP, CLEAR's NEMO Program, UConn and the town of Mansfield, has been working its way through this new approach, and in the process breaking new ground on the use of low impact development practices. The project has an extensive website that can be found at [clear.uconn.edu/projects/tmdl](http://clear.uconn.edu/projects/tmdl).

## Research continued from page 1

### Program Updates

continued from page 3

and national networks. The two primary leaders of NEMO programs, Sea Grant and Extension, both piggy-backed additional meetings on the conference. Conference sessions focused on urban low impact development retrofits, local climate change adaptations, hybrid approaches to land use planning, and innovative approaches to supporting local land use officials.

Learn more about the National NEMO Network at: [nemonet.uconn.edu](http://nemonet.uconn.edu). Follow the Network on Twitter at: [twitter.com/NEMOhub](https://twitter.com/NEMOhub) and/or on Facebook (search for the National NEMO Network).

#### ► The Geospatial Training Program (GTP)

CLEAR's Geospatial Training Program has also suffered a partial loss of staff



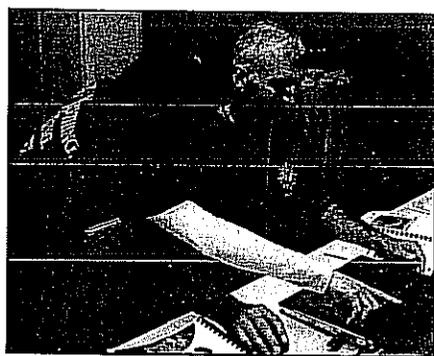
power, but is filling up its dance card with a new national training program funded by the USDA Water Program. The training

focuses on the use of "mashups," a combination of GIS and internet technology

that allows anyone to easily post geographically-specific information via the use of web browsers such as Google Maps and Google Earth. The applications for research, outreach, monitoring and evaluation are virtually endless. As a result of the USDA grant, in

between our Connecticut trainings GTP faculty have been busy traipsing all over North America training Land Grant and Sea Grant audiences on "Mashup Madness" (see photo). For more information contact: Cary Chadwick, 860-345-5216.

[cary.chadwick@uconn.edu](mailto:cary.chadwick@uconn.edu)



GTP's Cary Chadwick leads a geospatial training workshop at the National NEMO Network's 7th NEMO University conference.

period, the percentage change in new development appears to have occurred at a slower rate in the 100-foot corridor than the 300-foot corridor, with both being slower than the rate for the entire state (Figure 1). At the town level, the amount of development in riparian areas was less than that for the overall town, but was also seen to vary closely with the overall town average. More can be found at: [clear.uconn.edu/projects/riparian](http://clear.uconn.edu/projects/riparian).

The **Agricultural Fields and Soils** study looks at land cover change over areas designated by the USDA Natural Resources Conservation Service (NRCS) to have *prime or important* farmland soils ("ag soils"). The CCL project's major land cover categories include developed land, forest, turf/grass, and agricultural fields (derived from satellite imagery).

During the 21-year study period Connecticut lost approximately 31,000 acres of agricultural field overlying ag soils. Forest was by far the most common land cover on ag soils throughout the period, but by 2006 the developed land cover category had replaced the agricultural field category as the second-most common land cover on ag soils.

Figure 2 compares the 2006 land cover

breakdown of the entire state versus that of the land overlying prime or important agricultural soils. As might be expected, important ag soil areas had more of the agricultural fields land cover category than the state as a whole. However, ag soil areas

Study Area	Percent Developed Land 1985	Percent Developed Land 2006	Change in Percent 1985-2006
100 ft corridor	12.7%	14.4%	+1.7%
300 ft corridor	14.5%	16.8%	+2.3%
state, all areas	16.0%	19.0%	+2.9%

Figure 1. Percent of developed land in 100 and 300-foot riparian corridors, compared to state.

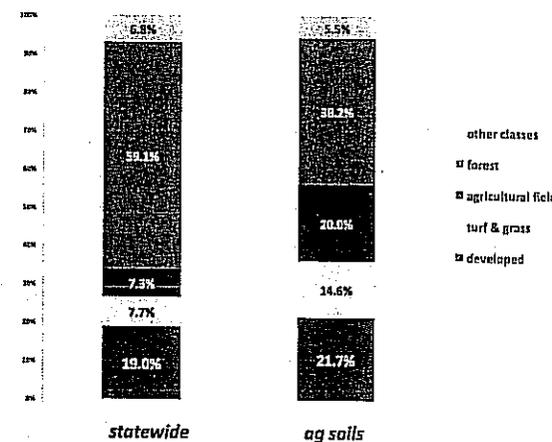


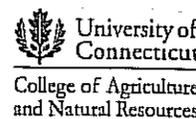
Figure 2. 2006 land cover breakdown over ag soils (right), versus entire state (left).

also had more development, more turf/grass, and less forest than the state overall. This might also be expected, since many soils well suited for agriculture, being relatively flat and well-drained, are also well-suited for development. More can be found at: [clear.uconn.edu/projects/ag](http://clear.uconn.edu/projects/ag).

Contact CLEAR at: University of Connecticut, CES, 1066 Saybrook Road, P.O. Box 70, Haddam, CT 06438 • Phone: (860) 345-4511  
 • Email: [clear@uconn.edu](mailto:clear@uconn.edu) • Web: [clear.uconn.edu](http://clear.uconn.edu)  
 • Editor: Chet Arnold • Designer: Kara Bonsack

The University of Connecticut Center for Land Use Education and Research (CLEAR) provides information, education and assistance to land use decision makers, in support of balancing growth and natural resource protection. CLEAR is a partnership of the Department of Extension and the Department of Natural Resources and the Environment at the College of Agriculture and Natural Resources, and the CT Sea Grant College Program. Support for CLEAR comes from the University of Connecticut and from state and federal grants.

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January/February 2011

# Connecticut Wildlife

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF NATURAL RESOURCES  
DIVISIONS OF WILDLIFE, INLAND & MARINE FISHERIES, AND FORESTRY



# From the Director's Desk



The old saying "time flies when you're having fun" couldn't be more true, at least so in my case. It seems as though it's been a simple matter of days – ok, weeks – since I've joined the wonderful, smart, dedicated, engaging, and somewhat unique staff of the Wildlife Division. But alas it's been some 18 months. Again, time flies . . . In that short time, we've implemented several changes; many small and not obvious to the casual observer, while others have been substantial and overwhelmingly successful, including the 2010 Connecticut Hunting and Fishing Appreciation Day. Another has been the evolution of Connecticut Wildlife, an evolution that will continue throughout the coming year. But first, a brief history of where we've been and then where we plan to go.

In July 1981, the precursor to the magazine was born, and it was called SCOPE. This fledgling, informal newsletter was the brainchild of Paul Herig, a former director of Connecticut's Wildlife Unit (now known as the Wildlife Division). Paul's vision was to provide information to cooperators and sportsmen about wildlife projects and issues.

By 1988, SCOPE had evolved into a 12-page, two-color, bimonthly newsletter with black-and-white photographs. That year Kathy Herz (editor) joined the magazine staff, followed several months later by Paul Fusco (production editor/photographer), and both have been working together on the publication ever since. This talented duo made many improvements to the magazine over the years and eventually the name was changed to Connecticut Wildlife in 1993. Extra pages and new features were added. Distribution increased as marketing efforts were expanded. The most notable increase occurred once subscriptions could be ordered through the DEP sportsmen's licensing system. By 2002, color photographs began to appear in the magazine and, in 2010, we achieved our goal of going full-color.

Now, beginning with this issue, you'll see the next chapter in the life of the magazine unfold. With the support of Bill Hyatt, Chief of the Bureau of Natural Resources, and the Directors of the Inland Fisheries, Marine Fisheries, and Forestry Divisions, the content will expand to include articles and features about fisheries and forest resources and management. To support these broader themes, four pages have been added so that we can continue to provide the wildlife news and information you expect. I hope you will join me in welcoming the magazine's new contributing editors: George Babey (inland fisheries), Penny Howell (marine fisheries), and Chris Martin (forestry).

As we embark on this new adventure, we hope that as loyal readers of Connecticut Wildlife you enjoy what it has become and share your appreciation for the magazine with family and friends. We also encourage comments and suggestions from our readers. Please let me know how we are doing and if there is anything we can do better by contacting us at Connecticut Wildlife, P.O. Box 1550, Burlington, CT 06013, or by E-mail at [dep.ctwildlife@ct.gov](mailto:dep.ctwildlife@ct.gov).

Rick Jacobson, Director – Wildlife Division

## Cover:

An American robin feeding on winterberries during a Connecticut snowstorm highlights the importance of persistent winter food sources for songbirds.

Photo courtesy of Paul J. Fusco

# Connecticut Wildlife

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Wildlife Diversity, Birds, Furbearers, Outreach and Education, Habitat Management, Conservation Education/Firearms Safety, Connecticut Wildlife magazine

Franklin Wildlife Management Area

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Migratory Birds, Deer/Moose, Wild Turkey, Small Game, Wetlands, Habitat and Mosquito Management, Conservation Education/Firearms Safety, Wildlife Diversity

Eastern District Area Headquarters

209 Hebron Road, Marlborough, CT 06447 (860-295-9523)

State Land and Private Land Habitat Management

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Web site: [www.ct.gov/dep/wildlife](http://www.ct.gov/dep/wildlife)

E-mail: [dep.ctwildlife@ct.gov](mailto:dep.ctwildlife@ct.gov)

Phone: 860-675-8130



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.



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# Sand Dunes Stabilized at Harkness State Park

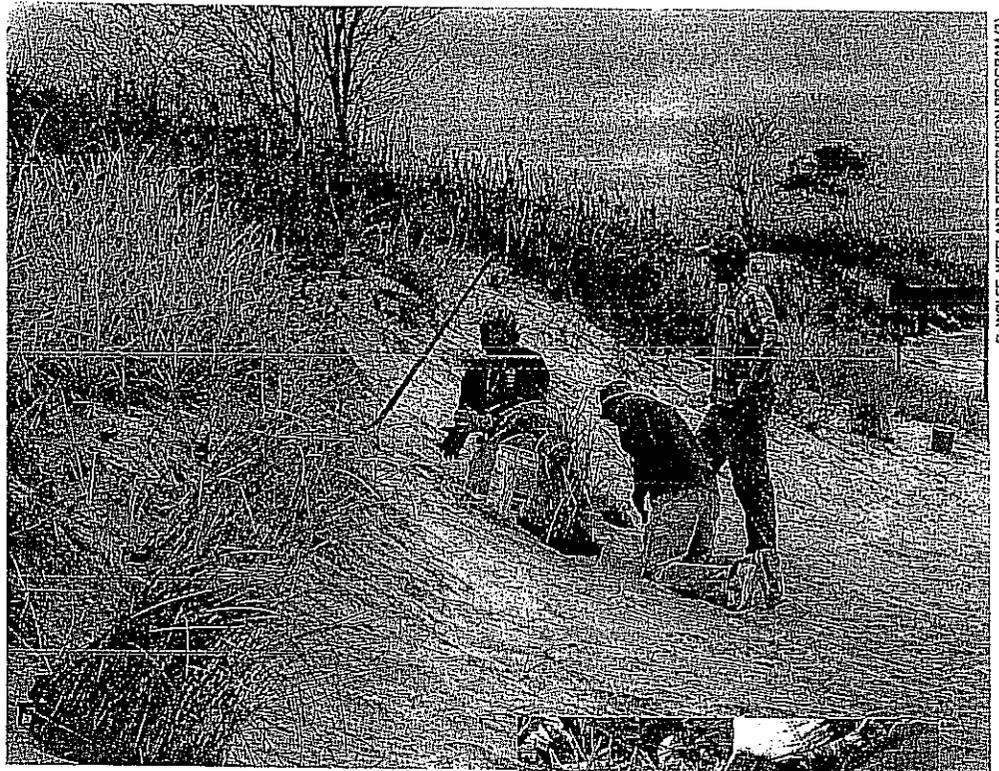
Written by Paul Rothbart

Coastal habitat loss and degradation were identified as priority concerns in Connecticut's Comprehensive Wildlife Conservation Strategy. Degradation of coastal habitat occurs when people hike in fragile dunes and non-native invasive plants, including multiflora rose, bittersweet, and barberry, out compete native species (e.g., Virginia rose, bayberry, and butterfly weed).

To address these problems, the Wildlife Division applied for a Wildlife Habitat Incentives Program (WHIP) grant through the USDA Natural Resources Conservation Service to provide funding for stabilizing and enhancing sand dune habitat at Harkness State Park, in Waterford. Approximately 1,000 feet of dune habitat was targeted. Activities have included mowing and herbiciding to control non-native plants like Japanese knotweed, autumn olive, Japanese barberry, Asiatic bitter-sweet, and multiflora rose.

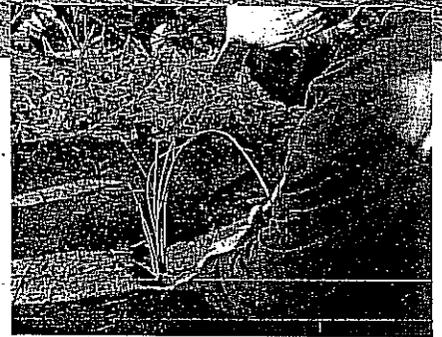
After two years of controlling non-native invasive plants at the park, staff from the Wildlife Division and Harkness State Park worked cooperatively to plant 6,000 native seedlings and grasses, forbs, and shrubs.

The dune area was planted with 5,000 two-inch plugs of American beachgrass (*Ammophila breviligulata*). This grass species is native to eastern North America, where it grows on sand dunes along the coasts of the Atlantic Ocean and Great Lakes. Beachgrass thrives under conditions of shifting sand and high winds. It is a dune-building grass that



R. WOLFE, WETLAND RESTORATION PROGRAM (3)

American beachgrass is native to eastern North America, where it grows on sand dunes along the coasts of the Atlantic Ocean and Great Lakes. It thrives under conditions of shifting sand and high winds, and it helps build the first line of sand dunes along the coast.



builds the first line of sand dunes along the coast. Beachgrass is less vigorous in stabilized sand, and is only found infrequently further inland.

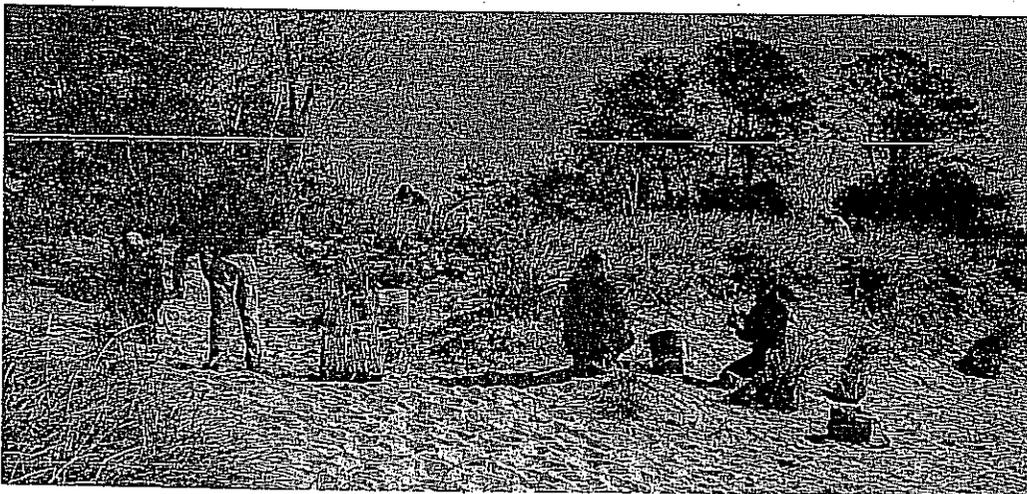
The more upland zone in back of the dune was planted with a combination of plugs and containerized species, including Virginia rose, shadbush, bayberry, New York aster, switchgrass,

and coreopsis. A fence was installed to minimize human disturbance to the area while allowing plants to become well established. These plantings will assist in erosion stabilization on the fragile dune habitat and also increase plant diversity, benefiting a variety of birds and insect pollinators.

The Wildlife Division would like to thank the Connecticut Waterfowl Association for its support of this project.

*Paul Rothbart is the supervisor of the Wildlife Division's Habitat Management Program*

DEP staff planting 5,000 American beachgrass plugs to restore fragile sand dune habitat at Harkness State Park in Waterford.

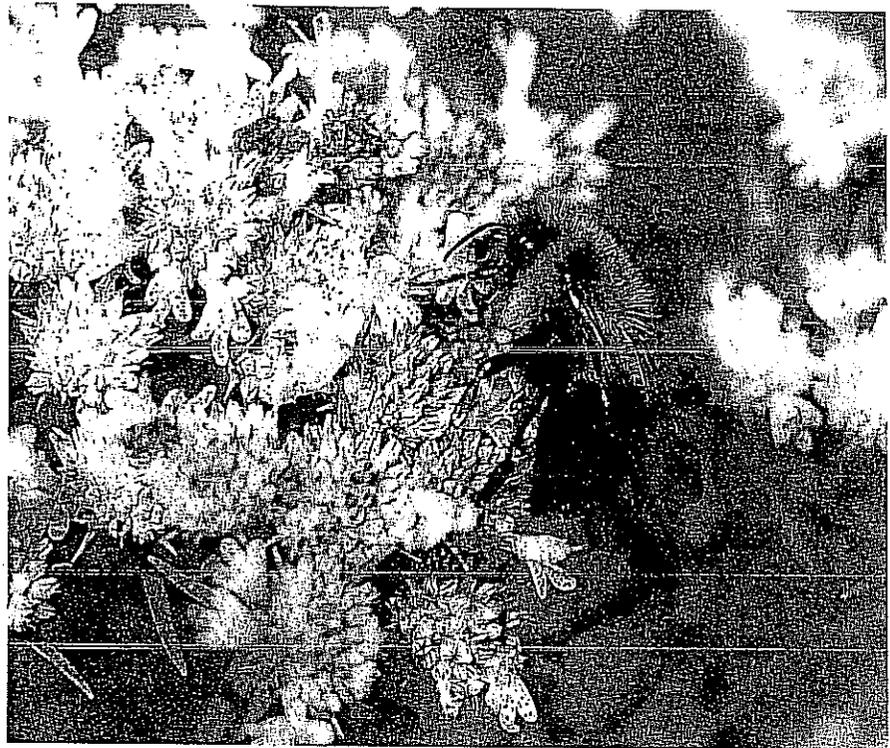


# Five Bee Species Added to CT's Endangered Species List

Written by Laura Saucier

Most people may not realize that bees are keystone species of terrestrial ecosystems. The ecological service bees provide, through pollination, produces fruits and seeds, thus supporting entire food webs. Biologists noted a decline in the distribution and abundance of many common wild bumble bee species in the late 1990s. About the same time this decline was noticed by scientists, there was a disease outbreak in commercially raised western bumble bees which were used for greenhouse pollination purposes. The possibility of an escaped pathogen from commercially raised bees affecting wild bumble bees is currently being studied. While the reason for the decline is not yet clear, bees, like other wildlife species, are susceptible to habitat fragmentation and degradation by pollution, pesticides, and other environmental stressors. These stressors can take a toll on a species' ability to adapt to its changing environment.

There was a need to compile and update any existing information about bees in Connecticut because it was spread out among many institutions. With State Wildlife Grant funding, Dr. David Wagner of the University of Connecticut was able to compile, survey, and update the Wildlife Division's information on



P. J. FUSCO (2)

these important animals. Because of his work, we have a clearer picture of which bees need protection under Connecticut's Endangered Species Act. Connecticut has become the first state to add bees to its Endangered, Threatened and Special Concern Species List with the 2010 update to the list.

## Bees Added to CT's List

**Special Concern:** Affable, or rusty-patched, bumble bee (*Bombus affinis*), which was once common east of the Mississippi, has only been found in small numbers and in isolated pockets throughout its former range. The last time this species was documented in Connecticut was in the early 1990s.

**Special Concern:** Yellowbanded bumble bee (*Bombus terricola*) was once commonly found east of the Rocky Mountains south to the Appalachian Mountains. It also has only been found in isolated pockets and has not been seen in Connecticut for over 10 years.

**Special Concern (historic):** Ashton's bumblebee, or Ashton's cuckoo bee (*Bombus ashtoni*), parasitizes nests of the rusty-patched bumble bee. This bee is rare because the host that it

evolved with is rare. It has not been documented in Connecticut since the 1960s.

**Special Concern:** The fringed loosestrife oil-bee (*Macropis ciliata*) has an interesting life history as it is a specialist on *Lysimachia* (loosestrife) plants. This bee collects and combines pollen and floral oil from loosestrife to provide food for its larvae. This collected oil also is used to line the brood cells of underground nests. This oil-bee was most recently found in eastern Connecticut in 2006.

**Endangered:** Macropis cuckoo (*Epeoloides pilosula*) is a nest parasite of the fringed loosestrife oil-bee. It is rare because its host is rare and it has been considered one of the rarest bees in North America. The Macropis cuckoo has only been found twice in the past 50 years, in Nova Scotia in 2002 and in eastern Connecticut in 2006. Little is known about its life history.

More information on native pollinators is on the Xerces Society for Invertebrate Conservation Web site at [www.xerces.org](http://www.xerces.org).

Laura Saucier is a technician for the Division's Wildlife Diversity Program



State Wildlife Grants



Bumble bees are typically the first bees to emerge from winter hibernation and to be seen at early flowering plants in spring.

# The Timber Rattlesnake: A Modern Day Legend

Written by Dennis Quinn

Surprise, quickly followed by fear, is the typical response when Connecticut residents learn about their neighbor, the timber rattlesnake. This snake's reputation is tangled in myth, legend, and folklore, rendering them ruthless killers that are better off dead in the eyes of most. Although a tough reputation to abate, it is both unjust and undeserved as timber rattlesnakes are docile and unlikely to impose harm on people.

The timber rattlesnake is a large snake that measures up to 4.5 feet in length, although larger individuals are not uncommon. It occurs in two color phases, "yellow" and "dark," both with dark brown or black banding. Banding patterns are more pronounced on yellow phase individuals because of the stark contrast to the lighter, yellowish background color. Facial pits, used to detect heat radiation from prey, are located between the nostril and eye on either side of the head. Distinctive only to the rattlesnake is the "rattle" at the base of the tail composed of loosely interlocking, keratinized segments, which cause the distinctive rattlesnake buzzing sound when vibrated.

*Although great strides to protect timber rattlesnakes have occurred in the past 20 years, continuous efforts are needed to effectively protect and manage the remaining stronghold populations.*

In Connecticut, timber rattlesnakes reside in northwest Litchfield, southeastern Hartford, and northern Middlesex Counties. Recent radio-tracking studies conducted in Connecticut by the DEP, coupled with years of population monitoring within the state's forests, have uncovered a vast amount of knowledge regarding the biology, movements, and threats to rattlesnake populations.

Spending winters in communal den sites located on rocky hillsides, where upwards of 100 or more snakes can reside, rattlesnakes start to emerge in early spring to soak up the warm daytime sun.



D. QUINN / DEP WILDLIFE DIVISION

This yellow phase timber rattlesnake basks in the early spring sun prior to dispersing to its summer foraging grounds.

As springtime temperatures rise, rattlesnakes begin dispersing into forested foraging grounds where they spend the summer feeding primarily on small rodents and birds. During this period, snakes will travel distances in excess of two miles from den sites, using a home range area of 500 acres. As fall approaches, the snakes start moving back to the denning areas for their long winter's rest.

Pregnant (gravid) females use habitats differently than males and non-gravid females. Gravid females typically remain sedentary within open rocky habitats, called rookeries, usually within one mile of denning areas. There, they bask in the warm summer sun to aid in the proper development of young. Gravid females give live birth in early fall to an average of 10 young. Although the young are born capable of self survival, the female will remain with them for one to two weeks post-birth, leading the young by scent trail back to the winter den site.

An endangered species in Connecticut, the timber rattlesnake continues to face threats to long-term survival in the state. As urbanization encroaches and suitable rattlesnake habitat continues to diminish, contact with humans increases, with potentially deadly consequences for the snakes. With development comes

habitat fragmentation, increasing the likelihood of snakes crossing roads to reach their summer foraging grounds and leading to higher road mortality. Rattlesnakes are subject to large scale collection pressures for illegal live animal trade, especially in early spring and fall when the snakes congregate around den areas. Once depleted, populations are extremely vulnerable to extirpation, primarily due to the rattlesnake's low reproductive rate. With a single female taking as long as 10 years to reach sexual maturity and only reproducing once every three to four years, it could take years for a population to recover.

Although great strides to protect timber rattlesnakes have occurred in the past 20 years, continuous efforts are needed to effectively protect and manage the remaining stronghold populations. Connecticut's rattlesnake populations have a chance to survive into the future with continued education of the public, local municipalities, and state agencies; creative land use planning at town and state levels; increased protection of important rattlesnake habitat; and continued law enforcement efforts to prevent poaching.

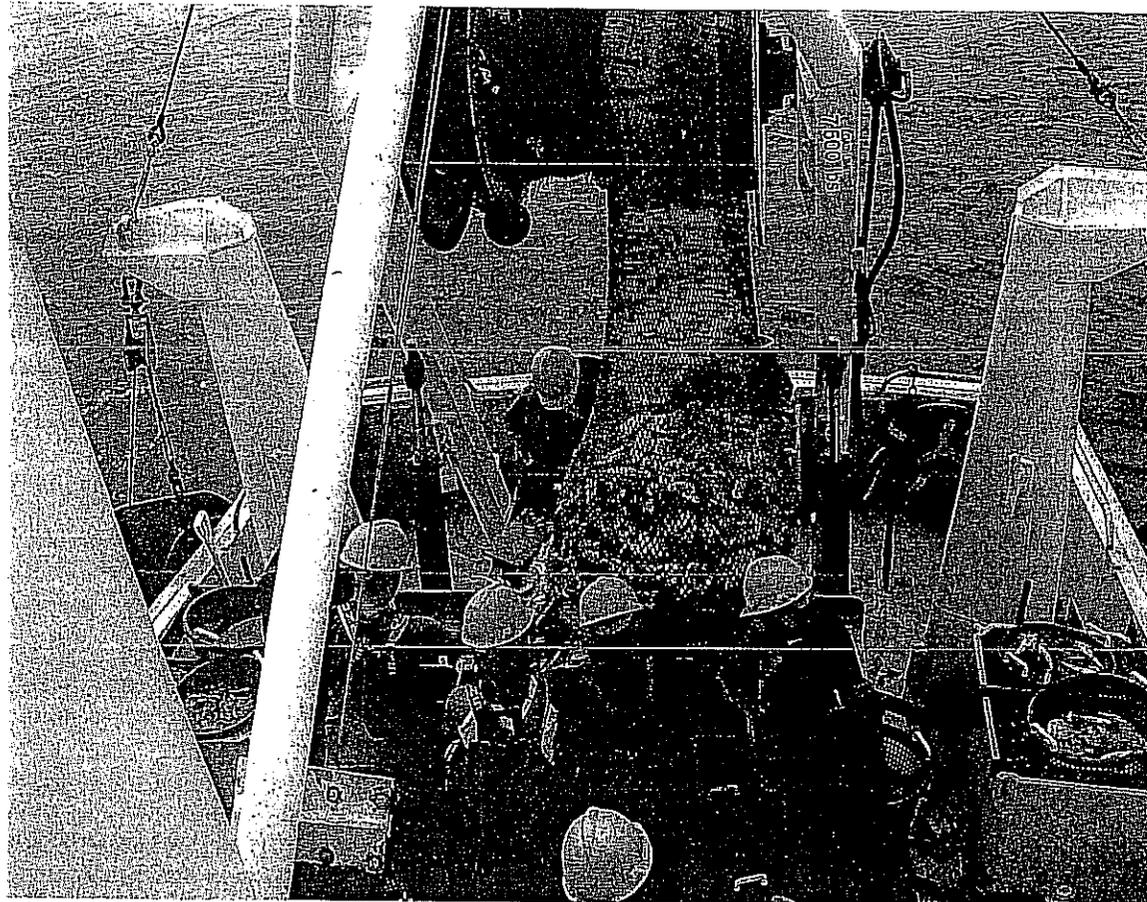
*Dennis Quinn is the owner of CTHerpConsultant, LLC*

# Long Island Sound – CT’s Unique Biological Highway

Written by Penny Howell; Photos provided by DEP Marine Fisheries Division

The waters of Long Island Sound provide nursery and feeding grounds for over 100 species of finfish. The wide variety of bottom types, water depths, currents, and tidal ranges found in different parts of the Sound create a myriad of habitats which attract this large array of species. There is a species adapted to take advantage of conditions in every mud patch and rock pile, in a few feet of water to more than 120 feet. The Sound, and the rivers that feed into it, make up an estuary – one of the most unique ecosystems on the planet.

In 1987, the U.S. Congress designated Long Island Sound an *Estuary of National Significance* because of its high biodiversity and coinciding function as an “urban sea” and well-used travel route.



Crew of the research vessel *John Dempsey* beginning to sort the catch of scup, flounder, and other fish species. The entire catch is documented right down to algae and litter. All animals are sorted into holding tanks so they can be counted, weighed, and released. Some fish are taken back to the DEP Lab in Old Lyme to determine age, monitor for disease or contaminants, and record food habits and other biological data.

## Traffic Monitoring

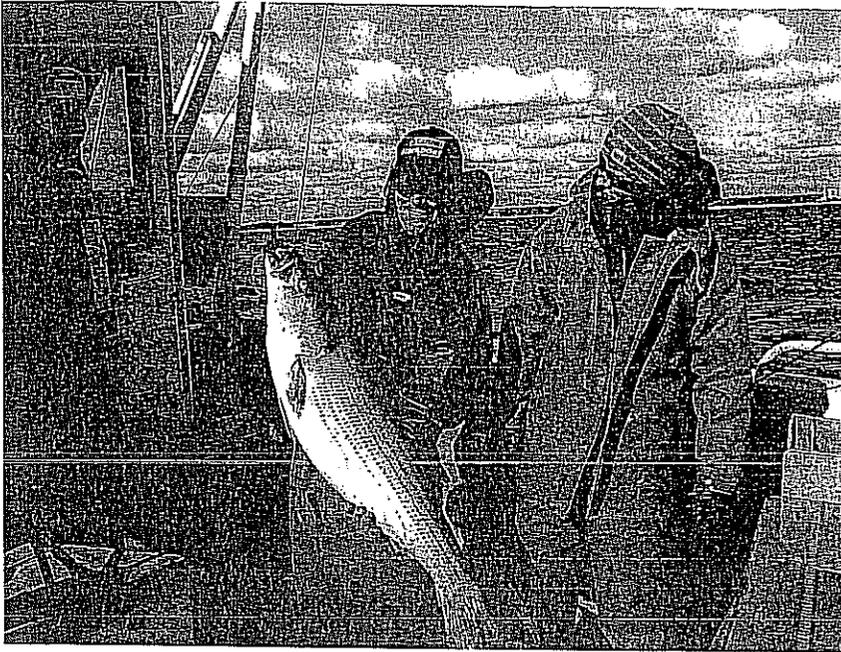
The DEP Marine Fisheries Division oversees the marine resources in the state’s waters (except shellfish aquaculture) and safeguards the health of these populations – or “biological traffic” – that uses our local estuarine “superhighway.” Although portions of the Sound’s finfish community have been documented for centuries in commercial and recreational catch records, as well as in localized research studies by academic institutions, the most comprehensive data comes from the DEP Long Island Sound Trawl Survey (LISTS). This survey began in 1984 and covers Connecticut and New York waters from the Thames River in the east to waters off Stamford in the west.



The *John Dempsey* crew reeling in the research trawl net after a half-hour sample tow.

## Sampling in Three Dimensions

After a quarter century of standardized bottom trawl sampling, the Survey catch indices have shown that overall abundance of finfish in the Sound has



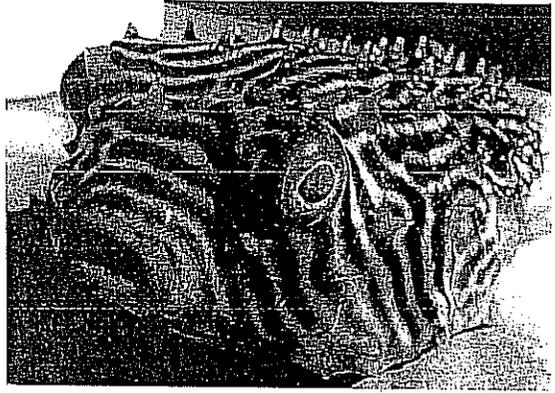
Crew members holding a large striped bass captured during one of the cold spring surveys. The fish was measured, weighed, and released.

stayed remarkably stable. Trawling for three months in spring (April-June) and two months in fall (September-October), the Survey is designed to randomly sample 12 habitats: three bottom types (sand, mud, and transitional between the two) at four 30-foot water depths. Average catch over the time series among these 12 habitat types ranges from 27 fish per sample at deep (greater than 90 feet) sand sites (primarily found mid-Sound west of the mouth of the Connecticut River) up to an average of 99 fish per sample at mud sites in the western basin at mid-depths of 60 to 90 feet. Although the abundance of individual species has gone up and down, this spatial pattern of total abundance has remained fairly constant over 25 years. Despite continuing assaults to Long Island Sound's ecosystem (sewage and industrial discharges, hypoxia, water diversions, loss of buffering wetlands), this important estuary is holding its own as a vibrant and productive finfish nursery and feeding ground.

*Penny Howell is a fisheries biologist with the DEP Marine Fisheries Division and a contributing editor to Connecticut Wildlife magazine*

### *Estuaries Are Special Places*

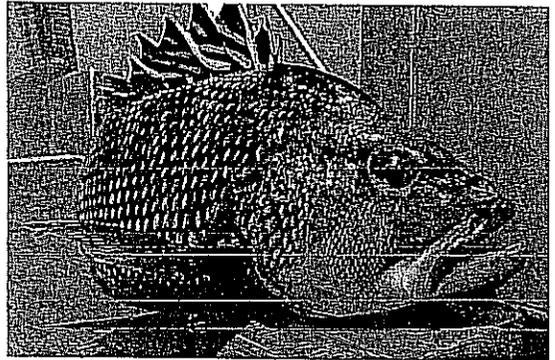
- An estuary is the mixing zone for saltwater from the ocean and freshwater from rivers. This zone is a natural interchange connecting the terrestrial, freshwater, and marine systems. Much of an estuary's biological production is exported out to these adjoining systems.
- Estuaries are rare. When adding up all the "water real estate" on the globe, estuaries cover only two million square kilometers (sq. km), or 0.6% of the total.
- Estuaries are highly productive. When adding up all the biological energy produced on the globe (also known as the Global Energy Budget or GEB); estuaries contribute four percent to the GEB. This may not seem like much compared to the seven percent contributed by coastal seas, 33% contributed by the open oceans, and 56% contributed by agriculture, and temperate and tropical forests on the terrestrial side. However, if energy production is calculated per square kilometer, it only takes one-half million sq. km of an estuary to produce one percent of the GEB, while it takes about five million sq. km of the coastal zone and 10 million sq. km of open ocean to produce the same one percent GEB, making estuaries 20 times more productive per square kilometer than the open ocean.



This striped burr fish, a rare tropical migrant, was captured during a fall survey when the Sound's water is warmest.



A common local spawner, this female winter flounder is the largest captured in the survey.



Black seabass used to be rare in the Sound but now are more commonly captured in the survey and by recreational and commercial fishers.



A close up of this sea raven shows the barbles and spines used for camouflage as the fish swims in kelp beds on the bottom of the Sound. This cold-adapted species is becoming less common in the Sound.

# Why Trees Are Harvested in Connecticut State Forests

Bureau of Natural Resources, Division of Forestry

**A**n often heard comment to the DEP Division of Forestry is that there should be no harvesting of trees in Connecticut. However, the science of sound forest management actually encourages the periodic harvesting of trees to weed out diseased or deformed trees and to make room for the healthiest,

of Connecticut's increasing population.

The Division of Forestry's mission is to promote healthy and high-quality sustainable forests, not to cut trees to obtain the most money. In fact, many times the cost of cutting hundreds of small trees that have no value is absorbed so as to allow more sunlight to reach the ground for seed germination or to achieve a better distribution of tree sizes. In general, DEP foresters will select the least healthy and poorer quality trees for harvesting first, leaving the better quality trees to grow. However, society's huge demand for wood products makes the timber harvested from the state forests valuable. Certified Forest Practitioners bid on the right to cut trees that have been designated for harvest by a DEP Forester. Harvesters are required to comply with standards that minimize adverse environmental impacts, promote safety, and protect Connecticut's woodlands.

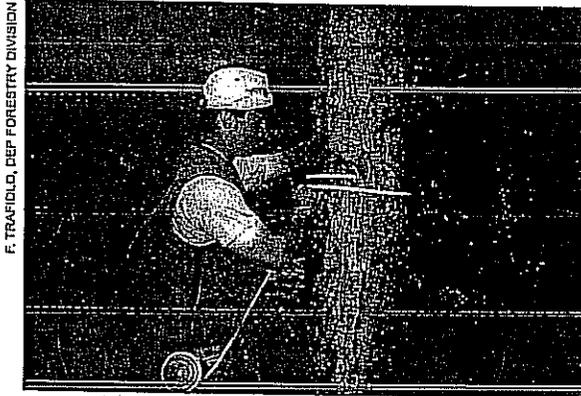
suited their needs. Native Americans burned the forest to improve habitat for game animals, increase berry production, enhance firewood and acorn production, ease travel through the forest, facilitate hunting, and clear land for agriculture. By their frequent and widespread use of fire, Native Americans were responsible for creating and maintaining diversity throughout the forests of the region.

Connecticut's landscape has changed dramatically over the centuries. Natural weather events, fire, and human appetite for forest products have altered forests. European settlers cleared forests to provide areas for livestock grazing and wood to warm their homes and fuel their industries. They continued clearing the forest until the early 1800s – to a point where nearly 80% of Connecticut had been transformed into agricultural fields. It wasn't until the late 1800s, when Connecticut's farmers began to abandon their farms to move west or to seek steady employment in the cities, that the forest began to reclaim the countryside. Today, a dramatically different forest has returned. Today's forest is less diverse in age, species, and cover types – and yet, this is an era when Connecticut residents look to the forests to fulfill a spectrum of social and economic needs unprecedented in history.

## Promoting Healthy, Sustainable State Forests

A forester's work is based on science and designed to imitate, in a controlled way, the natural and Native American disturbances that created the healthy and diverse forests that greeted the Europeans. The forester seeks a careful balance because too much disturbance and too little disturbance are both detrimental to forest diversity.

To start, DEP foresters carefully identify and map the different stands of trees found in each state forest. Then, the foresters examine each stand, collecting scientific data that are later analyzed and used in management planning. Long-term forest management plans are developed for each state forest, incorporating measures to address the needs of wildlife, water quality, recreation, and the sustainable production of forest products. Foresters then implement the plans by overseeing commercial harvests, prescribed fires, or



DEP Forester David Irvin collects stand data, such as diameter at breast height (dbh), during a forest inventory.

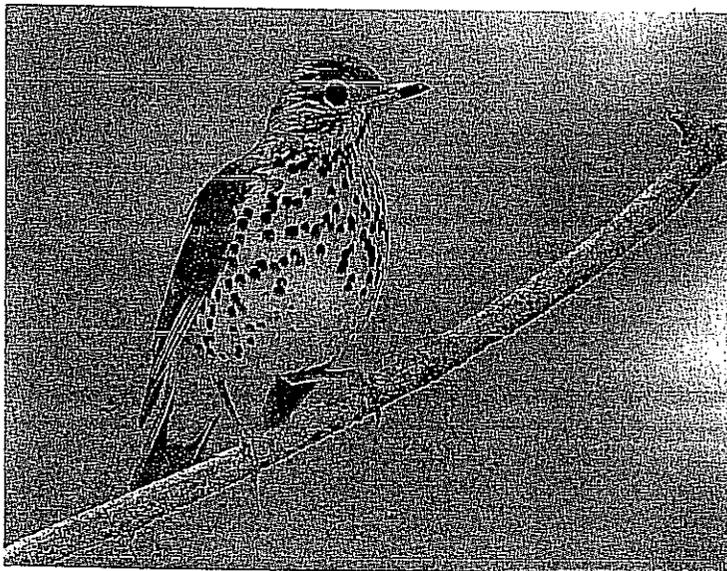
most vigorous trees to grow. A healthy, vigorous forest is better able to ward off diseases, defoliating insects, and the effects of natural events, such as fires and hurricanes. A well-managed forest provides a variety of habitat conditions and contributes to biological diversity, while being resilient enough to handle the recreational and forest product demands

## History of Connecticut's Forests

When the first European settlers arrived in what was to be the Connecticut colony, the forest they encountered was quite different from what you might imagine. It was not a sea of mature, old-growth forest. There were grasslands

along the coast and major rivers; areas of woodlands with open, park-like understories; and mature forest interrupted by patches of young and middle-aged forest growth. This patchwork provided specialized habitats for a wide variety of native plant and animal species.

What accounted for this variety of habitats? From the time the Native Americans returned after the glacial period, they used fire to create a forest that better



Mature forests in Connecticut provide nesting habitat for the wood thrush, a bird of conservation concern across its range. Wood thrushes use the interior, as well as the edges, of deciduous and mixed forests, often near water.

other techniques to shape the forest.

Forest management plans may call for a harvest in a forest stand to thin overcrowded trees, salvage trees dying from disease or insect infestations, or regenerate a new forest stand. Foresters often prescribe management that favors trees best suited for the site. For instance, white pine thrives in sand and gravel soils, while sugar maple prefers fertile, moist soils.

Seedlings of different tree species germinate and grow best with various amounts of sunlight. To take advantage of the specific requirements of each tree species, foresters will employ particular management systems to encourage certain tree species.

**Even-aged System:** This system is used to develop a forest stand of uniform age. It works well if the forester wants to favor trees that need a lot of direct sunlight to germinate and grow, such as oaks and aspen. Two different cutting methods are used in even-aged management, clearcutting and shelterwood cuts. Occasionally a clearcut is prescribed in a stand with sufficient, existing, advanced regeneration to stimulate rapid seedling growth by removing the overstory in one harvest. These harvests may exceed 10 acres in size, but typically the patches are five to 10 acres. In shelterwood cuts, all trees are removed from the stand, but in two or three phases rather than all at once. This method encourages the development of new seedlings in partial shade until they are ready to be "released" to grow in full sunlight. The trees left standing in the early stages of a shelterwood cut are an "insurance policy" that provides a valuable source of seed. The goal is to regenerate one percent of the even-aged areas each year.

**Uneven-aged System:** This system relies on "selection cutting" to create, over time, a forest stand with at least three distinct age classes. Selection cutting means that individual trees or individual groups of trees are harvested to create small openings in the forest canopy. These small openings allow sunlight to reach the forest floor and stimulate seed germination. However, the crowns of the surrounding trees close the openings within a few years. This system favors tree species that are tolerant of shade, such as sugar maple, yellow birch, and beech.

Forest stands that are being thinned or managed with an uneven-aged system may only experience some harvesting



P. J. FUSCO

As part of the DEP Division of Forestry's mission to promote healthy and high-quality sustainable forests, trees are cut to restore the forest landscape and the diversity of forest life, as well as to provide society with forest products.

every 25 or so years.

Over the centuries, Connecticut's forests have demonstrated how well they can rebound after being harvested. Most planned harvests on state forests are designed to take advantage of the abundance of naturally-occurring seeds and the aggressive capacity of the forest to rapidly regenerate on its own. Planting seedlings is usually not successful due to heavy browsing by deer and competition from naturally-occurring seedlings and stump sprouts. Planting can be useful if there is no desirable seed source on site, but it is done only on a limited basis.

Some areas within each state forest will never be harvested because of certain factors, such as inaccessibility, severe topography, or unique plant/animal communities.

### *Challenges for the Future*

A century ago, Connecticut's first foresters began to work with forests that had been devastated by overcutting and widespread wildfire. Through the efforts of those foresters and an involved public, substantial headway was made in creating the State Forest System in the 20th century. Today, DEP foresters face many new challenges that threaten the future of healthy Connecticut forests and a diverse wildlife population. Those 21st Century challenges include:

- Loss of continuous habitat due to development (fragmentation);

- Lack of new generations of oak (due to deer damage, absence of fire, and harvesting practices on private land);
- Loss of conifer habitat because of infestations of the hemlock woolly adelgid;
- A general scarcity of early successional, or young-forest, habitat; and
- Increasing populations of invasive, exotic plants.

DEP confronts these new challenges through active forest and wildlife management programs that are based on the latest research, certifying forestry professionals, informing the public, educating private woodland owners, and increasing land acquisition for open space.

Foresters with the Division of Forestry believe that providing forest products from local forests in a manner that sustains ecological, societal, and economic values is part of their ethical responsibility as stewards for the future. "Sustainability" of our forests means not harvesting and using more than can be grown. It ensures there will always be a forest to use and enjoy. If not supplied locally, our demand for forest products is transferred to other places around the world where environmentally sound forest practices may not always be followed.

*This article was prepared by the Division of Forestry. To learn more about forestry in Connecticut, visit the DEP's Web site at [www.ct.gov/dep/forestry](http://www.ct.gov/dep/forestry).*

# Native Wildflower Meadow at Belding WMA

Written by Jane Seymour

A wildflower meadow planted in 2008 with seeds of native species has become beautifully established over the past two years at the Belding Wildlife Management Area in Vernon. Native wildflowers bloomed from spring



A bumble bee visits a purple coneflower in the Belding WMA wildflower meadow.

PHOTO BY J. SEYMOUR, HABITAT MANAGEMENT PROGRAM

into fall this past year.

With the arrival of spring, lupine filled the meadow, putting on a show of vibrant purple. Lupine is a native plant that provides nectar for a variety of insects, and is also a host plant for the eastern tailed-blue butterfly.

As the lupine went to seed, a variety of summer-blooming wildflowers took over the show. Wild bergamot, purple coneflower, and ox-eye sunflower attracted a variety of bees, butterflies, and other insects. Great-spangled fritillaries, red admirals, monarchs, tiger swallowtails, and eastern

tailed-blues were some of the butterflies seen feeding in the meadow. The meadow also provided nesting cover for red-winged blackbirds and song sparrows.

By September, New England aster took over the field as summer blooms turned to seed. Once the wildflowers go to seed, they become an important food source for seed-eating birds, such as American goldfinch, indigo bunting, and song sparrow. The seeds also are eaten by meadow jumping mice and meadow voles. The voles, in turn, become food for red-tailed hawks that hunt the wildflower meadow and adjacent fields.

## Establish Your Own Wildflower Meadow

There has been increased interest in cultivating wildflower meadows in recent years. When establishing your own wildflower meadow, select native plants that will provide nectar sources throughout the season. Seed mixes are available that also include native grasses, which provide nesting cover and food for wildlife. (Check the seed mix to be sure it contains native species.) Wildflower

meadows require some maintenance, but less than a lawn. A meadow will eventually grow into a forest through natural succession. Therefore, woody plants must be weeded out to maintain the meadow habitat. This can be done by hand in small areas as tree and shrub seedlings begin to sprout. Meadow habitat is maintained in larger areas through occasional mowing or burning, usually every two or three years and after the nesting season.

If you have questions about establishing a wildflower meadow, send an E-mail to [dep.belding@ct.gov](mailto:dep.belding@ct.gov).

Jane Seymour is a technician for the Wildlife Division's State Lands Management Program.



New England aster (top right) and lupine (above) are some of the native flowers that bloom in the wildflower meadow at Belding Wildlife Management Area in Vernon.

# The Race to Save Bats Continues

A silent invader moves rapidly through the darkness, reaching out to ensnare its peacefully sleeping victim. What may sound like the plot of the newest scary movie is actually a real conservation horror story occurring right here in Connecticut. In less than four years, white-nose syndrome (WNS) has killed thousands of Connecticut's bats and more than a million bats throughout the Northeast. It has spread to over a dozen states and two Canadian provinces, leaving a trail of ecological havoc in its wake.

Bats are a key part of healthy ecosystems, providing tremendous economic benefits to agriculture and forestry through their insect control abilities. The DEP, other state wildlife agencies in the Northeast, the U.S. Fish and Wildlife Service (USFWS), and many other academic and conservation partners are working in concert to find solutions and stop this unparalleled mortality.

Several bat species that call Connecticut home have been affected by white-nose syndrome. Known as "cave bats," they include little brown, northern long-eared, tri-colored (pipistrelle), big brown, and the Indiana bat (a state and federally endangered species.) The DEP has been actively involved with investigating the impact of WNS since 2007.

## The Good News

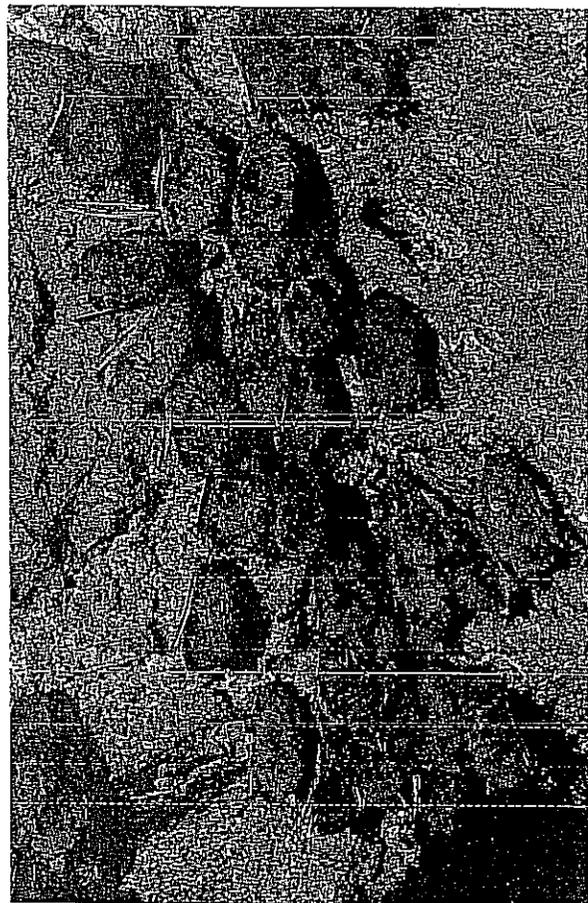
The USFWS, through its Preventing Extinction Program, awarded \$1.6 million this past October to six new projects aimed at detailed studies of the fungus associated with WNS. Through the federal Competitive State Wildlife Grant Program, the DEP and its counterparts in the Northeast received funding to address the growing problem of WNS from a regional perspective. These 11 partner states were recently awarded \$200,000 from the grant to provide funding for research projects that will target urgent research needs — testing the safety and efficacy of non-invasive antifungal treatments; determining safe antifungal drug doses for affected bats; and determining if rehabilitated bats have successfully shed the fungus and can survive in clean sites without any regrowth of the fungus.

## The National Plan

This past fall, the USFWS released a national white-nose syndrome management plan for review. In an effort to gather additional scientific and commercial information for consideration before the plan becomes final, public comments on the plan were accepted through December 26, 2010. The national plan, along with more information on WNS and related conservation efforts, can be viewed at [www.fws.gov/WhiteNoseSyndrome](http://www.fws.gov/WhiteNoseSyndrome).



The white fungus associated with WNS is clearly visible on the hibernating little brown bat on the left.



P. J. FLUSCO (R)

Several cave-dwelling bat species have been severely affected by WNS, especially little brown bats.

## What Is Connecticut Doing?

Wildlife Division biologists continue to diligently observe the state's bats for the impacts of WNS. Since WNS emerged in the state in 2008, biologists have closely monitored hibernating bats for signs of WNS and to document mortality. Over the past two years, biologists also have begun intensively tracking summer maternity colonies to see if WNS is having a negative impact on bat survival and the ability to give birth and raise young.

Biologists, with the help of citizen scientists, were able to identify 41 summer maternity colonies throughout Connecticut during summer 2010. Over 2,065 bats were counted due to the efforts of about 80 volunteers. The majority of the bats identified were big brown bats. Sadly, other WNS affected "cave bats" were only rarely encountered. The good news is that, through these surveys, biologists were able to document the birth and survival of pups.

The DEP also was able to log over 500 citizen reports of bats throughout the state. While this may sound like a high number of sightings, reports of vacant bat houses and barns were equally common. These reports, along with the summer maternity colony counts, are all important to the research of WNS and our understanding of bats in Connecticut.

Residents are encouraged to help monitor WNS by reporting to the DEP any bats found outdoors from November through February. The characteristic white, fuzzy fungal growth is typically only visible on bats while they hibernate in cool, moist conditions in caves and mines. Even though the fungus may not be readily seen on a bat's nose, bats seen flying during the day or clinging to the outside of a building during winter are signs that WNS may be at work. Please submit the details of your sighting, including the date, location, what you observed, and digital photos, if possible, to Wildlife Division Technician Christina Kocer at [christina.kocer@ct.gov](mailto:christina.kocer@ct.gov).

Please remember that cave etiquette is critical to reducing the spread of WNS. If you visit a cave or mine in an area of the country affected by WNS, do not wear or bring any of the same gear to other sites. You also should heed closure signs for caves with restricted access.

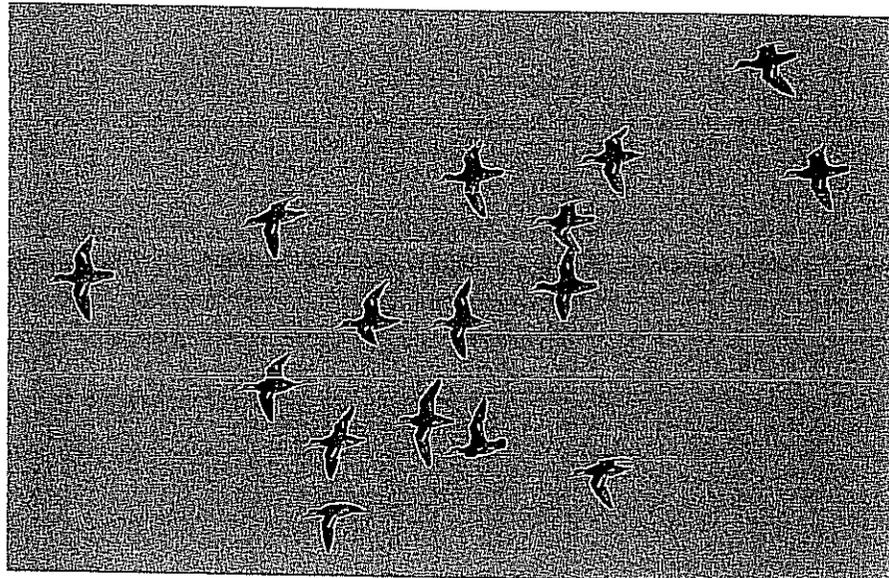
# The Importance of Migratory Bird Stopover Habitat

Article and photography by Paul Fusco

In a world of increasingly dramatic changes happening across the landscape, the question arises, what are the impacts to wildlife? With urban sprawl, development, pollution, and progress continually degrading and destroying critical wildlife habitat, what consequences are wildlife experiencing? There are many critical habitats within the landscape that are of supreme importance to a wide range of wildlife, especially to migratory birds. Some of the most critical, and threatened, habitats are migratory bird stopover areas. These are the places where migrating birds congregate to feed, rest, and take cover during the part of their lives when they are most at risk – during migration.

Migratory bird stopover areas are generally habitats that provide essentials for birds to survive and continue their journey. Food plays such a big part that some migrations are timed to take advantage of a temporary abundance of food, which can be insect population explosions, ripened berries, or an abundance of fish. Most stopover areas also provide critical habitat for cover and rest. Whatever the attraction, migrating birds need to have safe and reliable habitats along their journey in order to survive. They may spend a few days or a few weeks at these locations, refueling and resting in preparation for the journey that lies ahead. Any loss of these important habitats can have a huge impact on bird populations.

A bird's migratory journey can be likened to a chain, with the stopover habitats being links in that chain. Birds stop at places along the chain for a period of time to feed, rest, and rebuild their fat reserves before continuing their journey to the next stopover habitat. When habitats are degraded or disappear, the links in the chain become weakened or lost, and thus the



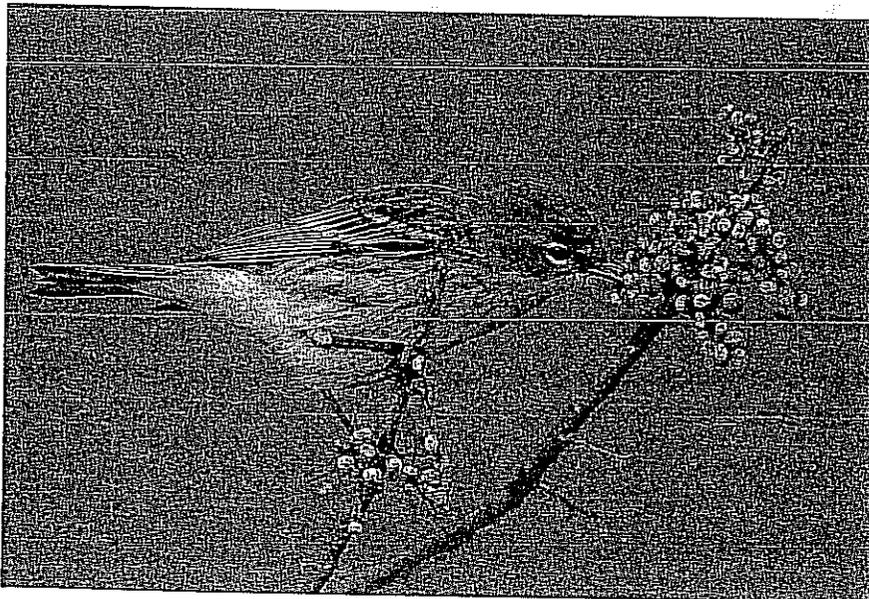
Green-winged teal rely on small ponds for refuge along their migration route to and from their northern breeding grounds.

continuity is broken and migrations are at risk. If migrations are at risk, then bird populations also are at risk.

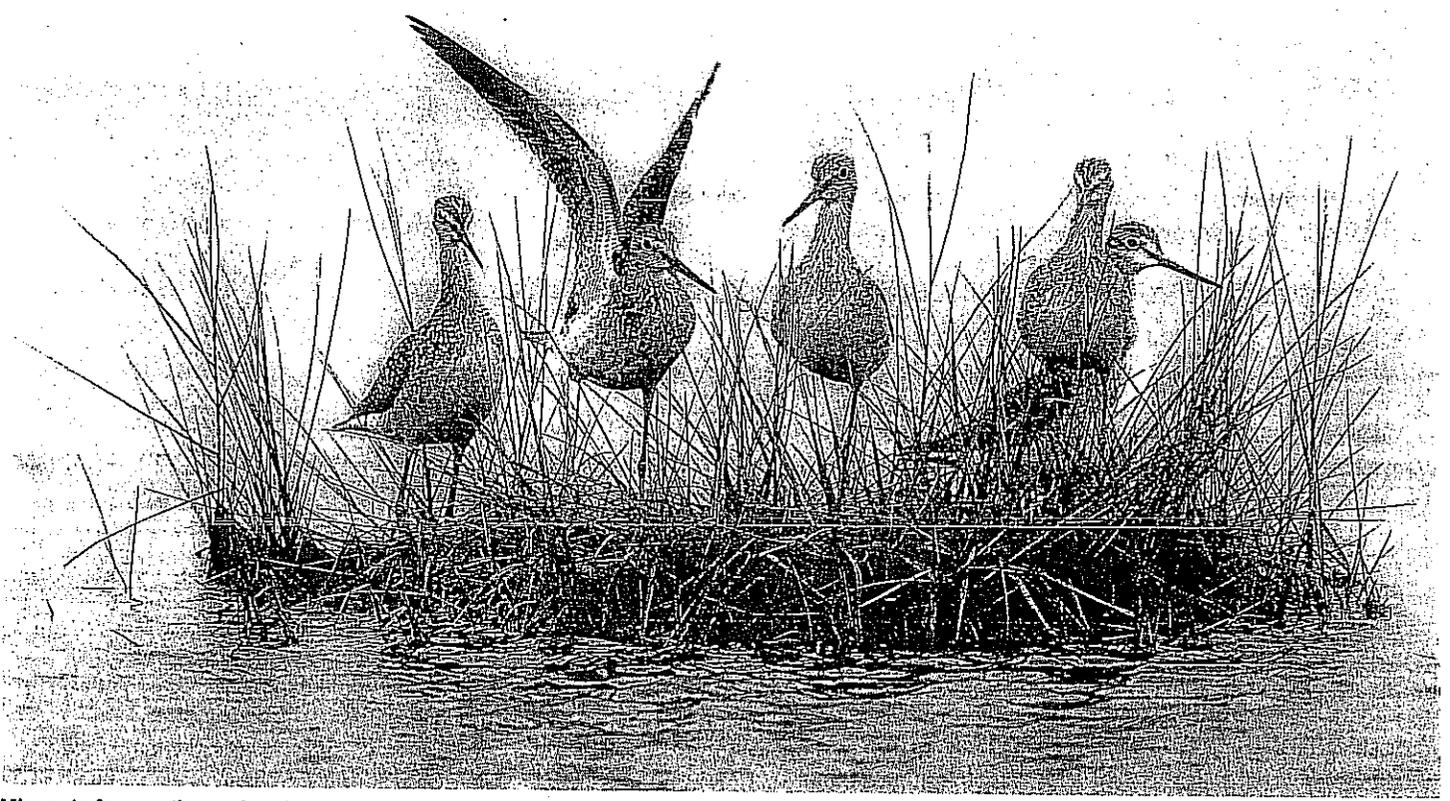
In some cases, whole species depend on just a few places to keep their life cycle intact. For instance, a small sandpiper, the red knot, has evolved to be heavily dependent on the food resources of the Delaware Bay during its spring migration. Abundant deposits of horseshoe crab eggs give the knots the energy they require to make the last leg of the journey to their Arctic breeding grounds. The entire East Coast population of red knots relies on the crab eggs. In recent years, overharvesting of horseshoe crabs has left a depleted number of eggs, resulting in dire consequences for the knot population which has dropped by an estimated 90%. The knots still show up in the traditional Delaware Bay stopover area, but they are unable to find enough food to pack on the fat reserves they need to reach their breeding areas, and their reproductive success has declined significantly.

Connecticut has some regionally significant migratory bird stopover areas that include the habitat complex at the mouth of the Housatonic River, the lower Connecticut River, the New Haven Harbor area, and parts of Long Island Sound. While these areas have regional importance for migratory birds, many other areas are significant on a statewide level. Some of these places include East Rock Park in New Haven, Cove Island Park in Stamford, and Bluff Point State Park in Groton for landbirds. Hammonasset Beach State Park in Madison and Great Meadows Marsh in Stratford are important for marshbirds and shorebirds, while Barn Island Wildlife Management Area in Stonington and Bantam Lake in Litchfield/Morris are significant for waterfowl.

Habitat corridors play a large role for migrating birds. The Conte National Wildlife Refuge is made up of a loose collection of property agreements protecting habitat along the length of the Connecticut



Berries are an important food source for migratory birds, including this yellow-rumped warbler seen feeding on poison ivy berries.



Migrants frequently run into inclement weather along their journey and need to find a place to rest and feed until the weather improves. These greater yellowlegs gathered on a small grass patch in a marsh to wait out bad weather during their southward migration.

River, recognizing the river's importance as a habitat corridor for migratory birds. Other rivers, like the Housatonic, Shetucket, and Quinnipiac, are similarly important.

On a smaller scale, local properties can be important as well. Even the smallest thickets or weedy fields can serve as stopover areas for birds that need to find food and cover as they pass through. Town parks, state parks, farm fields, ponds, and backyards can be used and are important stopover areas for a variety of birds.

Protecting habitat for migratory birds and other wildlife is one of the main goals of the DEP Wildlife Division. In Connecticut, coastal habitats are probably the most critical areas for the conservation of migratory birds. In general, birds tend

to congregate in greater numbers at coastal areas than at inland locations. Waterfowl and shorebirds are not the only birds that build their numbers along the coast — so do songbirds and raptors. Connecticut's geography tends to naturally concentrate migrating birds along the shoreline, especially in fall and winter. The protection of coastal habitats, large and small, is imperative to migratory bird conservation in Connecticut. But it doesn't end there. Not only is it important to protect habitats along the coast and close to the coast, but it also is important to protect the smaller thickets and weedy fields further inland.

Migratory bird stopover areas are islands of high quality habitat. They often are surrounded by degraded or lesser quality habitat and development. The distance between stopover habitats may be hundreds of miles or more. For a small bird depending on finding food and cover, traversing that distance can be challenging to that bird's very survival.

Protection of stopover areas is of equal importance for the conservation of migratory birds as the protection of breeding and wintering habitats. Even though Connecticut is a small state, it still has a number of high-profile stopover areas that are on both public and private properties. The Wildlife Division is working to conserve critical habitats on state land that serve as stopover areas. Towns and private land owners also can protect habitat for birds by leaving fallow areas uncut, planting native food-producing plants, and monitoring birds on their property. The average homeowner can make a difference by providing migrating birds with stopover habitat in their own backyard.

*Paul Fusco is the Production Editor and Photographer for the Division's Outreach Program*



Weedy habitats, such as those found at migration hotspots along the coast, provide many fall migrant songbirds with an excellent place to find seeds and insects.

# Ice Fishing Anyone?

Written by George Babey

Volunteer instructors with the Connecticut Aquatic Resources Education (CARE) Program have been teaching family ice fishing classes across the state for the past two decades. Over 100 ice fishing events and derbies have attracted thousands of participants who seem to enjoy the outdoor adventure, laughter, and opportunity for exercise with family and friends. If this interests you, read on.

CARE volunteers operate about a dozen classes and events each winter. Most are indoor classes followed by a fishing opportunity on a frozen pond at a later date. Some are outdoor events held right on the ice. Families, youth groups,

and adults looking to develop new skills can all expect to have a fun and interesting time. Instructors cover all the topics you might expect, from safety to clothing to tackle. You'll learn, in an entertaining way, with video presentations, demonstrations, and the opportunity to try some of the equipment for yourself. Instructors will have equipment, cold-weather clothing, safety equipment, and other items for you to inspect at the class or event.

It's easy to locate a family ice fishing class near you by visiting the CARE Schedule of Classes Web page ([www.ct.gov/dep/calendar](http://www.ct.gov/dep/calendar)). Most classes require pre-registration to ensure that there is enough interest and room for all who wish to attend. Add some excitement and adventure to your winter by registering for a class today!

## Family Ice Fishing Trips

If you want to try ice fishing, CARE instructors can help. Equipment will be available for you to borrow at the annual Family Ice Fishing Derby on January 29, 2011,

at Coventry Lake, in Coventry. You should take a family ice fishing class before attending the Derby, so you are well prepared. Good boots, warm clothing, a 2011 fishing license (required for those 16 years and older), and other items will help ensure a wonderful day. CARE instructors will offer a second opportunity to try ice fishing at another lake on February 5, 2011, as part of DEP's Great Parks Pursuit. (Location and time will be announced soon.) In addition to ice fishing, other activities will make the day complete. Check the CARE Schedule of Classes Web page for more information.

## Would You Like to Help?

The CARE Program is always looking for sporting men and women who would like to share their love of fishing

with families across Connecticut. CARE New Instructor Training is scheduled for February 26, 2011. Teaching materials, equipment, and a statewide team of other CARE instructors are available to help you get started. The training is fun and the rewards are endless. For more information, contact the CARE Center at 860-663-1656 for more information.

*George Babey is a Supervising Fisheries Biologist for the Inland Fisheries Division and a contributing editor to Connecticut Wildlife magazine*

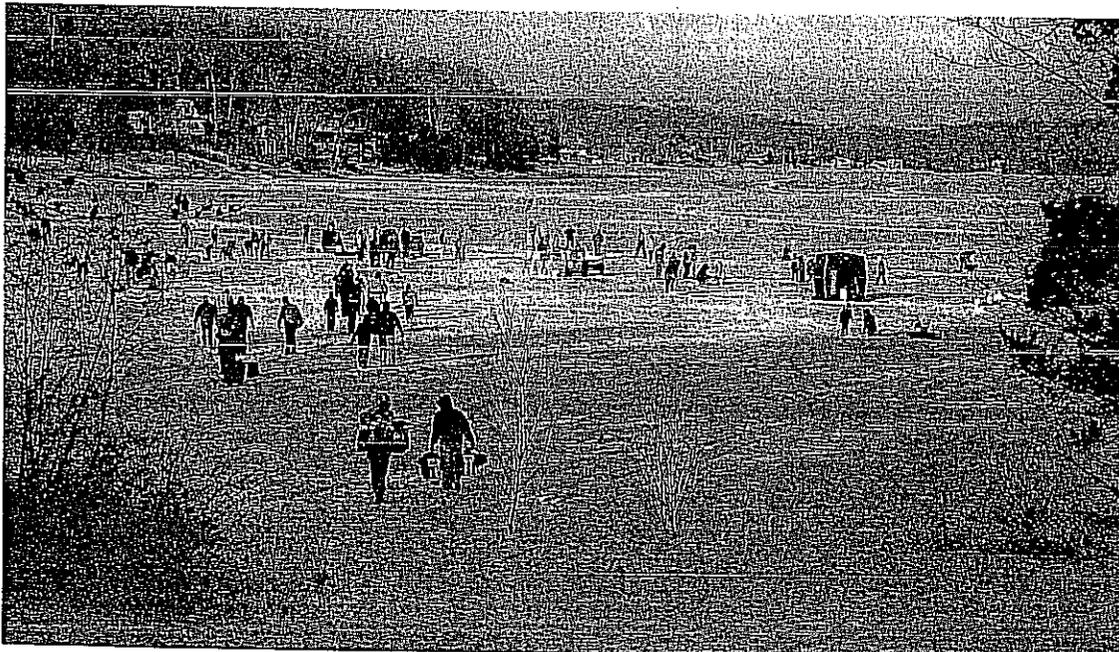


Hundreds of adventurous New Englanders joined CARE instructors at Burr Pond State Park in Torrington last winter.

AMIEE CARLIN, DEP PARKS DIVISION (3)



This young angler is happy that he attended a CARE family ice fishing event.



The CARE Family Ice Fishing Derby is set for January 29, 2011, in Coventry. Attend an ice fishing class earlier in the month to prepare your family for the outdoor adventure.

# Coyote

*Canis latrans*

## Background

Coyotes were not originally found in Connecticut, but have extended their range eastward during the last 100 years from the western plains and midwestern United States, through Canada and into the northeastern and mid-Atlantic states. Coyotes were first reported in Connecticut in the mid-1950s. For the next 10 years, most coyote reports were from northwestern Connecticut. Coyotes eventually expanded their range throughout the entire state and are now a part of Connecticut's ecosystem. The coyote is one wildlife species that has adapted to human-disturbed environments and can thrive in close proximity to populated areas.

## Range

Originally an inhabitant of the western plains of the United States, the coyote now occurs from Alaska south into Central America and east from the Atlantic Provinces to the southeastern United States.

## Description

A typical coyote resembles a small, lanky German shepherd, but several characteristics distinguish it from a dog. Coyotes tend to be more slender and have wide, pointed ears; a long, tapered muzzle; yellow eyes; slender legs; small feet; and a straight, bushy tail which is carried low to the ground. The pelage (fur) is usually a grizzled-gray color with a cream-colored or white underside, but coloration is variable with individuals having blonde, reddish, and charcoal coat colors. Coat color does not vary between the sexes. Most coyotes have dark hairs over the back and a black-tipped tail, which has a black spot near its base covering a distinctive scent gland. However, not all coyotes have the black markings.

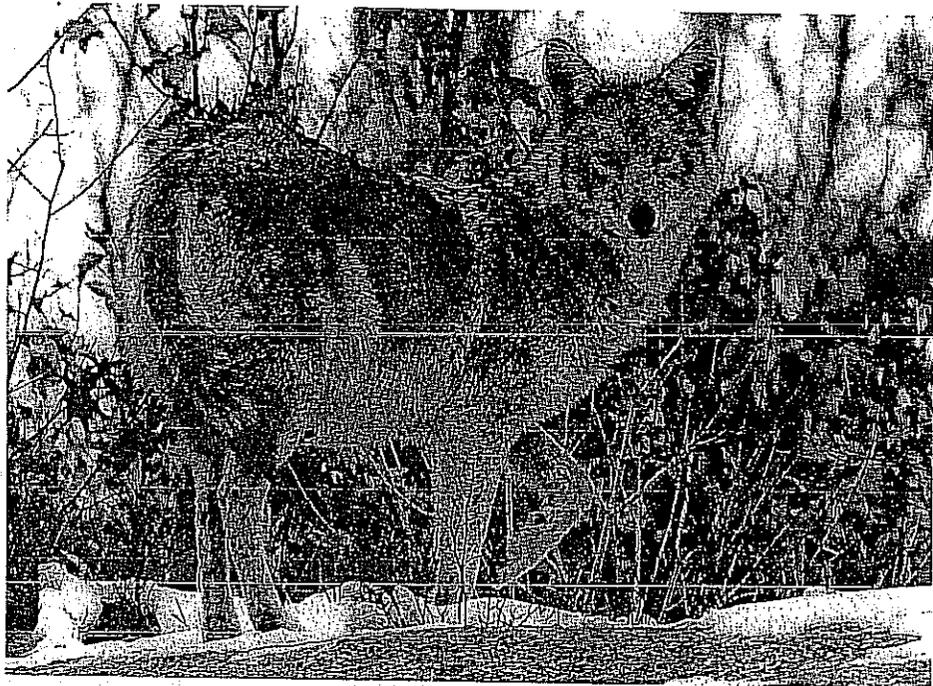
The eastern coyote is larger than its western counterpart. Most adults are about 48 to 60 inches long from nose to tail and weigh between 30 to 50 pounds, with males typically weighing more than females.

## Habitat and Diet

Coyotes are opportunistic and use a variety of habitats, including developed areas like wooded suburbs, parks, beaches, and office parks. Their ability to survive and take advantage of food sources found in and around these "man-made" habitats has resulted in an increase in coyote sightings and related conflicts. A coyote's diet consists predominantly of mice, woodchucks, squirrels, rabbits, deer, some fruits, carrion, and when available, garbage. Some coyotes will also prey on small livestock, poultry, and small pets. In Connecticut, unsupervised pets, particularly outdoor cats and small dogs (less than 25 pounds) are vulnerable to coyote attacks.

## Life History

Coyotes are monogamous. The male and female usually maintain pair bonds for several years. In Connecticut, the breed-



P. J. RUSCO

ing season is from January to March, and the gestation period is about 63 days. Although adults can dig their own dens, they often enlarge an abandoned woodchuck or fox burrow. Pups are born in spring (April to mid-May), and litters range in size from one to as many as 12 pups; the average in Connecticut is seven. Both adults care for the young and will readily move them if disturbed. Pups are weaned at about six to eight weeks and begin foraging and hunting with the adults when they are eight to 13 weeks old.

The family group usually breaks up in fall or early winter when the young disperse. Young coyotes may travel long distances in search of new territories, giving this species a rapid potential for colonization. Although nearly full grown by their ninth month, eastern coyotes may not breed until they are nearly two years old.

## Interesting Facts

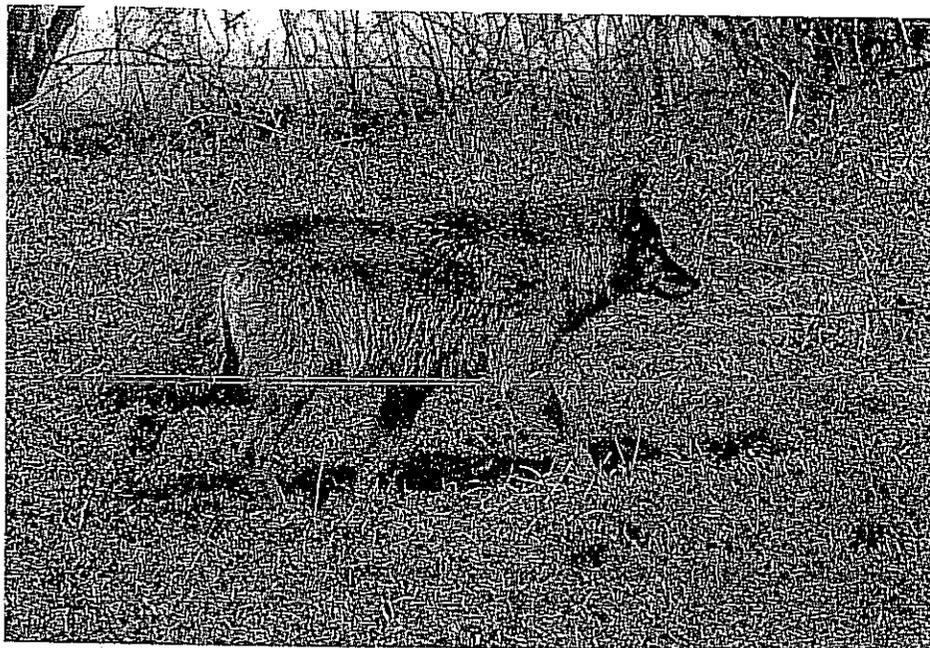
Eastern coyotes are generally larger in size than their western counterparts. Recent genetic research has attributed the eastern coyote's larger size to interbreeding with Canadian gray wolves.

Coyotes are biologically able to reproduce with domestic dogs, although because of several barriers, they rarely do. For instance, both male and female coyotes are fertile for only a short time during the year. Also, young coydogs rarely survive because male domestic dogs that breed with female coyotes do not remain with her to assist with parental care. The offspring of a coyote/domestic dog mating are often infertile.

Coyotes use a variety of vocalizations to communicate with one another. Howls, yelps, and high-pitched cries are best known, but they also bark, growl, wail, and squeal. Family groups yelping in unison can create the illusion of a dozen or more performing together. Coyotes are most often heard around dawn and dusk. However, they may respond to sirens and fire whistles at any time of day or night.

A coyote's social unit consists of the adult pair and their young; they may be encountered singly, in pairs, or in groups of three or more. Mated pairs maintain territories which are scent-marked and defended against other coyotes as well as foxes.

P. J. RUSCO



A coyote's sense of hearing, sight, and smell are well developed.

Coyotes normally run as fast as 25 to 30 miles an hour, but can run 35 to 40 miles an hour when pursued. They are also strong swimmers.

### Living with Coyotes

As coyotes have become more common, public concerns about coyotes attacking pets and people, especially children, have increased. Although some coyotes may exhibit bold behavior near people, the risk of a coyote attacking a person is extremely low. This risk can increase if coyotes are intentionally fed and then learn to associate people with food.

Coyotes will attack and kill pets, especially cats and small dogs (less than 25 pounds). **The best way to protect pets is to not allow them to run free.** Cats should be kept indoors, particularly at night, and small dogs should be on a leash and under close supervision at all times. The installation of a kennel or coyote-proof fencing is a long-term solution for protecting pets. In addition, homeowners should eliminate other sources of attraction to coyotes including pet food left outdoors, table scraps on compost piles, and decaying fruit below fruit trees.

Coyotes will attack a variety of livestock but sheep and fowl are at greatest risk. Coyotes pose very little danger to horses and cattle. The probability of a coyote attack can be reduced by penning susceptible livestock and poultry at night. Some fences effectively exclude coyotes but require careful maintenance. Guard dogs have been used successfully to reduce coyote depredation. The removal and proper disposal of dead poultry or livestock is highly recommended as a preventive measure. Carrion left in the open may attract coyotes and bring them into close and more frequent contact with live animals. Livestock owners may use trapping or shooting to remove coyotes that have attacked their animal stock.

Coyotes seen near homes or in residential areas rarely threaten human safety. Coyotes are abundant across North America, yet only a very small number of attacks on humans have ever been reported. Like many animals, coyotes can grow accustomed to buildings and human activity.

**NEVER feed coyotes! DO NOT** place food out for any mammals. Homeowners should eliminate any food sources that may be attractive to coyotes. Clean up bird seed below feeders, pet foods, and fallen fruit. Secure garbage and compost in animal-proof containers.

You can attempt to frighten away coyotes by making loud noises (shouting, air horn, or banging pots and pans) and acting aggressively (e.g., waving your arms, throwing sticks, spraying with a garden hose). Homeowners should realize that if they live near suitable habitat, fencing may be the only method to completely eliminate coyotes from travelling near homes. In rare cases, efforts to remove coyotes may be justified.

Coyotes are most active at night but may be active during daylight hours, particularly during the young-rearing period and longer days of summer. Daytime activity alone is not indicative of rabies. Coyotes appear to have low susceptibility

to the "raccoon" or mid-Atlantic strain of rabies found in Connecticut. Coyotes are susceptible to strains of rabies that occur elsewhere in North America and to the other common canine diseases, such as canine distemper. Sarcocystis mangle, a parasitic disease, can affect large numbers of coyotes, particularly when the population is dense and the chance of transmission is high. In Connecticut, many are also killed on roadways by automobiles.

It is legal to trap and hunt coyotes in Connecticut. Hunters and trappers are required to follow strict laws and regulations. Hunters and trappers are required to report and tag coyote pelts before they are sold, tanned, or mounted. There are special provisions for using land sets to trap coyotes on private land from December 1 through January 31. For more information on coyote hunting and trapping seasons, consult the current Connecticut Hunting and Trapping Guide or go to the DEP website at [www.ct.gov/dep/hunting](http://www.ct.gov/dep/hunting).

### Tracks

Members of the dog family (domestic dogs, coyotes, wolves, foxes) have similar track patterns that show four toes and usually the toenails. The front foot is slightly larger than the hind foot. Coyote tracks are pointed, while dog tracks are more circular.



Front 2¼ - 3" Long

Hind 2¼ - 3" Long

# Despite Drought Conditions, WNV and EEE Persisted

Written by Roger Wolfe

It is impossible to predict what the mosquito season will be like year after year. Connecticut experienced a wet, mild spring in 2010, and from that it could have been speculated that an active mosquito season was in store. Several heavy rain events resulted in localized flooding with bridge and road washouts. This also resulted in a good hatch of spring mosquitoes. Spring, floodwater mosquitoes hatch from eggs that were laid the previous fall and overwintered in the egg stage. As the days grow longer and the water warms up in spring, these eggs hatch into larvae and eventually emerge as adult mosquitoes. This process takes about a month and a half in Connecticut, with adult mosquitoes usually emerging just in time for Memorial Day weekend. However, in 2010, the rains quickly ended and most of Connecticut experienced drought-like conditions for the bulk of the summer. While less rain usually means fewer mosquitoes, these weather conditions tend to favor those mosquitoes that amplify and transmit West Nile virus (WNV), and that is indeed what Connecticut experienced this past year.

West Nile virus and eastern equine encephalitis (EEE) are bird viruses that are naturally present in the wild bird population and are transmitted primarily by a dozen or so of Connecticut's 50 different species of mosquito. Over time, wild birds have developed a natural immunity to these viruses and therefore are not normally affected by the diseases. On the other hand, non-native or exotic birds (e.g., emus, ostriches, pheasants) do not have these built-in immunities and can be susceptible to the diseases.

## Monitoring Mosquitoes

As part of Connecticut's Mosquito Management Program, the Connecticut Agricultural Experiment Station (CAES) began trapping and testing mosquitoes in early June for EEE, WNV, and other mosquito-borne diseases. Mosquito traps were set at 91 sites throughout the state and attended by CAES staff every 10 days on a regular rotation. Two trap types were used at all trapping stations: a CO<sub>2</sub>-baited CDC Light Trap, designed to trap host-seeking adult female mosquitoes (all species); and a Gravid Mosquito Trap, designed to trap previously blood-fed adult female mosquitoes (principally *Culex* species) looking for a place to lay their eggs.

By the end of October, the CAES had trapped and tested almost 116,000 mosquitoes. Although this appears to be a significant number, it is more an indication of the drought as it is a far cry from the 286,000 mosquitoes that were tested in 2009. Despite the lack of rain and more than 30 days with tempera-

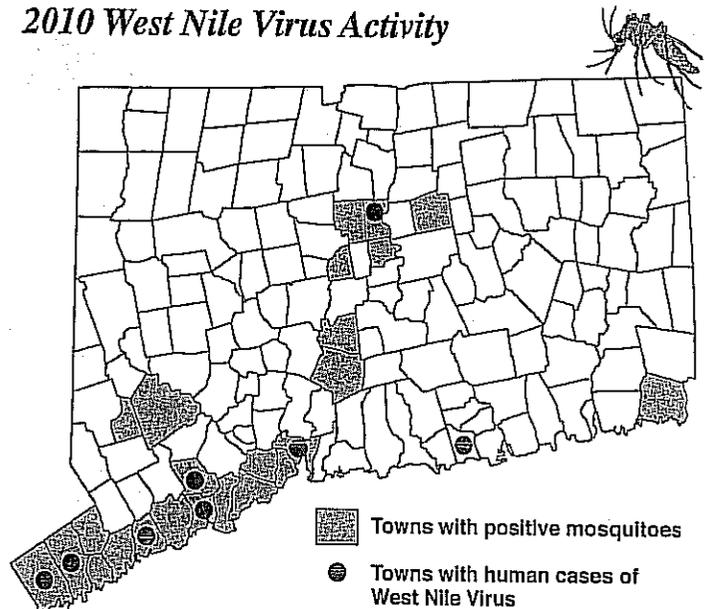
tures above 90° F, the CAES isolated 220 WNV-positive pools of mosquitoes and 4 EEE isolations. In addition, the Department of Public Health confirmed eight human cases of WNV. There were two additional human cases of WNV, but it was determined through travel history that these infections were obtained while the individuals were out-of-state.

Some individual towns opted to spray (adulticide) for mosquitoes on their public lands. However, the DEP did not spray because virus isolations were too widespread geographically and spatially. Mosquito surveillance reports, as well as helpful information for homeowners to minimize the risk of mosquito-borne diseases, can be found on the Mosquito Management Program Web site ([www.ct.gov/mosquito](http://www.ct.gov/mosquito)).

It can never be predicted from year to year what the mosquito season will be like, but we can learn from the past, look for long-term trends in weather and mosquito activity, use new technology for surveillance and control as it becomes available, and be better prepared for when mosquito and viral activity rises and becomes a risk to public health.

Roger Wolfe is the coordinator of the DEP's Mosquito Management Program

## 2010 West Nile Virus Activity



## Remember Your "Other Dependents" at Tax Time

Tax time may be a dreaded time for most people, but something good can come out of it. Connecticut taxpayers have the opportunity to "give back to wildlife" by voluntarily donating a portion of their state tax refund to the Endangered Species/Wildlife Income Tax Check-off Fund. This special fund supports efforts aimed at helping Connecticut's endangered species, natural area preserves, and watchable wildlife. Recently-funded projects include moose research and a study of endangered populations of spadefoot toads and blue-spotted salamanders (see articles in the November/December 2010 issue of *Connecticut Wildlife*).

When filling out your tax form, remember your "other dependents," our state wildlife species, and please donate a portion of your tax refund. Citizens also can contribute directly by sending a check (payable to DEP Endangered Species/Wildlife Fund) to: DEP, Bureau of Financial and Support Services, 79 Elm Street, Hartford, CT 06106.

Thank you for supporting Connecticut's Wildlife!



# How to Be a Good Bluebird Box Landlord

Written by Geoffrey Krukar



PHOTO BY P. J. FUSCO

Countless bluebird nest boxes are in yards, parks, golf courses, and cemeteries throughout Connecticut. While putting up a box is a good first step towards helping bluebirds, much still needs to be done after the box is installed. Assuming boxes were placed in the proper habitat, the success or failure of boxes will be greatly influenced by care and diligence. Proper management can be achieved by following certain guidelines.

## Preparation and Monitoring

Prepare boxes for the nesting season each year by cleaning and repairing them no later than the first week of March. Male bluebirds begin selecting nest sites as early as mid-March and will be less likely to use dirty, broken boxes. Remove old bird or mouse nesting materials. Use caution when removing mouse nests as they may still be active. The walls, roof, and floor of the boxes need to be checked for cracks or breaks and damaged pieces should be replaced. Vent holes on the sides and drain holes in the floor should be free of obstructions.

Be prepared to visit your nest boxes

at least once per week for the entire nesting season (March – July). Routine visits allow you to track the progress of nesting birds and detect any problems early enough to be corrected. Keeping a journal or log also is a good idea. Bluebirds are tolerant of occasional human interference and will not abandon the nest.

The proper technique of monitoring boxes is simple and straightforward and will ensure that the experience is mutually beneficial. First, observe the box from a distance and take note of birds going in and out. Then, approach the box, giving it a gentle tap to warn the birds that you will be opening it. Try not to approach the box from the same direction every time because doing so will create a scent trail that could lead predators to this location. Next, slowly open the door and peek inside. You should take note if there is a nest, what kind it is, the number of eggs or nestlings, and any signs of parasites or predators. If there are nestlings on a prior visit and the nest is empty on a subsequent visit, the birds likely fledged (unless there are signs of predation, such as chew marks or fur around the hole).

One benefit of weekly visits is that you can obtain an estimated age for nestlings. This is important because you should avoid opening the box when the nestlings are more than 14 days old to prevent them from jumping out of the box and fledging early.

Once the nestlings have fledged, the nest should be removed from the box. Eastern bluebirds have been reported to nest up to three times over the same season in Connecticut. Even though the birds will build a new nest on top of the old one, it is best to remove the old material.

Knowing which species of bird is nesting in your box is important. Eastern bluebirds, tree swallows, house wrens, chickadees, and tufted titmice are native species that commonly use bluebird nest boxes. All are protected by federal laws and should be allowed to finish any nest they start. The non-native, invasive English house sparrow is another common nester in Connecticut. House sparrows are aggressive competitors to native bird species and any nesting attempts should be discouraged through nest removal, egg removal, or euthanasia.

## Report Nesting Results

Nest box successes and failures should be reported to the Wildlife Division at the end of the nesting season. These data are used to track bluebird population distributions and trends. Plans are in the works to allow nest box landlords provide their information through the DEP Web site. In the meantime, landlords can contact Wildlife Division technician Geoffrey Krukar at 860-675-8130 or send an E-mail to [geoffrey.krukar@ct.gov](mailto:geoffrey.krukar@ct.gov).

*Geoffrey Krukar is a technician for the Wildlife Division's Avian Program*

## Quick Guide to Nest Identification

**Bluebird:** a neat nest of fine grasses or pine needles.

**Tree swallow:** a nest of grasses lined with feathers.

**Black-capped chickadee or tufted titmouse:** a downy nest of mosses, fur, and soft plant fibers.

**House wren:** a messy nest of twigs, occasionally lined with finer fibers.

**House sparrow:** a nest with a jumble of odds and ends, such as grasses, cloth, feathers, twigs, and possibly bits of litter.

# American Woodcock Demonstration Area at Roraback WMA

Written by Paul Rothbart

The Wildlife Management Institute, in partnership with state wildlife agencies, the U. S. Fish and Wildlife Service and the Ruffed Grouse Society, spearheaded an effort to develop an American Woodcock Conservation Plan. The plan was completed in 2008. To best implement the plan, managers have established "Woodcock Regional Habitat Initiatives." These initiatives are partnerships between government agencies, conservation organizations, and private landowners in the geographic areas within the woodcock's range. Currently, there are four such initiatives:

- Atlantic Coast area that stretches from southwestern Maine to the Chesapeake Bay, which includes most of Connecticut.
- Northern Forest comprising most of New England, the Adirondack Mountains of New York, and Atlantic Canada. The extreme northwest corner of Connecticut falls within this area.
- Appalachian Mountains covering southern New York, much of Pennsylvania, western Maryland, all of West Virginia, and parts of Ohio and Virginia.
- Upper Great Lakes region of Michigan, Wisconsin, and Minnesota.

## Project at Roraback WMA

The Wildlife Division began a project in 2009 at the Roraback Wildlife Management Area (WMA) in Harwinton to create and renew the young forest habitats on which more than 47 wild species depend – animals from reptiles and amphibians to birds to large mammals, which are identified in Connecticut's Comprehensive Wildlife Conservation Strategy as species of greatest conservation need. This initial phase of the project is designed to promote public awareness of, and support for, management efforts that provide habitat for woodcock and other young-forest wildlife.

Roraback WMA, at 1,975 acres, is the state's largest wildlife management area. Its varied habitats include streams, wetlands, mixed hardwood forest (aspens, hickories, oaks, maples, black cherry, white pine), farmed land, and brushy fields. Ruffed grouse, woodcock, songbirds, cottontail rabbits, deer, fisher, and

porcupine are some of the many species of wildlife present on the area.

In Connecticut, as in other states in the Northeast, forests are becoming increasingly mature, which means that populations of animals that need young forests – such as ruffed grouse, woodcock, Eastern towhee, brown thrasher, and New England cottontail – have



PHOTO BY P. J. FUSCO

trended downward for several decades.

## Improving Habitat for Woodcock

In 2009, workers used logging machines and a tracked skid-steer with a cutting head to clear and regenerate young trees on a 13-acre parcel of forest. In addition, non-native invasive plants, such as multiflora rose, barberry, and honeysuckle, were treated with herbicides

within existing old fields, shrublands, and an orchard.

Although mature trees were removed, managers left behind apple trees and native shrubs, such as gray-stemmed and red-osier dogwood, arrowwood viburnum, and spicebush. A forested buffer remains next to wetlands and Lead Mine Brook, a high-quality trout stream that winds through the area. As the 13 acres re-grow, managers will spot-use herbicides to hold back invasive shrubs in favor of natives. Every 15 to 20 years, mature trees will be harvested again to keep the tract in a young-forest stage.

## Expanding the Project

Habitat work has expanded eastward from the initial 13-acre core area, where 15 acres of mature hardwoods were commercially logged in fall 2010. The resulting 28-acre patch will provide habitat for New England cottontails, which have historically been found at Roraback WMA. Young-forest tracts that are 25 acres and larger are more suitable for these native rabbits.

Existing hayfields at Roraback WMA already offer singing grounds and roosting habitat for the American woodcock. Young hardwoods and raspberry shrubs are growing back densely in a 10-year-old, 2.6-acre patch cut on the far southern portion of the project area, providing feeding and nesting cover.

A self-guided trail through the managed area also has been developed. Informational signs explain how young-forest habitat benefits wildlife. In addition, there are plans to hold annual landowner workshops at the demonstration area (see article on page 20). For more information, including directions to an access road leading to the habitat area, contact Paul Rothbart, supervisor of the Wildlife Division's Habitat Management Program, at 860-295-9523, or send E-mail to [paul.rothbart@ct.gov](mailto:paul.rothbart@ct.gov).

A special thank you goes out to the Wildlife Management Institute, Connecticut's Beardsley Zoo, and Connecticut Woodcock Council which provided cooperative funds to complete the initial habitat enhancements.

*Paul Rothbart is the supervisor of the Wildlife Division's Habitat Management Program*

# Landowners Learn About Young-forest Species at Workshop

Written by Judy Wilson and Lisa Wahle

**T**hirty four landowners attended the DEP Wildlife Division's workshop entitled "The New England Cottontail Initiative: Working to Benefit the Cottontail, Woodcock, and Other Young-forest Species" on October 3, 2010, at the Sessions Woods Wildlife Management Area (WMA) in Burlington. These

Given this and the fact that the rabbits require large areas of habitat, the Division "targeted" landowners who owned 10 or more acres and were within one mile of the project sites. All land trusts, sportsman's clubs, conservation organizations, and town conservation commissions in the focus area also were targeted.

overgrown tangles of brush and briar; coastal shrublands; and young regenerating forests. The more abundant eastern cottontail can survive in smaller patches of fragmented early successional habitat, such as the overgrown edges of lawns and small agricultural areas, more typical of conditions found in much of Connecticut today.

## Learning About Cottontails

Paul Rothbart, Supervisor of the Division's Habitat Management Program, kicked off the workshop with an overview of Connecticut's role in the "Range-wide New England Cottontail Initiative," a program made possible by a U.S. Fish and Wildlife Service grant to several New England states in 2010.

The New England

Historically, the native rabbit ranged throughout New England and west to the Hudson River in New York. Its current range has been reduced by 80%. The decline of the New England cottontail is attributed to the disappearance of large, quality habitat areas and an increase in predators associated with humans, including foxes, coyotes, dogs, and cats. While not physically dominant over the New England cottontail, Eastern cottontails are able to exploit a wider variety of habitat types, produce more young, and are better at detecting and evading predators. To date, New England cottontails have been documented in 41 Connecticut towns. Although New England cottontails have a restricted distribution in Connecticut and they are considered uncommon, the state contains a globally significant proportion of the world's population.

## Learning About Early Successional Species

Workshop attendees also heard from Min Huang, Leader of the Division's Migratory Bird Program, about the American woodcock, another species dependent on young-forest habitats and also in decline throughout Connecticut and most of its range.

Patrick Comins, Director of Bird Conservation for Audubon Connecticut, provided a historical perspective on early successional habitats across the landscape and the natural processes that created and maintained them. He explained how most natural processes have been interrupted or suppressed, and that active management is necessary to maintain these habitats and the biodiversity associated with them. The many species of mammals, birds, reptiles, amphibians, and insects that require these habitats for survival were highlighted during the presentation. Chris Fields, Important Bird Areas (IBA) Program Coordinator for Audubon Connecticut, talked about "Smart Management for Early Successional Birds."

cottontail is a candidate species for protection under the federal Endangered Species Act, and is being considered for full protection. During his introduction, Paul highlighted the goals of the initiative: 1) to create and restore approximately 190 acres of habitat on four state management areas in northwestern Connecticut; 2) to conduct pre- and post-monitoring of these habitat projects for vegetative and wildlife species response; and 3) to initiate outreach to private landowners.

Howard Kilpatrick, Supervisor of the Division's Deer, Turkey, and Small Game Programs, provided results from over 10 years of research on the status and distribution of New England cottontails in Connecticut. Two species of cottontails are found in the state, the native New England cottontail and the introduced Eastern cottontail. The New England cottontail requires large areas of dense cover provided by overgrown abandoned farmland; shrub swamps and brushy areas near beaver flowages; dense thickets and



P. COMINS, AUDUBON CONNECTICUT

Wildlife Division Supervising Biologist Paul Rothbart gives an overview of the Roraback WMA Young Forest Demonstration Trail to private landowners attending the New England Cottontail Workshop.

landowners were invited because they hold significant parcels of potential New England cottontail habitat near habitat restoration projects on state lands. The Wildlife Division is currently conducting habitat management activities at four locations in northwestern Connecticut. The locations include Roraback WMA in Harwinton, Goshen WMA in Goshen, Housatonic WMA in Kent, and Camp Columbia State Forest in Morris. The one-day workshop served as the starting point for the private lands outreach component of the New England Cottontail Initiative. More workshops are planned for the near future.

The Division has documented active populations of New England cottontails at all of the management areas where work is being done, except at Roraback WMA where there is one historic record. Current research shows that New England cottontails have limited dispersal capabilities and can only be expected to colonize new habitat up to about one kilometer away.

## Opportunities for Landowners

Judy Wilson, a Wildlife Division biologist with the Private Lands Program, provided an overview of the various grant programs available to landowners who want to become involved in managing for New England cottontails and other wildlife species dependent on young-forest habitats, such as woodcock, blue-winged warbler, eastern box turtle, eastern hognose, and bronze copper butterfly. The Division's Landowner Incentive Program, which provides technical advice and financial support to projects that benefit species at risk, will be holding an open application period in the near future. Landowners will be able to apply for assistance with projects that benefit species at risk in priority wetland or early successional habitats. More information about this program is available on the DEP Web site ([www.ct.gov/dep/wildlife](http://www.ct.gov/dep/wildlife)), or by contacting Judy or Wildlife Technician Robin Blum at 860-295-9523.

## Experiences of Conservation Organizations

Jason Marshall, President of both the Northwest Connecticut Sportsman's Council and Northwest Connecticut Sportsman's Club, spoke about the club's experience with several private land grant programs. The club used the U.S. Fish and Wildlife Service's Partners Program to carry out a regeneration cut to create a young seedling/sapling forest for woodcock, ruffed grouse, chestnut-sided warblers, and blue-winged warblers. A Natural Resources Conservation Service Wildlife Habitat Incentive Program grant also was used to carry out other wildlife habitat improvements.

Andy Weik, Regional Biologist for the Ruffed Grouse Society, gave an overview of the Society's mission to promote and maintain conditions suitable for ruffed grouse and other young-forest dependent species. He also described how the Society can assist private forest owners and professional land managers with habitat management. More information on the Ruffed Grouse Society can be found on its Web site ([www.ruffedgrouse-society.org](http://www.ruffedgrouse-society.org)).

Dale May, retired Wildlife Division Director spoke on behalf of the Connecticut Woodcock Council, an organization dedicated to conserving woodcock and other early successional wildlife. He provided personal insight into why people should care about the stewardship of the



Andrew Bosse, a private consulting forester, demonstrates a customized herbicide sprayer mounted on an all terrain vehicle (ATV) and discusses its application for various treatments.

woodcock and discussed the types of activities the Council undertakes to further its mission. More information on the Council and early successional habitats is available at [www.timberdoodle.org](http://www.timberdoodle.org).

## Habitat Management in Action

Workshop participants also had the opportunity to visit Roraback WMA to view a completed early successional habitat project that was designed specifically to benefit New England cottontails, woodcock, and other species of greatest conservation need (see page 19 to learn more about the project). Participants were shown various pieces of habitat management equipment and how they are used. Andrew Bosse, a private consulting forester, demonstrated a customized herbicide sprayer mounted on an all terrain vehicle (ATV) and discussed its application for various treatments. Lower Berkshire Land Development demonstrated a tree shear used to harvest and move large trees, and TR Landworks, LLC, showed a large excavator fitted with a specialized cutting head (Denis Cimaf mower) used to cut and mulch trees.

While at Roraback WMA, participants also walked a recently completed Young-Forest Habitat Demonstration Area Trail that highlighted work being done for New England cottontail, woodcock, and other young-forest dependent species. This is the first demonstration trail in Connecticut to be created under the Atlantic Coast Woodcock Initiative

(see [www.timberdoodle.org/Atlantic-Coast](http://www.timberdoodle.org/Atlantic-Coast) to learn more about this initiative). The trail highlighted a variety of important wildlife habitat features and management techniques, including a vernal pool, stone walls, managed thickets, drumming logs, aspens, a riparian zone, an orchard, herbaceous fields, and snags. Technician Jane Seymour and Biologist Peter Picone, from the Wildlife Division, led the walks, providing interpretation at all trail stops. Larry Rousseau, DEP Private Lands Forester, discussed how the Connecticut Forest Practices Act applies to landowners undertaking forestry projects and the role certified forest practitioners have in those projects.

Workshop attendees received a copy of the publication "*Managing Grasslands, Shrublands and Young Forests for Wildlife: A Guide for the Northeast*," along with a number of other handouts. This group represents the first of hopefully many interested landowners whose land may be critical to the conservation of New England cottontails. The landowners who attended the workshop will be contacted regarding potential habitat work on their property as additional resources become available.

*Judy Wilson is a biologist with the Wildlife Division's Private Lands Habitat Program. Lisa Wahle is a seasonal resource assistant for the Wildlife Division's Habitat Management Program.*



## Water Control Structure Replacement Project

The Wildlife Division manages water levels at over 100 inland impoundments statewide. These sites provide habitat for wood ducks, black ducks, great blue herons, kingfishers, otters, amphibians, reptiles, and numerous other species. Due to ongoing beaver activities at many of these sites, the water control structures and associated emergency spillways often are plugged with debris, making it impossible to manipulate or maintain desirable water levels. This situation often results in degraded wildlife habitat and also may create a safety issue if the dam/dikes are inundated and become unstable.

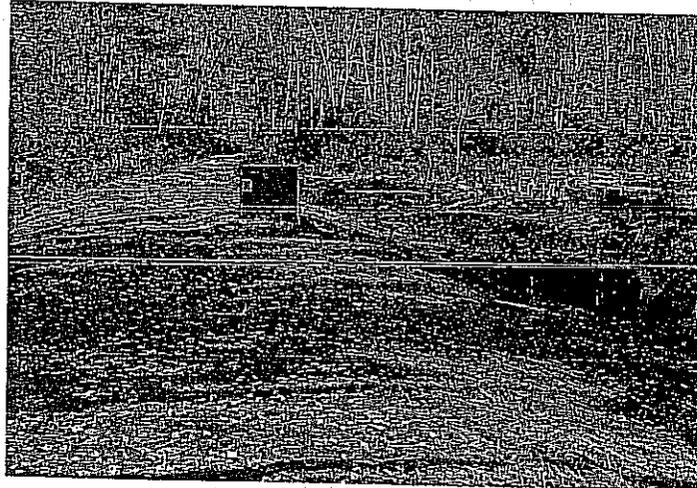
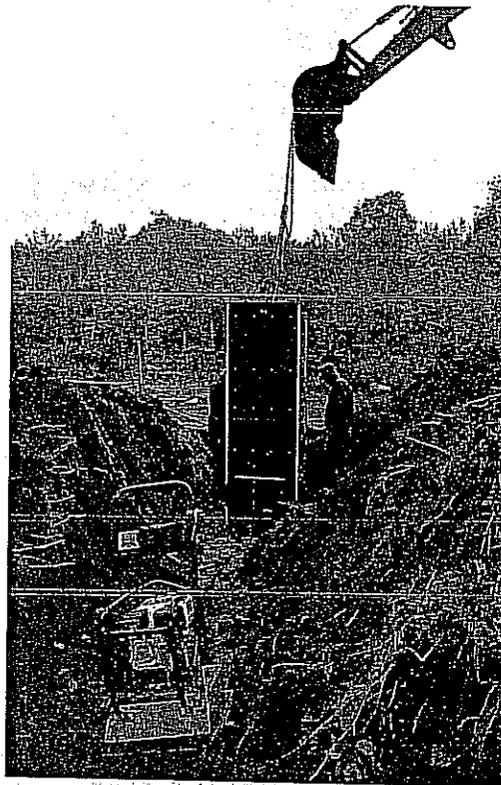
With funding obtained through the Natural Resources Conservation Service's Wildlife Habitat Incentives Program, the Wildlife Division has been able to move forward with enhancements at three inland impoundment sites: 1) Bartlett Brook Wildlife Management Area (WMA) in Lebanon; 2) Franklin Swamp WMA in Franklin; and 3) Oxbow Marsh in Cockaponset State Forest, in Haddam.

The project involves the replacement of deteriorating water control structures at these locations with newly designed structures. These structures will be placed in the middle of the dikes with the culvert inlet pipe extending at least 10 feet out in front. This new structure makes it difficult for beavers to hear where the water flow is occurring, thus deterring them from blocking the pipes with debris and thereby eliminating or at least minimizing nuisance related issues.

The installation of these structures will allow the adequate management of water levels in the impoundments, resulting in the proper mosaic of shallow water (1-3 feet deep) intermixed with wetland plants. This project will create 17 acres of high quality habitat at these sites.

Work on this project was conducted by staff from the DEP's Wetland Habitat and Mosquito Management Program.

*Paul Rothbart, Habitat Management Program*



(Top) DEP Wetlands Habitat and Mosquito Management Program staff installing an In-line design water control structure at Bartlett Brook WMA in Lebanon. (Bottom) This device allows the Wildlife Division to manage water levels at suitable depths for wetland dependent species. It also minimizes water flow impacts by nuisance beaver.

PHOTOS BY A. KILPATRICK, HABITAT MANAGEMENT PROGRAM

## Staff Notes

Inland Fisheries Division Technician, Justin Wiggins, who is involved with the Connecticut Aquatic Resources Education (CARE) Program, was recently elected to the Board of Directors of the Aquatic Resources Education Association (AREA) at the national meeting in Omaha, Nebraska, in October 2010. Although Justin comes from a fisheries management background, he has specialized in aquatic resources education for the last five years. Justin will serve a two-year term as the Northeast regional representative on the AREA Board.

## Posters to Help You Discover Connecticut's Wildlife

*Bats of the Eastern United States* is a 24" x 36" full-color poster that features 19 different species of bats, including ones found in Connecticut (\$5).

*Connecticut's Bald Eagles - Home Again* is a full-color, glossy 11" x 14" print celebrating the first eagle chicks born in Connecticut since the 1950s (\$6).

*Winter Picnics Are for the Birds* is a watercolor of birds commonly seen at backyard bird feeders (\$5).

*Connecticut's Wildlife - Worth the Watching* is a full-color 24" x 30" reproduction of a watercolor featuring 71 wildlife species hiding in and around a wetland habitat (\$6).

Proceeds from the sale of these posters go to the Nonharvested Wildlife Fund to help finance projects that benefit songbirds, bats, invertebrates, raptors, and other nongame wildlife. Take part in the conservation and management of Connecticut's nongame wildlife by ordering a poster today.

Please send a check or money order (payable to CT DEP Nonharvested Wildlife Fund) to: Discover Connecticut's Wildlife, Sessions Woods WMA, P.O. Box 1550, Burlington, CT 06013. Be sure to include your shipping information and indicate which poster(s) you would like and if the poster(s) will be sent as a gift.

## Attention Sportsmen: Say Thank You to Private Landowners with a Gift of Connecticut Wildlife!

A gift subscription to *Connecticut Wildlife* magazine is the perfect way to extend your appreciation to private landowners for allowing you to hunt or fish on their property. It's a gift that gives year round! Fill out the coupon on the next page to order a subscription. We'll take care of the rest, including sending a card to notify the recipient of your gift.

# Conservation Calendar

- Dec. 26-Mar. 16..... Observe bald eagles at the Shepaug Bald Eagle Viewing Area in Southbury. Observation times are Wednesdays, Saturdays, and Sundays between 9:00 AM and 1:00 PM. Although admission is free-of-charge, advance reservations are required. To make reservations for individuals, families, and groups, call toll-free at 1-800-368-8954 between 9:00 AM and 3:00 PM on Tuesdays through Fridays.
- Jan. 29..... Family Ice Fishing Derby at Coventry Patriots Park Lodge in Coventry, from 8:00 AM to 11:00 AM. Please pre-register by calling 860-424-3474. If you have never participated in ice fishing, you should take a Family Ice Fishing Class from the Connecticut Aquatic Resources Education (CARE) Program before attending the Derby. Visit the DEP Web site at [www.ct.gov/dep/calendar](http://www.ct.gov/dep/calendar) to obtain a schedule of classes and more information about the ice fishing derby.
- Feb. 26..... Seal Search Walk, starting at 11:00 AM at the Meigs Point Nature Center, Hammonasset Beach State Park in Madison. Come stroll the beautiful trails of Hammonasset and see if you can spot the seals offshore! A guided walk for all skill levels. Bring binoculars and dress for the weather. No dogs please! This free walk is sponsored by the Meigs Point Nature Center and Friends of Hammonasset. Registration is not required. For more information, call 203-245-8743; E-mail [rangeruss@hammonasset.org](mailto:rangeruss@hammonasset.org); or visit [www.hammonasset.org](http://www.hammonasset.org).

## 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 Millford St. (Route 69) in Burlington.

- Feb. 23..... Children's Program: An Introduction to Birds, starting at 9:30 AM. Natural Resource Educator Laura Rogers-Castro will introduce children to birds through a short slide show presentation and a visit to the bird feeding station at Sessions Woods. Children also will discover what the Wildlife Division is doing to conserve birds in Connecticut. Participants should meet in the exhibit area of the Conservation Education Center.
- Feb. 27..... Winter Tracking, starting at 9:00 AM. Wildlife Division Supervising Biologist Peter Good will lead participants on a search to find and identify the animal tracks seen at Sessions Woods. Peter will provide an introduction to wildlife tracks and signs on this hike to the beaver marsh. Participants should wear winter boots suitable for walking off trail in snow and be prepared for a two to three-mile excursion. This program will be cancelled if there is no snow.
- March 20..... Medicinal Mushrooms, from 9:30 - 11:30 AM. Join the Connecticut Valley Mycological Society during their annual meeting at Sessions Woods for a presentation on medicinal mushrooms. Author Gary Marley from Maine will be the speaker for the event. Refreshments will be served at 9:30 AM, followed by the speaker at 10:00 AM.
- April..... The Friends of Sessions Woods Annual Meeting will be held in April at a date and time to be announced. Stay tuned to *Connecticut Wildlife* or call the Sessions Woods office (860-675-8130) to find out when the meeting will be held and who will be the featured speaker.

## Programs at the Kellogg Environmental Center

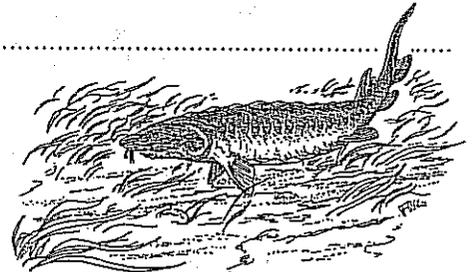
The DEP's Kellogg Environmental Center is located at 500 Hawthorne Avenue, in Derby. Call 203-734-2513 for more information. Visit the Calendar Events section of the DEP Web site ([www.ct.gov/dep/calendar](http://www.ct.gov/dep/calendar)) for a complete listing of programs offered at the center.

- Feb. 15..... Whip-poor-wills, starting at 7:30 PM. Wildlife Division Technician Shannon Kearney-McGee will give a slide presentation on whip-poor-wills and discuss their unique characteristics, conservation status, and the monitoring and research efforts that are being conducted by the Division. A donation of \$4.00/adult and \$2/student or child is requested. Registration is requested but not required.

## Hunting Season Dates

- Jan. 1-31..... Deer and turkey bowhunting season on private land in zones 11 & 12 (Fairfield County and shoreline towns).
- Jan. 17-Feb. 11..... Special late Canada goose season in the south zone only

# Connecticut Wildlife



## Subscription Order

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# CFL News

**Volume 15, Issue 3—December 2010**

## **2011 Membership Drive Begins**

Your membership dues and tax-deductible donations help CFL to provide educational information to our members through our web site, conferences and special mailings of books and magazines. We appreciate and need your ongoing support.

Act now to join or renew your membership in the CFL with the application found in this newsletter.

We appreciate your support of the Connecticut Federation of Lakes in 2011.

## **INSIDE THIS ISSUE**

- 2** Influencing Lake Smart Behavior  
Lake Association Grants
- 3** Lake Smart Home Award  
New Permitting Rules for Aquatic Pesticide Applications
- 4** Zebra Mussels in Lake Zoar & Lake Lillinonah
- 5** The Problem with Unmonitored Boat Launches
- 6** CT LCV Environmental Summit

## **President's Message**

The CFL Roadshow educational event in Jewett City on September 17th was a success thanks to the efforts of the CFL Board of Directors and especially our speakers: Kathy and Ken Klein of East Haddam, Bill Merson and Dave Artz of Crystal Lake, former Ellington First Selectman Mike Stupinski, and Robert Thorson, UConn professor, author, and columnist for the Hartford Courant.

The challenges for CT lakes and ponds are many. Number one – the CFL needs a grant or grants to hire a part-time executive director to better pursue its legislative agenda and advocacy goals. Please come forward with your suggestions and gifts.

At the December 8th Connecticut League of Conservation Voters' 11th Annual Environmental Summit, the CFL joined many, many of other earth friendly advocacy groups to share and organize around various legislative priorities. The CFL submitted some of its top concerns and desires:

1. Extend the MS4 stormwater control program to all towns in CT to protect waterbodies.
2. Make the establishment of DWMDs (decentralized wastewater management districts) less expensive and less difficult to approve so that water bodies can be protected years sooner.
3. Develop a state of Maine type boat sticker program to build a dedicated fund to enforce invasive aquatic weed laws and to better monitor state boat launch areas to prevent the spread of invasives by visiting boat traffic.

4. Provide funds for the DPH (Public Health) to write regulations for proper oversight and maintenance for AT systems placed in DWMDs when conventional alternatives cannot be constructed.

5. Promote a shoreline vegetation buffer zone program for both undeveloped and already developed waterfronts of all water bodies.

In closing, please take the LakeSmart Home Pledge and display your award for all to witness your lake stewardship activities. Encourage your neighbors to do the same, and join the CFL.

Bruce Fletcher



## **Influencing LakeSmart Behavior**

**By Bruce Fletcher**

Many actions can and do affect daily practices and habits. Economic incentives (like taxes, rebates, "cash for clunkers"), education, saturation marketing, guilt, fines and peer pressure are some. A recent Wall Street Journal article reviewed this issue and came to some conclusions that may be helpful to lake associations hopeful that larger numbers will follow more and more best management practices lest our lakes become eutrophic and green with invasives, weeds and algae.

Ms. Stephanie Simon, a WSJ staff reporter in Dallas, says that studies over the last 50 years clearly show the power of social norms. People are definitely influenced by the actions of friends, relatives, neighbors like the "Joneses," and even the herd. "The magic ingredient is Peer Pressure." "It tends to work on a subconscious level" because no one admits to "money see, monkey do." Social scientists agree that peer pressure works similarly in Europe and Asia; the "social norm proves equally influential across cultures."

An example of effective peer pressure comes from Robert Cialdini, PhD psychologist at Arizona State University who studied hotel guests' responses to variously worded appeals to reuse towels in their hotel rooms. Guests showed greater compliance to the suggested behavior as the wording of the request became more specific. The first card read, "Help Save the Environment" and "show your respect for nature;" the second said "Join Your Fellow Guests in Helping to

Save the Environment." In the third the appeal in which the wording was tweaked to say, "nearly 75% of guests who stayed in room 331 reused their towels" produced even better compliance.

So... lake associations can try by being less general and more direct in wording their messages and giving examples of groups exhibiting the desired behavior. For example, "ten (10) homes in neighbor X on lake XYZ have banded together to get their septic tanks pumped at a lower group rate so join in and save." Or: "Have you noticed the five lakeside residences that have recently planted shoreline buffers? As a result the water quality will improve as it has on lake ABC where 60% of riparian homes have these protective buffers."

Good luck in your efforts to influence.



## **Lake Association Grants**

Congratulations to Connecticut lakes who have been approved to receive grant funds to date. They include Alexander Lake, Amos Lake, Candlewood Lake, Coventry Lake, Great Hill Pond, Hitchcock Lake, Lake Basile, Moosup Pond and West Hill Pond. Examples of some of the work they are doing include storm drain stenciling, building lake association websites, building a lake association, and public education and outreach.

The deadline for applying for the lakes capacity building grants available to Connecticut Lake Associations has been extended. Please visit our website, [www.ctlakes.org](http://www.ctlakes.org), to find more information on qualifying projects and the application process. Contacts for questions or assistance in completing an application are also located on the website.



## Lake Smart Home Award

The CFL and the citizenry of Connecticut cherish its lakes and ponds. Pristine lake waters add beauty, increase property values, and provide recreational opportunities throughout the four seasons. These beautiful jewels within our environment are fragile and need our constant attention and help.

In its recent national assessment of US lakes and ponds, the EPA in 2009 reported that the majority of lakes are in worse shape now. Because of this, "the nation must commit itself to slowing, if not reversing, the creeping damage to our lakes."<sup>1</sup> Studies have shown that as water quality declines the value of shorefront property also decreases. It affects human health, fishing, town property tax income and the local economy that serves lake users throughout the year.

The future health of ponds and lakes depends on folks who visit and live on the shoreline and within the watershed. Besides following many other protective guidelines to keep lake water clean, people must also "stabilize eroding areas, reduce the use of chemicals, divert rainwater into vegetated areas and minimize lawns and impervious areas."<sup>2</sup> If people understand how their day-to-day activities affect their waterbody, and if they make a commitment to partner in ideal lake stewardship, the future of these waters will be healthier and safer. Everyone needs to "pitch in with the small things we do every day as good watershed citizens."<sup>3</sup>

Join in by taking the CFL LakeSmart Pledge and earn a sign that reads "LakeSmart Home" for display on your property. Put one on your dock or raft and another roadside so that boaters and drivers both will take notice. "The sign tells the world that you care and that you're doing your share."<sup>4</sup> This award is available to CFL members and prospective members. The CFL hopes to grow a larger membership and, more importantly, better lake stewardship statewide. Log on today to the CFL website([ctlakes.org](http://ctlakes.org)), review the best lake management practices, make the LakeSmart Home Pledge and indicate that you'd like to receive one or two "LakeSmart Home" awards from the CFL. Encourage your neighbors. Congratulations and thank you.

---

<sup>1</sup> Robert Thorson

<sup>2</sup> Maine DEP

<sup>3</sup> Eight Mile River

<sup>4</sup> Eight Mile River

## New Permitting Rules for Aquatic Pesticide Applications

**By Brad Robinson, Pesticide Program Supervisor,  
CT DEP**

In April of 2011, there will be new requirements for aquatic application of pesticides. This has come about due to a U.S. Circuit Court decision where it was ruled that these types of applications are subject to the authority not only of pesticide laws, but also of the Clean Water Act. Basically this means that control of aquatic weed and other types of water pests, with pesticides will require permits similar to those that industries and sewage treatment plants need to discharge their wastes.

This type of a permit, often referred to as a NPDES permit, is complicated and onerous to obtain, so EPA and many states, including Connecticut, are developing what is known as a general permit. This type of permit replaces an individual, site specific permit with a general set of requirements that need to be followed in order to comply with that permit.

Connecticut has been delegated the authority to issue these types of permits, so the general permit is being written by the DEP rather than the federal EPA. The plan is to harmonize the current permit requirements under the state pesticide control act with the new general permit to the greatest extent possible. For the most part, if one complies with the current pesticide permit requirements, the new permit requirements will be satisfied. There will be some additional requirements for larger areas treated, but the exact threshold between small and large has not yet been determined. In addition, some entities currently exempt from permit requirements, such as water utility reservoir treatments, will come under the new general permit requirements.

DEP will solicit input through an informational hearing, and the general permit will be subject to a public notice, and if requested, a public hearing, where additional concerns may be expressed. The current plan for publication of the draft is early winter, with the hearing about a month later. The final permit needs to be in place before April of 2011 or else individual permits will be required. It is important to note that this is a nationwide process, and is being driven by the court's repudiation of an EPA rule that stated that aquatic applications of pesticides are not subject to

The Clean Water Act permitting requirements. The EPA is drafting its general permit in such a way so as to satisfy the requirements of the Clean Water Act while keeping the regulatory burden as light as possible. Connecticut is following this basic philosophy as well.



## **DEP Reports Zebra Mussels Discovered in Lake Zoar and Lake Lillinonah**

### **First New Confirmation of this Invasive Species in Connecticut Since 1998**

The Connecticut Department of Environmental Protection (DEP) today announced that the aquatic invasive species, Zebra mussel, has been discovered in Lake Zoar and Lake Lillinonah, two large impoundments on the Housatonic River in western Connecticut.

This is the first report of a new infestation since zebra mussels were first discovered in Connecticut in 1998 in East and West Twin Lakes in Salisbury. Only small numbers of the zebra mussels have been discovered so far, and it could take a relatively long period of time for them to have an impact. At this point it is uncertain if the mussels found in Lakes Lillinonah and Zoar are the result of downstream migration from upstream sources or the result of a separate introduction.

"This is a disturbing discovery," said DEP Commissioner Arney Marrella. "Only small numbers of the zebra mussels have been discovered so far, and it could take some time before we see the impact they may have. The zebra mussels have the potential, however, to do much damage by displacing native mussels, clogging power plant and industrial water intakes, affecting public drinking water distribution systems and disrupting aquatic ecosystems."

"Zebra mussels can be spread from one water body to another through boating and fishing activities and Connecticut's boating and angling communities have worked closely with us the past 12 years to prevent this from happening," Commissioner Marrella said. "With this latest news, it is now time to redouble our efforts to make certain everyone on our waters is aware of common sense precautions they can take to help contain the spread of zebra mussels."

The zebra mussel is a black and white-striped bivalve mollusk, which was introduced into North American waters through the discharge of ship ballast water. Since its discovery in Lake St. Clair (Michigan/Ontario) in 1988, the zebra mussel has spread throughout the Great Lakes, the Mississippi River system and most of New York State. Zebra mussels were first found in the Housatonic River in 2009 when they were discovered in Laurel Lake in Lee, Massachusetts, and subsequent sampling found them in the lake's outflow into the mainstem river.

Zebra mussels have fairly specific water chemistry requirements, and are limited to waters with moderate to high calcium concentrations and pH. In Connecticut, suitable habitat for zebra mussels is mostly limited to a number of water bodies in western portions of the state.

The mussel can foul boat hulls and engine cooling water systems and clog power plant, industrial and public drinking water intakes. Sites that may be affected on the Housatonic River include the hydroelectric facilities at Falls Village, Bulls Bridge, Lake Lillinonah, Lake Zoar, Lake Housatonic, and the pump-storage facility at Candlewood Lake.

"DEP is seeking the continued active cooperation of boaters and anglers to follow practices that help prevent the spread of zebra mussels and other aquatic invasive species," said Commissioner Marrella. "We also encourage the public to make DEP aware of any indications of zebra mussels or any other invasives they may have seen."

The DEP Boating Division is posting signs at Lakes Lillinonah and Zoar alerting the public to the presence of the zebra mussels in those waters and listing steps they should take to prevent them from spreading. DEP is also posting signs at nearby Lakes Candlewood and Housatonic, as well as Squantz Pond, which are all interconnected and have water qualities making them susceptible to the zebra mussels. These signs will alert the public to the fact that this invasive species has been detected in nearby water bodies and that proper precautions should be taken.

Actions anglers and boaters can take to prevent the spread of zebra mussels include:

### Before Leaving A Boat Launch:

Completely drain all water from the boat, including bilge water, livewells and engine cooling systems.

Inspect your boat, trailer, and equipment. Remove and discard all aquatic plants and animals you may have picked up while on the water.

### At Home:

Rinse boat, trailer and equipment with tap water. A bleach solution can be used to clean livewells. Dispose of all rinse material properly!

### When Fishing:

Do not dump your bait bucket or release live bait! Avoid introducing unwanted plants and animals. Unless your bait was obtained on site, dispose of it in a suitable trash container.

Do not transport fish, other animals or plants between water bodies. Release caught fish, other animals and plants only into the waters from which they came from.

The DEP will continue to monitor for the presence of zebra mussels at these lakes and others throughout the state. Individuals wishing to report possible sightings of zebra mussels and other aquatic nuisance species can contact DEP's Inland Fisheries Division at 860-424-3474. More information on zebra mussels and other aquatic nuisance species can be found on the DEP website ([www.ct.gov/dep](http://www.ct.gov/dep)) in the:

#### 2010 CT Angler's Guide:

([www.ct.gov/dep/lib/dep/fishing/anglers\\_guide/anguide.pdf](http://www.ct.gov/dep/lib/dep/fishing/anglers_guide/anguide.pdf))

#### 2010 CT Boater's guide:

([www.ct.gov/dep/lib/dep/boating/boating\\_guide/boaterguide.pdf](http://www.ct.gov/dep/lib/dep/boating/boating_guide/boaterguide.pdf)),



## **The Problem With Unmonitored Boat Launches**

### **An Editorial by Bruce Fletcher**

Another aquatic invasive weed was found in Bashan Lake (276 acres) of East Haddam in 2010 near the state boat launch. Now fanwort (*Cabomba caroliniana*), already well established in nearby Pickerel Lake, Lake Hayward and Moodus Reservoir, is growing in Bashan Lake along with variable milfoil (*Myriophyllum heterophyllum*). Most likely fanwort was carried into Bashan on boats and trailers using the state boat launch. Now the Bashan Lake Association faces the additional expense of fighting fanwort. Most state lakes and ponds with public launches have or will suffer this same fate of multiple invasive infections. The transport of invasives by unknowing or less than diligent and vigilant boaters using the unsupervised state boat launches is the all too common scenario responsible for the spread of invasives. Controlling established invasives is so expensive that the state, towns and lake associations will struggle to keep up.

Admittedly while some boaters are not careful enough, the State must be considered partly responsible because these launch areas are open full time all year-round and are never tended by inspectors to check trailers and boats for weeds. Until the State pays for inspectors doing mandatory inspections during open launch hours and /or until the State will pay for all invasive weed control, the prudent course of action is to close the state launch ramps. Perhaps it would be wise for the State to put towns, lake authorities and lake associations in charge with limited open hours and with inspection and enforcement authority and maybe even high pressure wash stations. Perhaps the towns or lake associations could charge every boat launch user a fee to cover the expenses. Since the prevention of spread is less expensive and easier than the trying to control established invasive infestations, a fresh new look at controlling invasives is needed. How about closing launches until an inspection program has been established? What suggestions do you have? Please contact the CFL with your ideas. Thank you.



## **CTLCV 11th Annual Environmental Summit - December 8, 2010**

**By Bruce Fletcher**

About 30 legislators and nearly 150 environmental advocates and public officials rallied at the Jaycees Boathouse to discuss environmental issues and initiatives and goals in today's economic and political reality. The conference was organized by the Connecticut League of Conservation Voters (CTLCV). David Sutherland, Director of Governmental Relations for the Nature Conservancy, told environmental advocates not to apologize for these tough economic times, but to speak up in "the right tone of voice" with a wise, well thought out unified message reached by coalition building and constructive dialogue among groups with different viewpoints.

The Keynote Address was by Yale Professor Dan Esty, who recently published Green to Gold, which he called a "playbook for businesses" for dealing with environmental problems and goals. Since the U.S. is to innovation and technology what Saudi Arabia is to oil, the U.S. can solve our huge problems soon if the government encourages with incentives. The government must speed up permitting, enact tougher enforcement and incentivize the private sector. He feels there should be a price to pay for doing environmental harm. Charging for pollution and similar harms will encourage innovations and raise revenue to pay for remedial programs. Esty hopes a present day Conservation Corps modeled after the 1930's CCC can be developed to install insulation and better lighting, to clean up environmental messes, to teach of energy efficiencies, etc.

State Representative Vicky Nardello spoke out against the raiding of designated environmental funds. Re-establishing a State Department of Energy is being advocated by former State Rep. Jessie Stratton, currently the Director of Government Relations for Environment Northeast.

Programs dealing with stormwater runoff, establishing buffers, increasing funding to grow the DEP, and restoring the Clean Water Funds are among the priorities of Senator Ed Meyer and State Rep. Dick Roy, the co-chairs of the Environmental Committee.

Fifteen (15) Initiatives for improving Connecticut's Water were highlighted as well as many regarding Land Use and Conservation and Development. Most of

these reforms would better the health of our lakes and ponds, and therefore match up nicely with the CFL's legislative "agenda." CFL's Penny Hermann and Bruce Fletcher attended the Land Use and Water focus groups respectively.

In Russell Brenneman's [CTLCV Education Fund Chair ([www.conservationeducation.org](http://www.conservationeducation.org))] closing remarks, he encouraged all to keep trying to improve our fragile environment – don't be guilty of doing nothing "while Rome is burning."



## **About the Connecticut Federation of Lakes**

**By Bruce Fletcher**

Everyone agrees that healthy lakes are highly valued natural assets whose beauty and recreational offerings make them irresistible to so many each season of the year. Towns with attractive lakes annually collect higher property tax revenues and benefit each year from months of "trickle down economics". These precious resources are fragile, and need constant monitoring and preventive and corrective programs. So it is no wonder that individuals, families, lake associations, towns and states proactively work to help their lakes and recognize that unprotected lakes may become damaged beyond repair.

The Connecticut Federation of Lakes (CFL) was formed in 1995 to help individuals, steering committees and established lake associations with needed guidance, advice and support. In addition, the CFL fosters an alliance of Connecticut's many pond and lake protective organizations so that Connecticut lakes can speak with a unified voice.

The CFL board members are dedicated volunteers who have first hand experience in dealing with lake and association issues. Since some board members are professional lake managers and others have masters & doctorate credentials in the science of limnology, the CFL can and does help. Recently the CFL helped pass legislation geared to curb the establishment of invasive aquatic plants in Connecticut. Boat launch monitoring, on site waste water management guidelines, and model municipal

regulations and ordinances for watershed protection are current initiatives.

The CFL publishes newsletters for members full of technical information, lake profiles, management tips and news from the Connecticut Department of Environmental Protection (CT DEP). Chuck Lee of the DEP, an environmental analyst in the Bureau of Water Protection and Land Reuse, 860-424-3716, attends all the CFL Board meetings. The CFL works with the Governor to designate the annual Lakes Awareness Week and hosts educational conferences for CFL members and friends. In addition the CFL is an active full participant in NEC-NALMS (the New England Chapter of the North American Lake Management Society). We participate in their programs annually and host the 3 day conference on a rotating basis.

Lakes in Connecticut need to receive more preventive medicine. In other New England states the citizenry and legislators have pushed through bigger and better programs for lakes. If you treasure your lake, please join the CFL. With your help the CFL will continue to make a difference locally and statewide.



### **Contact the CFL**

For more information regarding the Connecticut Federation of Lakes, visit our web site at [www.ctlakes.org](http://www.ctlakes.org), contact [Penny@Ctlakes.org](mailto:Penny@Ctlakes.org), or write to P.O. Box 216, Windsor, CT 06095.



### **CFL Board**

Bruce Fletcher, President – Bashan Lake  
Larry Marsicano, Vice President – Candlewood Lake  
Penny Hermann, Secretary, – Lake Williams  
George Walker, Treasurer - Lake Lillinonah  
George Benson  
John Burrell, -Columbia Lake  
Richard Canavan – Limnologist  
Mary Ellen Diluzio - Bashan Lake  
George Knoecklein – Limnologist  
Bruce Lockhart, - Certified Lake Manager  
Larry Marsicano, - Director, Candlewood Lake  
Chris Mayne, - Certified Lake Manager  
Tom McGowan, - Lake Waramaug  
Mieke Schuyler

### **Newsletter Committee**

The Newsletter Committee welcomes your input and your articles. Please send suggestions or articles to CFL, P.O. Box 216, Windsor, CT 06095 or e-mail to [Penny@Ctlakes.org](mailto:Penny@Ctlakes.org).

The newsletter committee includes:

Bruce Fletcher  
Penny Hermann  
George Knoecklein

## CFL Application - 2011

Yes! I want to be a member of the CFL!

(Please make check payable to Connecticut Federation of Lakes)

Individual (\$25/year)

Lifetime - for individuals only (\$500)

Lake Association (\$150/year)

Tax Deductible Donation

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Telephone \_\_\_\_\_

e-mail \_\_\_\_\_

Whom may we thank for your referral?

\_\_\_\_\_

Mail to: CFL, P.O. Box 216, Windsor, CT 06095

### Calendar

Upcoming Board Meetings - 3<sup>rd</sup> Wednesday of January, March, April, May, June, September, and October 7PM at Northeast Utilities, Newington, CT

Connecticut Federation of Lakes  
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