AGENDA

Mansfield Conservation Commission
Regular Meeting
Wednesday, January 16, 2013
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. December 19, 2012

5. **New Business**
   a. IWA Referral: W1510 - Sauve Subdivision- 29 North Windham Road
   b. PZC Referral: PZC File #1311- Sauve Subdivision- 29 North Windham Road
   c. Mansfield Tomorrow | Our Plan ▸ Our Future
   d. Other

6. **Continuing Business**
   a. Protecting Dark Skies in the Last Green Valley
   b. Water Source Study for the Four Corners Area/Environmental Impact Evaluation (EIE)
   c. Swan Lake Discharge Mirror Lake Dredging and other UConn Drainage Issues
   d. UConn Agronomy Farm Irrigation Project
   e. Eagleville Brook Impervious Surface TMDL Project
   f. UConn Hazardous Waste Transfer Station
   g. Ponde Place Student Housing Project
   h. CL&P "Interstate Reliability Project"
   i. Other

7. **Communications**
   a. Minutes
      - ☐ Open Space (12/18/12)
      - ☐ PZC (12/17/12 & 1/7/13-not available yet)
      - ☐ IWA (1/7/13-not available yet)
   b. Inland Wetlands Agent Monthly Business Report
   c. November/December 2012 CT Wildlife
   d. November 2012 CFL News
   e. 12-19-12 Letter from CT Land Conservation Council
   f. Other

8. **Other**

9. **Future Agendas**

10. **Adjournment**

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 19 December 2012
Conference B, Audrey P. Beck Building
(draft) MINUTES

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

1. The meeting was **called to order** at 7:34p by Chair Quentin Kessel. Alternates Aline Booth and Joan Buck were designated voting members for this meeting. Frank Trainor has had to resign for personal reasons. Michael Soares, a consultant for land trusts who has a background in geology and environmental education, was introduced as a prospective member of the Commission. {At the end of the meeting, Mr. Soares indicated that he was interested in joining the Commission.}

2. The **draft minutes** of the regular monthly meeting on 14 November 2012 and the special meeting of 27 November 2012 were approved as written.

3. **IWA referrals.**

a. **W1508 (Shafer, 45 Echo Rd).** Additions are proposed on all sides of this house on Echo Lake, including a new garage on the north side, screened porch & deck on the west (lake) side, and four-season room on the south side. The garage will require a foundation; the other additions will be on concretepylons. The house is quite close to the lake; the new porch would be 47 ft from it. After some discussion, the Commission agreed unanimously (**motion:** Silander, Buck) to comment that:

> The Commission is concerned about the potential for significant negative impacts on Echo Lake from (1) sedimentation during construction (grading would be required on the slope that drops from west side of the house to the lake a short distance away) and (2) nutrient loading from septic leaching (increasing the living space of this house by one or two rooms may increase the amount of sewage generated, and Echo Lake is a low-nutrient pond that is particularly sensitive to nutrient loading).

b. **W1509 (Cone, 260 Coventry Rd).** A 30x40 ft addition to a garage, which houses the Cone's Christmas Tree shop, is proposed to increase retail space for seasonal use. The addition would rest on a concrete slab. While it would be farther from the brook along Coventry Rd. than the existing garage, runoff from the site down a steep slope to the SW could potentially deliver sediment to the brook during construction. The Commission agreed unanimously (**motion:** Silander, Booth) that:

> The wetlands impact of this project appears to be minimal *provided* sedimentation and erosion controls sufficient to prevent soil from washing into the brook during heavy rain are in place during construction and thereafter until the area is stabilized.

4. **Luciano letter.** The Commission received a copy of a letter from Tulay Luciano to Sen. Don Williams urging passage of legislation declaring UConn to be a water company and, accordingly, subject to state regulations that limit what water companies may do with their land. Such legislation was approved in 2003 by the Environment Committee but died when the Committee

on Higher Education nixed it at the behest of UConn. Facchinetti asked whether water-company status for UConn would limit the authority of the water board that has been proposed to oversee new water supplies for UConn and Mansfield. Kessel thought not: water companies and water boards have different functions. After wandering into tangential issues (see item 5), the Commission agreed unanimously (**motion:** Buck, Silander) to urge, in light of concerns that new water sources might permit UConn to abandon the well-fields it now uses, the Town Council to look carefully at Ms. Luciano's letter and the bills to which she refers.

5. Water Supply EIE. (a) Buck asked whether a regional water coordinating commission must approve any water supply plan, as alleged at the public hearing on the UConn Water Supply EIE. Kessel replied that it's supposed to work this way but that at present there is no regional commission for this area and that the Department of Energy and Environmental Protection has no money to set one up. (b) Kessel reported that Simsbury, Canton, and other towns in the Metopolitan District Commission (MDC) service area will object to MDC's proposal to supply water to UConn, since it involves an interbasin transfer of water. (c) The Town is requesting that all comments on the EIE from Town Commissions and Committees be included in the hearing record; the Commission's comment is attached.

6. Frank Trainor. The Commission agreed to send to the Town Council (via Town Manager Matt Hart) a tribute to long-time member Frank Trainor, so that his service to the Commission and the Town might be more widely recognized:

> The Conservation Commission regrets that Frank Trainor has had to resign for personal reasons after twenty years of service. During his twenty years of service on the Commission, he made many valuable contributions to the Town. Frank is truly "a gentleman and a scholar," and his knowledge of conservation matters, especially his expertise on water issues, will be sorely missed. He is known internationally for his scholarly research on freshwater algae and remains active in the field. Frank taught at UConn for 40 years, and has received a number of distinguished awards, including a Fulbright Scholarship for research in Sweden, UConn's Distinguished Faculty Award for Excellence in Teaching, and an honorary degree from Providence College.

7. Hazardous Waste Transfer Station. Kessel reported that maps for UConn's Tech Park show a site there for a relocated Hazardous Waste Transfer Station. However, the committee in charge of recommending a site has yet to announce any siting decision. Silander wondered why the university is planning a Tech Park on undeveloped land when it could instead use the Mansfield Training School (MTS) property (where some tech enterprises are now located). Kessel suggested that renovating or replacing old buildings may be too expensive. He also noted that the Transfer Station could not be relocated to the MTS property, since federal regulations require that such facilities be on property contiguous to that on which the waste is generated.

8. HUD planning grant. The Town has obtained a grant from the U.S. Department of Housing and Urban Development (HUD) to update the Plan of Conservation & Development and zoning regulations pursuant to it. These documents will be written by outside consultants using input from four working groups: Agriculture, Economic Development, Housing, and Zoning. Noting that Conservation seems to have been left out of the planning process, Kessel stressed the importance of getting people with a conservation perspective appointed to the working groups. Booth expressed interest in Zoning, Facchinetti in Housing, and Kessel, Lehmann, & Silander in Economic Development. The process begins in January and will continue for eighteen months.

9. Agronomy Farm. Facchinetti reported that the Storrs Heights Neighborhood Association is still trying to get UConn to divulge information on the nature of experimental chemicals being used at the Agronomy Farm.

10. CL&P Interstate Reliability Project. The Army Corps of Engineers has issued a "Finding of No Significant Impact" regarding CL&P's plan to run another 345kV transmission line through Mansfield Hollow. Its deliberations (concluding that the proposal was "non-contrversial") were apparently not informed by the objections the Town had communicated to the Connecticut Siting Council. Matt Hart has requested a public hearing on the Finding.

11. Adjourned at approximately 9:05p. Next meeting: 7:30p, Wednesday, 16 January 2013.

Scott Lehmann, Secretary, 21 December 2012.

Attachment: Comment on the Draft Water Supply EIE.

TO: Mansfield Town Council
FROM: Mansfield Conservation Commission
DATE: November 28, 2012

SUBJECT: Public Hearing on the Water Supply Environmental Impact Evaluation

Rank ordered by importance, The Mansfield Conservation (CC) makes the following recommendations and comments (ES-12 and 9-4 type page numbers referred to are those in the EIE, while the CDP designation is for the page numbers in the Draft 2013-2018 Conservation & Development Policies: A Plan for Connecticut):

1-A. From the point of view of conservation and best management practices, the WWW is clearly the best option. One reason for this is the State's environmentally-based hesitation to approve inter-basin transfers of water by water companies. In the case of the WWW, the inter-basin transfer would be from the Fenton/Mt. Hope/Natchaug River watersheds into the Willimantic River watershed (as is the current transfer of water from the University's Wells A,B,C, and D). The reason for this preference by the CC, is that all four of these rivers join to become the Shetucket River, i.e., this diversion results in only a detour of the water from its natural course, with the water pumped from the first watershed rejoining the Shetucket waterflow for which was destined in the first place. This position is consistent with the State's draft for the 2013-2018 Conservation & Development Policies: A Plan for Connecticut (CDP Growth Management Principles # 4 and #5, pp 17-22).

1-B. For the reasons in 1-A, the CC ranks the CWC as the second option and the MDC option a distant third. Other reasons include the capital costs of pipelines from more distant sources, the energy costs of pumping through the greater mileages of pipes, and the deterioration of water quality with the distance pumped. The MDC option is not consistent with many of the policies presented in the CDP Growth Management Principles #4 (CDP 17) and #5 (CDP 20). Nor is it consistent with the ecological and conservation practices utilized by a number of conservation organizations who attempt to base their planning activities on a watershed basis.

1-C. The CC is concerned with the seemingly uneven evaluations of the WWW, CWC, and MDC. There are several examples of this:

a) Under "Assessment of Feasibility": For WWW (9-1) "In the event that a new diversion permit could be obtained...." For MDC there is no mention of the much more serious diversion permit that will be required in their assessment (8-1).

b) Under the concluding "Findings": For WWW(9-40) "...A feasible alternative that may result in impact to downstream aquatic habitat under low stream flow conditions." This will be true for a relatively short reach of the Natchaug River (the already impaired portion between the WWW dam and the Shetucket River), but as the EIE notes, appropriate management of the Mansfield Dam could overcome this shortcoming. It is not clear to the CC that the difficulties of the dam management cannot be overcome, even if, as Jason Coite implied (the November 15, 2012 Four Corners Sewer and Water Committee meeting), "It might take an act of Congress." The CC does not understand the negativity associated with the WWW alternative.

The EIE is seemingly unaware of the Army Core of Engineers approval of a hydroelectric generator installation below the dam that should be providing electricity within a year. It is assumed there will be a constant flow through the associated turbine into the WWW reservoir. What will this flow be and how does it compare with WWW's current water usage and the additional amount that UConn needs?

Contrary to the findings statement for the WWW alternative, for the MDC proposal (8-62) the finding is that it "... will not result in significant environmental impact." Eileen Fielding, Executive Director of The Farmington River Watershed Association has expressed concern to the CC chair about this statement. The CC does not understand how the major inter-basin transfer of water proposed by the MDC would not have a significant environmental impact.

c) Another example of the apparent prejudice against the WWW in the EIE may be found in the Executive Summary (ES-8,9). Six cumulative Impacts are listed, including the interbasin transfer of water, but the WWW seems to be singled out because of the diminution of flow in a relatively short reach of Natchaug River, while the CWC and MDC are said to apparently be able to minimize their cumulative impacts – certainly the more serious interbasin transfer of water proposed by the MDC will be difficult to minimize!

2-A. The CC is concerned with the University (Jason Coite at the November 15, 2012 Four Corners Sewer and Water Committee meeting) apparently viewing as positive, the possibility of the University being able to shut down their current pumping operations along the Willimantic and Fenton Rivers. There are a number of reasons for this concern:

a) It would be contrary to one of the positive benefits of an outside water source listed in the EIE (ES-12): to "Provide additional redundancy and flexibility to the University of Connecticut water system."

b) The Town of Mansfield should not be at the mercy of a sole distributor for a commodity as valuable as drinking water is. The potential problems of such an arrangement are manifold, including the loss of the source (broken pipeline?) or contamination of the water, the financial implication of such a monopoly, and the general loss of control of the Town's water supply.

c) The possibility of shutting down the Willimantic and Fenton River well fields points out a shortcoming of the EIE. It does not investigate the consequence of shutting down one, or both, of the existing well fields, including secondary development.

2-B. In the event the University does choose to abandon its Willimantic and Fenton River

pumping stations, the Town should be permitted to operate them, perhaps utilizing the CWC, as the University does at present. The current arrangement is ironic, in that the University pumps its water from Mansfield aquifers and then limits what they are willing to apportion to the Town. The CC notes that as part of the EIE, a great effort was made to find suitable well sites at several locations in Mansfield, but none were found. It would make little sense to abandon the very productive current wells.

3. A governing body, such as a Water Board, should be formed to establish and oversee the policies that will govern not only the existing water sources but the new supplier of water to the Town and the University. This board must have significant representation from not only the Town and the University, but from the Mansfield citizens, as well. In the event that the WWW is chosen, an expansion of their existing Water Board might suffice for this.

4. The EIE's assessment of alternatives is driven by water demand projections from UConn and the Town, but these projections not evaluated in this study. Considering numbers presented in earlier University Water Plans it may be dangerous to accept these numbers at face value. (In the late 1990s or early 2000s UConn's Water Plan numbers indicated little or no growth, while at the same time they were significantly increasing UConn's enrollment.) Some numbers are puzzling, such as the PDD with 15% MOS value for "Committed Water Supply Demand" in Table ES-3: if calculated in the same manner as the other values in this column, it would be 425,500 gpd instead of 730,000 gpd. More generally, the basis for the projections is not clear. Also unclear is whether any consideration has been given to managing demand (by demand pricing, requiring water conserving fixtures in new construction and renovation, etc.) rather than simply supplying whatever amount of water is demanded.

5. The CC is offended by the situation Mansfield finds itself in because of wording in the MDC charter (3-2). A very small portion of Mansfield is apparently more than 19 miles, but less than 20 miles from the State Capitol in Hartford; above the 20 mile limit, MDC could not supply water to Mansfield. As it is, the MDC can supply water to the inhabitants of Mansfield and to any state facility located within Mansfield. If it were to supply water only to Mansfield residents, the Town of Mansfield would be required to pay for the Hartford to Mansfield pipeline, but the cost of constructing the pipeline to a state facility (UConn) would be borne by the taxpayers of the State of Connecticut. It is unclear to the Mansfield CC how the costs might be apportioned if UConn chooses the MDC option, in spite of the MDC proposal's environmental shortcomings. Would UConn be able to continue to supply water to the Town of Mansfield without Mansfield having to pay for a share of the pipeline?

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

FOR OFFICE USE ONLY	
File #	1510
Fee Paid	$360-
Date Received	1-2-13

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 James Sauve

Mailing Address 35 Sherwood Lane

Marlborough, Ct. Zip 06447

Telephone-Home 860-214-8643 Telephone-Business _____

Title and Brief Description of Project

Sauve Subdivision - 3 Lot Open Space Subdivision

No activity proposed in area of wetlands

Location of Project 29 North Windham Road, Mansfield, Ct.

Intended Start Date _____

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 1/3/13

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 NONE

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

A 10.74 ACRE PARCEL PROPOSING 3 SINGLE DWELLING LOTS INCLUDING CONSTRUCTION OF A COMMON DRIVEWAY +/- 525 FEET IN LENGTH. 4.1 ACRES OF THE PARCEL TO BE DESIGNATED TO AGRICULTURAL USE, SEPTIC DESIGNS WILL BE 12" GALLERIES. THERE IS NO PROPOSED ACTIVITY WITHIN AREA OF WETLANDS. THE CLOSEST LINEAR DIMENSION TO A WETLAND IS +/- 90' ON LOT 2, PROPOSED 12" GALLERIES, NO WETLANDS WILL BE DISTURBED. MINIMAL ACTIVITY ON LOT 2. DRAIN TOWARDS WETLANDS. FILL ONLY ANTICIPATED FOR DRIVEWAY CONSTRUCTION. TYPICAL CONSTRUCTION EQUIPMENT SHALL BE USED FOR INDIVIDUAL HOUSE LOT CONSTRUCTION I.E.; SMALL BACKHOE FOR FOUNDATIONS ETC. PROPOSING ADEQUATE SOIL EROSION AND SEDIMENTATION INSTALLATION. KNOWLEDGE OF CONSTRUCTION COMPLETION DEPENDENT UPON SALE OF INDIVIDUAL HOMES. NO KNOWLEDGE OF PREVIOUS WETLAND APPLICATIONS.

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

a- NONE b- LOT 1 PROPOSES 0.4 ACRES DISTURBANCE WITHIN 150' OF EDGE OF WETLANDS TO INCLUDE SEPTIC, HOUSE AND LIMIT OF CLEARING. LOT 2 PROPOSES 0.1 ACRES (SAME AS ABOVE) LOT 3 PROPOSES NO ACTIVITY IN OR NEAR WETLANDS (150' REVIEW AREA)

3) Describe the type of materials you are using for the project: CT DOT MODIFIED RIP RAP BANK RUN GRAVEL AND PROCESSED BASE MATERIAL AS NEEDED FOR INSTALLATION OF 16' COMMON DRIVEWAY AND 12' WIDE INDIVIDUAL HOUSE LOT DRIVEWAYS

a) include ***type*** of material used as fill or to be excavated NO EXCAVATION PROPOSED (SEE ABOVE)

b) include ***volume*** of material to be filled or excavated TOTAL ESTIMATED FILL FOR DRIVEWAYS APPROXIMATELY 470 CUBIC YARDS

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

SILT FENCE TOGETHER WITH STACKED HAY BALES PROPOSED SUFFICIENTLY AROUND ALL AREAS OF ACTIVITY.

Part D - Site Description

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

PARCEL IS HILLY AND WOODED, WELL DRAINED.

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.

ALTERNATIVE DESIGNS WERE CONSIDERED. FINAL DESIGN WAS DISCUSSED WITH TOWN PRELIMINARILY.

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 DEC. 21, 2012, NO REVISIONS AS OF THIS APPLICATIO
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
U.S. of A.	141 MANSFIELD HOLLOW RD., MANSFIELD, CT. 06250
JAMES & JEAN BELL	552 BASSETTS BRIDGE RD. MANSFIELD, CT. 06250
ALLEN & DARLENE RIQUIER	13 BATES RD. N. WINDHAM, CT. 06256
U.S. of A.	N. WINDHAM RD. MANSFIELD, CT. 06250

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

Part I - Additional Notices, if necessary

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

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

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

Part J - Other Impacts To Adjoining Towns, if applicable

1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site?___Yes_✓_No___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.

✓ $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.

_____ 1/2/13

Applicant's Signature Date

file # 1311
filing date 1-2-13

MANSFIELD PLANNING & ZONING COMMISSION
APPLICATION FOR SUBDIVISION OR RESUBDIVISION APPROVAL

Name of subdivision Sauve Subdivision

Name of subdivider (applicant)
James Sauve Phone # 860-214-8643
(please PRINT)
Address 35 Sherwood Lane Marlborough Ct. 06447
(street) (town) (state) (zip)

Signature _____ (owner ✓)
(optionee _____) Date 1-2-13

OWNER (IF OTHER THAN SUBDIVIDER)

Name SAME Phone # _____
(please PRINT)
Address _____
(street) (town) (state) (zip)

Signature _____ Date _____

FEES
See Town Council-approved Fee Schedule & Eastern Highlands Health District Review Fee Schedule (Subdivisions will not be reviewed by Eastern Highlands Health District unless an Application for Plan Review has been submitted)

SUBDIVISION DATA
Location: 29 North Windham Road, Mansfield, Ct.

Zoning district RAR 90

Total # of acres 10.74 +/-
Total # of lots 3

EXTENSION OF TIME

Pursuant to Section 8-26d, subsection (b) of the Connecticut General Statutes, the undersigned applicant hereby consents to an extension of time within which the Planning and Zoning Commission is required by law to approve, modify and approve or disapprove a subdivision plan known as

_____

and located at/on _____

It is agreed that such extension of time shall not exceed 65 days and it is understood that this extension of time is in addition to the first 65-day period after the receipt of the application by the Planning & Zoning Commission.

Signature _____ Date _____

Posted: 2006 11 15

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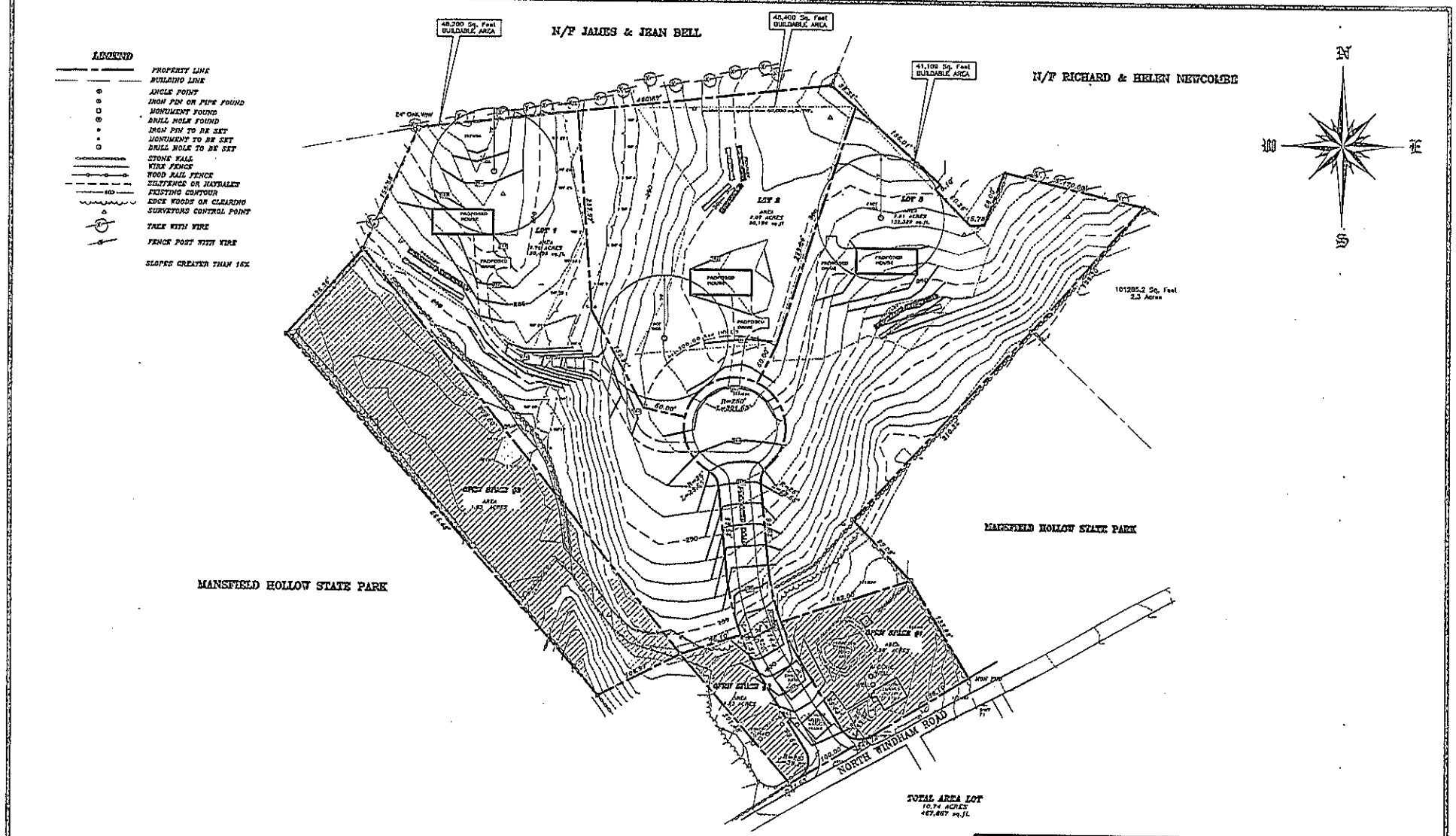


MAP REFERENCE:

"BOUNDARY SURVEY MANSFIELD HOLLOW LAKE", DATED 6/27/00, REVISED BY ARMY CORPS OF ENGINEERS.

GRAPHIC SCALE

50 0 50 100

(IN FEET)
1 inch = 50 ft.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS DRAWING IS NOT VALID UNLESS IT BEARS AN EMBOSSED OR INK SEAL AND SIGNATURE OF A LICENSED LAND SURVEYOR.

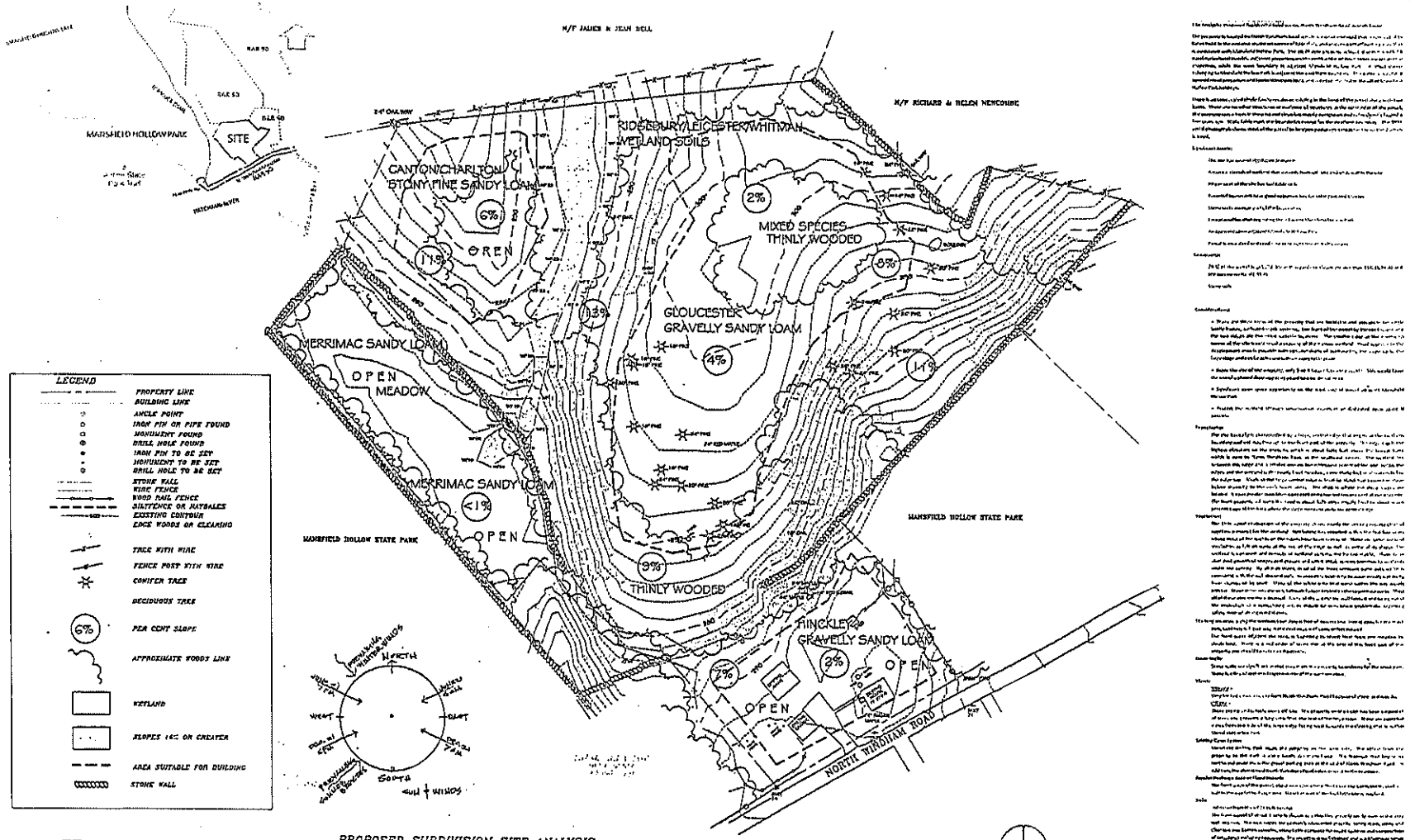
ROBERT W. HELLSTROM, L.S. #15626

NO.	DATE	DESCRIPTION
		REVISIONS

ROB HELLSTROM
LAND SURVEYING LLC
32 MAIN STREET
HEBRON, CT.
(860) 228-9463
(860) 228-1260 (FAX)
P.O. BOX 497
COLUMBIA, CT. 06237-0497

PRELIMINARY SUBDIVISION LAYOUT
- PREPARED FOR -
JAMES SAUVE
YIELD PLAN
29 NORTH WINDHAM ROAD
MANSFIELD CONNECTICUT

SHEET NO.	1 OF 1	JOB NO.	2011-020
DATE	MAY 2, 2012	BY	RWHELLSTROM H.
SCALE	1" = 50'	PLAN NO.	SAI 1020 YIELD



ROB HELLSTROM
LAND SURVEYING LLC
32 MAIN STREET
HEBRON, CT.
P.O. BOX 497
COLUMBIA, CT. 06237-0407

PROPOSED SUBDIVISION SITE ANALYSIS
JOHN ALEXOPOULOS, LANDSCAPE ARCHITECT
CT LIC. # 550

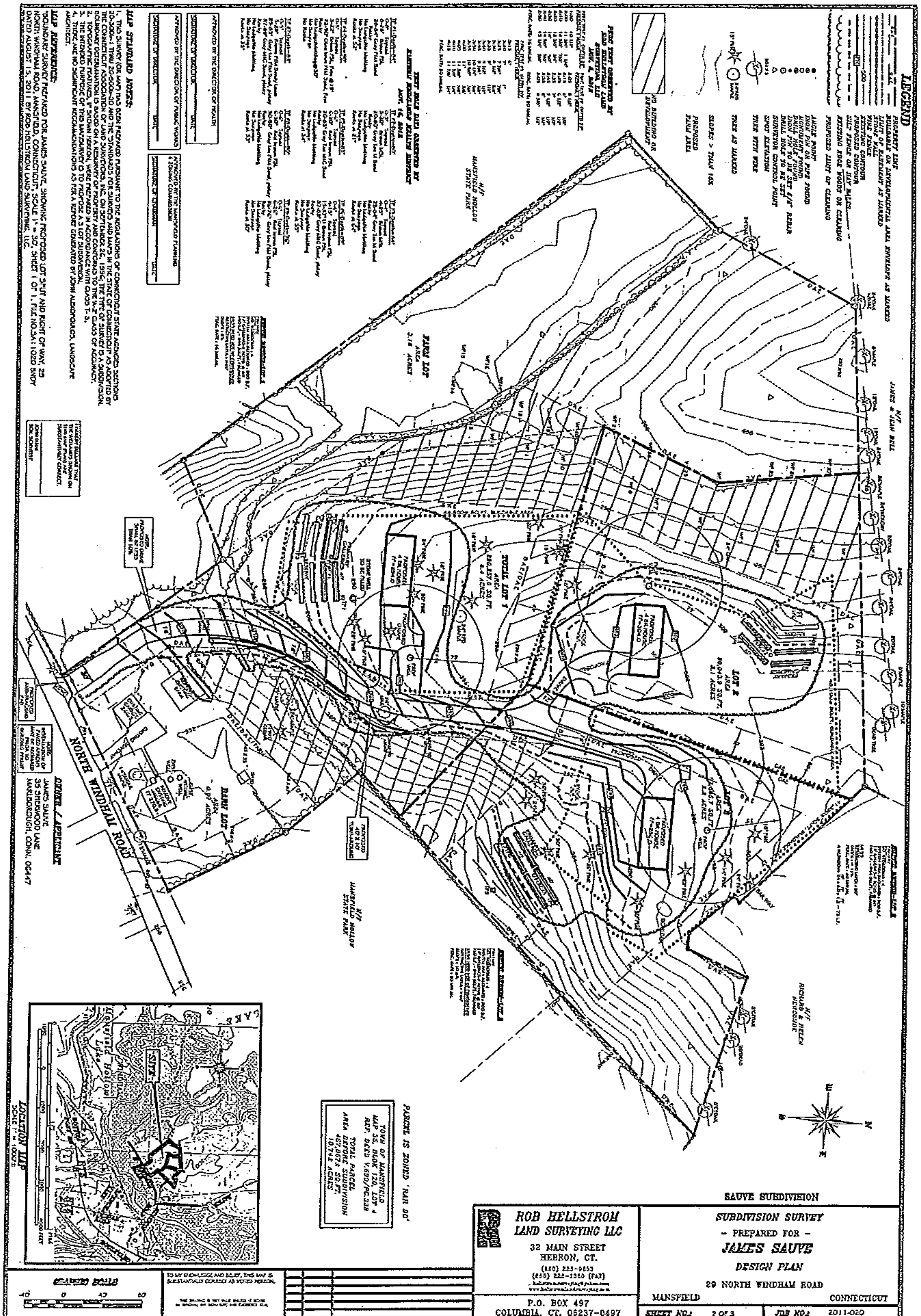
– PREPARED FOR –
JAMES SAUVE

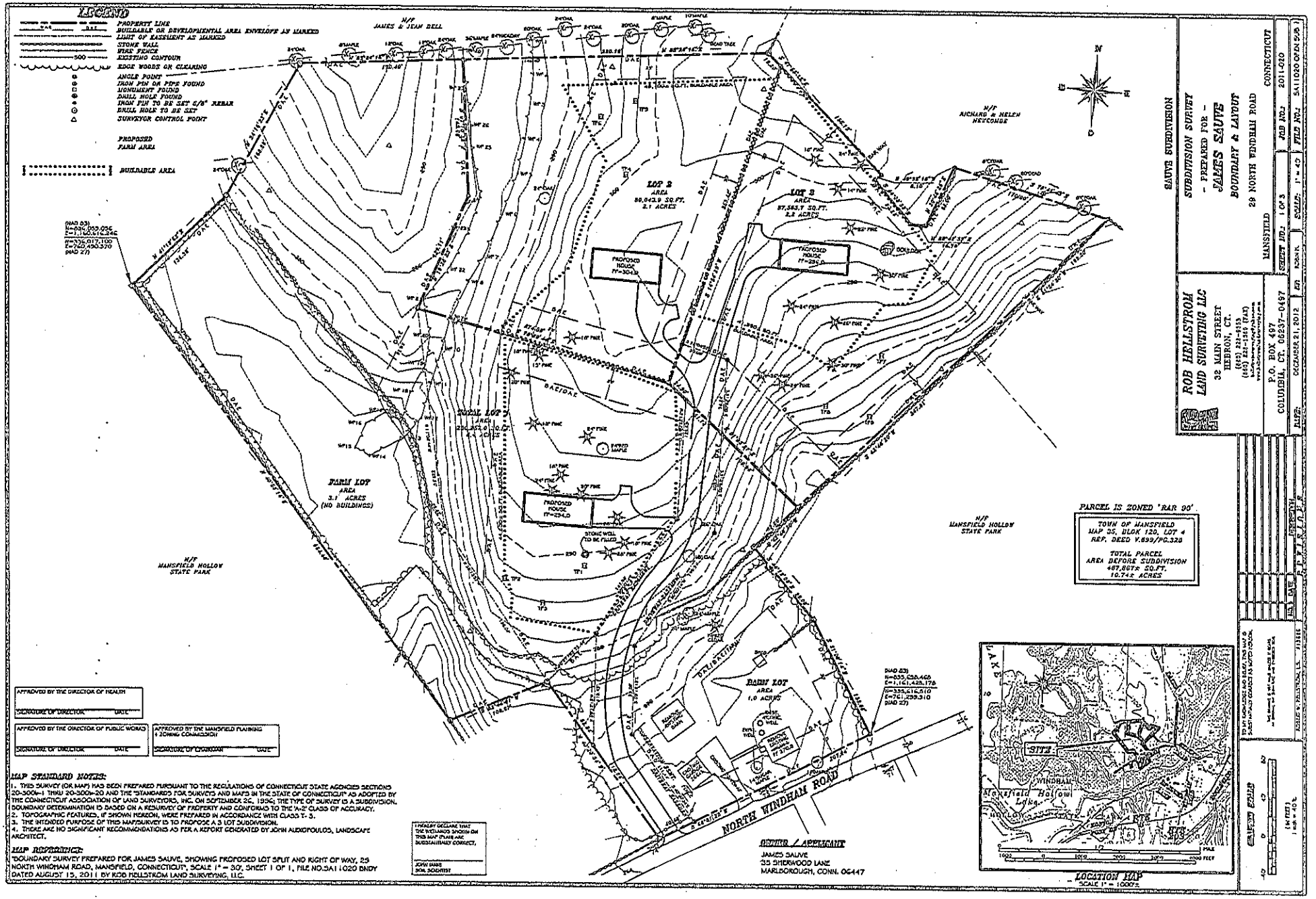
29 NORTH WINDHAM ROAD
MANSFIELD CONNECTICUT JULY 13, 2012

SCALE: 1" = 50 FEET

SITE ANALYSIS for property of Joseph Sauve 27 North Windham Road Mansfield, CT

John Alexopoulos Landscape Architect July 17, 2012


SAUVE SUBDIVISION
ROB HELLSTROM
LAND SURVEYING LLC
32 MAIN STREET
HEBRON, CT.
P.O. BOX 497
COLUMBIA, CT. 06237-0497
SUBDIVISION SURVEY
- PREPARED FOR -
JAMES SAUVE
DESIGN PLAN
29 NORTH WINDHAM ROAD
MANSFIELD
CONNECTICUT
SHEET NO.: 2 OF 3
JOB NO.: 2011-020
DATE: DECEMBER 21, 2012
SCALE: 1" = 40'
GRAPHIC SCALE
(IN FEET)
NORTH WINDHAM ROAD
LEGEND
LOCATION MAP
OWNER / APPLICANT
JAMES SAUVE
MAP STANDARD NOTES:
MAP REFERENCE:
PARCEL IS ZONED 'RAR 90'
BARN LOT
FARM LOT
LOT 1
LOT 2
LOT 3
N/F MANSFIELD HOLLOW STATE PARK
N/F JAMES & JEAN BELL
N/F RICHARD & HELEN HENCOSKE



MAP STANDARD NOTES:

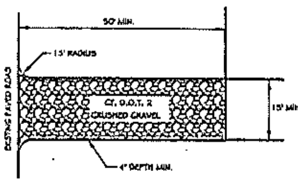
1. THIS SURVEY (OR MAP) HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996; THE TYPE OF SURVEY IS A SUBDIVISION. BOUNDARY DETERMINATION IS BASED ON A RESURVEY OF PROPERTY AND CONFORMS TO THE "A-2" CLASS OF ACCURACY.
2. TOPOGRAPHIC FEATURES, IF SHOWN HEREON, WERE PREPARED IN ACCORDANCE WITH CLASS T- 3.
3. THE INTENDED PURPOSE OF THIS MAP/SURVEY IS TO PROPOSE A 3 LOT SUBDIVISION.
4. THERE ARE NO SIGNIFICANT RECOMMENDATIONS AS PER A REPORT GENERATED BY JOHN ALEXOPOULOS, LANDSCAPE ARCHITECT.

MAP REFERENCE:

"BOUNDARY SURVEY PREPARED FOR JAMES SAUVE, SHOWING PROPOSED LOT SPLIT AND RIGHT OF WAY, 29 NORTH WINDHAM ROAD, MANSFIELD, CONNECTICUT", SCALE 1" = 30', SHEET 1 OF 1, FILE NO.SA11020 BNDY DATED AUGUST 15, 2011 BY ROB HELLSTROM LAND SURVEYING, LLC.

[illegible]

LOT #	* H*	X	IT	X	IT	=	MLSS
LOT 1	MLSS NEED NOT BE CONSIDERED RESTRICTIVE LAYER GREATER THAN 60"						
LOT 2	30	x	2.0	x	1.5	=	90 L.F.
LOT 3	MLSS NEED NOT BE CONSIDERED RESTRICTIVE LAYER GREATER THAN 60"						



ANTI - TRACKING PAD DETAIL
NOT TO SCALE

[illegible]

I. [illegible]
SITE CONSTRUCTION FOR RESIDENTIAL HOUSING, WITH RELATED DRIVEWAY IMPROVEMENTS.

II. [illegible]
A. CONSTRUCTION TO COMMENCE ______ AND COMPLETION BY ______
B. SEQUENCE OF OPERATIONS:
- LAYOUT OF DRAINAGE IMPROVEMENTS
- INSTALLATION OF STAKED HAYBALES AND/OR SILT FENCE DOWNSLOPE OF EXCAVATIONS AND OTHER DISTURBED AREAS
- CLEARING AND GRUBBING OF REQUIRED AREA
- EXCAVATION FOR STORM DRAIN PIPE, CATCH BASIN AND INSTALLATION OF STAKED HAYBALES AT CATCH BASIN
- STABILIZATION OF SWALES AND/OR SIDE SLOPES AND SEEDING OF TEMPORARY DISTURBED AREAS AS NEEDED DURING CONSTRUCTION.
- TOPSOIL, LIMING FERTILIZING AND SEEDING OF ALL DISTURBED AREAS FOR PERMANENT COVER.

[illegible]
- STATE OF CONNECTICUT DOT FORM 814
- GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (D.E.P.)

[illegible]
- AS REQUIRED FROM "GUIDELINES" AND AS SHOWN ON SUBDIVISION PLAN.

[illegible]

[illegible]
A. PRIOR TO REMOVAL OF ANY HAYBALES OR SILT FENCE, REGRADE ANY TROUBLE AREAS AND RESEED AS REQUIRED.
B. AT THE BEGINNING OF THE SECOND GROWING SEASON, RESEED THIN AREAS.
C. REMOVE SILT AT HAYBALES OR SILT FENCE OUTLETS AFTER ALL RAINFALLS.

NOTE: BUILDER RESPONSIBLE FOR CONSTRUCTION OF BLDG. AND OTHER IMPROVEMENTS AND IS RESPONSIBLE FOR ALL EROSION CONTROL MEASURES SHOWN HEREON AND AS OTHERWISE REQUIRED BY CONSTRUCTION TECHNIQUES UTILIZED.

[illegible]

FINE GRADE AND RAKE SOIL TO REMOVE ANY STONE LARGER THAN 2". INSTALL ANY NEEDED EROSION AND SEDIMENT CONTROL DEVICE SUCH AS HAY BALES OR SILT FENCE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE OR 90LB/1000 S.F. FERTILIZE WITHOUT 10-10-10 AT A RATE OF 11 LBS/1000 S.F. WORK LIME AND FERTILIZER INTO SOIL TO A DEPTH OF 4".

[illegible]

IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDED SURFACE WITH STRAW OR HAY AT A RATE OF 1.5-2 TONS/ACRE. MULCH SHALL BE SPREAD BY HAND OR WITH A MULCH BLOWER. PUNCH MULCH INTO SOIL APPROXIMATELY 2-3 INCHES.

DURING NON-PLANTING SEASONS, DISTURBED AREAS SHALL BE COVERED WITH TEMPORARY MULCH.

[illegible]

APPLY SHADE SEED TOLERANT GRASS MIX BY HAND, CYCLONE SEEDER OR HYDROSEEDER. SEEDING SHALL BE DONE BETWEEN APRIL 1ST AND JUNE 1ST OR BETWEEN AUGUST 1ST AND OCTOBER 1ST IF SEEDING CANNOT BE DONE DURING THESE TIMES, REPEAT MULCH PROCEDURE WITH AN APPLICATION RATE OF 30-40 LBS/ACRE.

[illegible]

THE RATE OF APPLICATION SHALL BE NO LESS THAN 100 POUNDS OF THE SEED MIXTURE PER ACRE. WHERE PERENNIAL RYEGRASS (LOLIUM PERENNE) ALONE IS CALLED FOR THE RATE OF APPLICATION SHALL BE NO LESS THAN 220 POUNDS/ACRE.

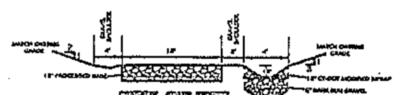
[illegible]

[illegible]

[illegible]

[illegible]

1. LIMITS OF DISTURBANCE: Upon approval of individual site plan development, the limit of development shall be established in the field for each proposed structure. Disturbance limits shall be 25-35 feet beyond the proposed building and shall be bounded by staked hay bales or silt fence.
2. EROSION CONTROLS: Area to be disturbed shall be bounded by staked hay bales or silt fence. All erosion controls, including silt fence and anti-tracking pad shall be installed and inspected by the Land use ZEO and Wetland Agents prior to stumps being pulled, grubbing, or excavation. The ZEO and Wetland Agent may modify the erosion control requirement based on field conditions so as to adequately control erosion and siltation from the site.
3. TREES CLEARED: Trees shall be cleared and cut to length and stacked or removed from the site. Then the pulling of stumps, grubbing and/or excavation shall begin.
4. STONE WALLS: All existing stone walls that will be removed due to street, driveway, house, septic system or other site construction shall be rebuilt elsewhere on the property, or the stones shall be used to enhance other existing walls on property.
5. DRIVEWAYS: All driveway and driveway shoulders shall be stripped, graded as shown on plan, and graveled. All driveway shoulders shall be stabilized immediately upon grading, either by diverting runoff, mulching, or seeding and hay bales, silt fence or other approved measures the same day that cuts are made.
6. TOPSOIL: All topsoil shall be stripped and saved in an area as shown on the plan or as approved by the Planner and Wetland Agent. Topsoil shall not be removed from the site except as in compliance with the Zoning Regulations.
7. CONSTRUCTION & DISTURBED AREA: Excavation and construction shall commence following inspection and approval of erosion control and construction of the driveway. The disturbed area shall be so as to contain runoff within the lot to the greatest extent possible.
8. SITES IN WINTER: When a site will be open during the winter months, rough grading and 4-6 inch mulching must occur prior to construction in order to minimize erosion and uncontrolled runoff.
9. DRAINS: Foundation and curtain drains shall be installed as shown on the approved plan. Any changes to the location of the drains or the additions of any drains shall be approved by the Wetlands Agenda prior to installation.
10. COMPLETE SITE WORK: Finish grading shall occur as soon as possible on all lots where there is potential for erosion and for degradation of wetlands and watercourses. Lots shall be finish graded, seeded with perennial grasses suitable for the respective amount of sun or shade and mulched prior to Certificate of Zoning Compliance.
11. FINAL STABILIZATION: Erosion controls shall be maintained on the lot as long as they are needed to control erosion and sedimentation.
12. E&S CONTROLS: All E&S controls shall be inspected on a daily basis and maintained as necessary until all disturbed areas are permanently re-vegetated or otherwise stabilized. The responsibility of such inspection shall be that of ______.
13. SOLAR ACCESS: Solar Access per section 4.6 under general provisions of the Mansfield Subdivision Regulations were taken into consideration with the locations of proposed lots and house locations on lots. Lot owners are encouraged to utilize Solar Access where and when possible in property designs.



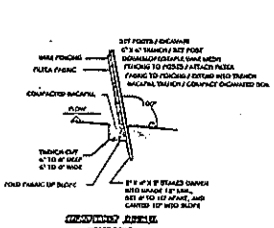
NOT TO SCALE

[illegible]

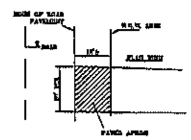
EROSION CONTROL LINING SHALL BE INSTALLED WHEREVER DISTURBED SLOPES ARE STEEPER THAN 20%. THE NETTING SHALL BE INSTALLED IMMEDIATELY AFTER THE HAY IS PLACED. IT SHALL LAY SMOOTHLY, BUT LOOSELY OVER THE HAY.

STAPLES SHALL BE PLACED NO MORE THAN EIGHT INCHES APART AT ALL EDGES AND OVERLAPS. EACH WIDTH OF NETTING SHALL BE ALTERNATELY STAPLED ALONG ITS CENTERLINE AT THREE-FOOT INTERVALS. WHERE TWO LENGTHS OF NETTING ARE JOINED, THE END OF THE UP-GRADE STRIP SHALL OVERLAP THE DOWN-GRADE STRIP.

THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE AREAS WITH EROSION CONTROL LINING UNTIL SUCH TIME AS THE TURF GRASS IS ESTABLISHED. THE CONTRACTOR SHALL REPLACE OR REPAIR AT HIS OWN EXPENSE ANY AND ALL EROSION CONTROL LINING AREAS DAMAGED BY FIRE, WATER OR OTHER CAUSES INCLUDING THE OPERATION OF CONSTRUCTION EQUIPMENT. NO MOWING WILL BE REQUIRED IN THE LOCATION WHERE EROSION CONTROL LINING IS INSTALLED.



[illegible]



APPROVED BY THE DIRECTOR OF HEALTH
SIGNATURE OF DIRECTOR DATE

APPROVED BY THE DIRECTOR OF PUBLIC WORKS
SIGNATURE OF DIRECTOR DATE

APPROVED BY THE MANSFIELD PLANNING & ZONING COMMISSION
SIGNATURE OF DIRECTOR DATE

REYNOLDS ENGINEERING SERVICES, LLC
[illegible] BOGG LANE
LEBANON, CT 06249
(860) 465-7419

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

ROB HELLSTROM LAND SURVEYING
32 MAIN STREET
HEBRON, CT.
P.O. BOX 497
COLUMBIA, CT. 06237-0497
(860) 228-0863

SAUVE SUBDIVISION
SUBDIVISION SURVEY
- PREPARED FOR -
JAMES SAUVE
NOTES & DETAILS
29 NORTH WINDHAM ROAD
MANSFIELD CONNECTICUT

SHEET	3 OF 3	JOB	2011-020
DATE	DECEMBER 21, 2012	BY	ROBIN H.
SCALE	1" = 40'	FILE	5A11020 H3

PAGE
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Mansfield Open Space Preservation Committee
DRAFT Minutes of December 18, 2012 meeting

Members present: Jim Morrow (chair), Michael Soares, Ken Feathers, Vicky Wetherell, Quentin Kessel, Jennifer Kaufman (staff). Also attending: Gwen Haaland.

1. Meeting was called to order at 7:30.

2. Vicky was appointed acting secretary.

3. Minutes of the November 27, 2012 special meeting were approved.

Opportunity for Public Comment

4. Gwen Haaland, Ashford Conservation Commission member, informed the committee about a Great Path (also known as the Old. Ct. Path) project to develop a public trail along the path from Boston to Hartford. The path does not go through Mansfield.

Old Business

5. *Beacon Hill Estates Section II* The committee reviewed the proposed Beacon Hill Estates Section II subdivision. Although the committee did not have final maps, they made final recommendations concerning proposed Town-owned open space and conservation easement areas. These final comments will be forwarded to PZC for a January 7 public hearing along with an appendix containing OSPC comments about a preliminary map (October 17, 2012).

Announcements/Communications

6. *Mansfield Tomorrow Update* Jennifer presented an overview of the Mansfield Tomorrow project, which will include assistance from several consulting firms to update the POCD in these areas: agriculture, economic development, housing, zoning. A local Advisory Group will be established to guide the project. After hearing from the community, Goody, Clancy will draft a POCD. OSPC members asked what the process would be for updating other parts of the Plan, especially those parts concerning conservation issues. They also asked how advisory committees/commissions would be involved in this project.

Executive Session

7. The committee voted to go into Executive Session at 8:55 and to come out of Executive Session at 9:36. Recommendations will be forwarded to the Town Manager.

8. Meeting adjourned at 9:40.

PAGE
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DRAFT MINUTES
SPECIAL MEETING OF THE
MANSFIELD PLANNING AND ZONING COMMISSION

Special Meeting
Monday, December 17, 2012
Council Chamber, Audrey P. Beck Municipal Building

Members present:	B. Chandy, R. Hall, K. Holt, G. Lewis, P. Plante, B. Pociask, K. Rawn (6:30pm), B. Ryan
Members absent:	J. Goodwin
Alternates present:	V. Ward, S. Westa (5:40pm)
Alternates absent:	A. Marcellino
Staff Present:	Linda Painter, Director of Planning and Development Jennifer Kaufman, Natural Resources and Sustainability Coordinator
Others Present:	Larissa Brown and Amy Kohn, of Goody Clancy Mayor Betsey Paterson; Council Members: Toni Moran, David Freudman, and Bill Ryan

Vice Chair Ryan called the meeting to order at 5:30 p.m., appointing Ward to act in Goodwin's absence.

Mansfield Tomorrow | Our Plan ▸ Our Future
Larissa Brown, of Goody Clancy, introduced the project and discussed the proposed schedule for getting documents out for review. She anticipates a Draft Plan of Conservation and Development (POCD) to be ready in the fall of 2013 and Draft Zoning Regulations to be ready in the spring of 2014. Discussion was held regarding ways to encourage public input, including the development of advisory boards to foster community participation and engage stakeholders. Emphasis was put on protecting the rural character of the town at the same time as encouraging change and growth in certain areas, and how to find a balance between the two. Larissa stated that tentative dates to kick off the project to the community would be January 30, 2013 with a public meeting on March 9, 2013. Members suggested including The Four Corners Sewer and Water Advisory Committee, Eastern Connecticut State University, and The University of Connecticut in the discussions.

Adjournment:
The meeting was adjourned at 7:00 p.m. by Vice Chair Ryan.

Respectfully submitted,

Katherine Holt, Secretary

DRAFT MINUTES
MANSFIELD PLANNING AND ZONING COMMISSION
Regular Meeting
Monday, December 17, 2012
Council Chamber, Audrey P. Beck Municipal Building

Members present:	B. Chandy, R. Hall, K. Holt, G. Lewis, P. Plante, B. Pociask, K. Rawn, B. Ryan
Members absent:	J. Goodwin
Alternates present:	V. Ward, S. Westa
Alternates absent:	A. Marcellino
Staff Present:	Linda Painter, Director of Planning and Development

Vice Chair Ryan called the meeting to order at 7:08 p.m., appointing Ward to act in Goodwin's absence.

Minutes:

12-3-12 Meeting Minutes- Plante MOVED, Hall seconded, to approve the 12/3/12 meeting minutes as written. MOTION PASSED UNANIMOUSLY. Chandy noted for the record that she familiarized herself with the record of the meeting.

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

Zoning Agent's Report:

It was noted for the Zoning Agent that Yukon Jack's on Route 44 has a sign out front advertising Live Music and that Moe's has an internally-lit illuminated sign.

Old Business:

a. **Special Permit Application, Seasonal Aerial Forest Ropes Course, west of Baxter Road on Storrs Road; Kueffner/Stoddard, owner/applicant: PZC File #1313**

Hall noted that he has familiarized himself with the record of this application.

Holt MOVED, Ward seconded, to approve with conditions the Special Permit application (PZC File #1313) of Christopher Kueffner and Lynn Stoddard for the development of a seasonal aerial ropes course on Storrs Road (Route 195) west of Baxter Road. This approval is based on the project as described in the application and subsequent information submitted by the applicants, including a statement of use and 9-page plan set dated September 25, 2012; and as presented at Public Hearings on November 19th and December 3rd 2012. This approval is granted because the application as approved is considered to be in compliance with Article V, Section B and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions:

1) **Extent of Approval.** This approval is specifically tied to the applicant's submissions and the conditions cited in this motion. Unless modifications are specifically authorized, the proposed uses and site improvements shall be limited to those authorized by this approval. Any questions regarding authorized uses, required site improvements and conditions cited in this approval shall be reviewed with the Zoning Agent and Director of Planning and Development, and, as deemed necessary, the PZC.
2) **Phase 1A: Development of parking area.** Prior to the issuance of a Zoning Permit for the development of the initial ±50 space parking area, the applicant shall submit a revised site plan for approval by the Director of Planning and Development that addresses the following issues:
   i) Relocation of the eastern and western ends of the parking lot to be at least 25 feet from the wetland boundary and 50 feet from the side property lines except as modified below by the corresponding buffer reduction.

ii) Provision of truck and pedestrian access to the portable toilets from the first phase of the parking lot.
iii) Redesign of the parking area as needed to ensure compliance with fire lane access requirements.
iv) Addition of notes and sign details related to how the applicant will enforce the prohibition on parking within fire access lanes.
v) Addition of a pedestrian connection linking the handicap accessible parking spaces to the main pathway leading to the ticket area.
vi) Addition of a note requiring installation of the second phase of the parking lot when needed to meet parking demand as determined by the Zoning Agent. If the second phase of the parking area is not built within 5 years, the applicants should seek an extension to the Inland Wetlands License.

3) **Phase 1B: Development of aerial ropes course.** Prior to issuance of a Zoning Permit for the aerial ropes course, the applicant shall submit detailed plans showing the locations of platforms, aerial elements and walking paths.
4) **Phase 2: Expansion of the Parking Area.** Prior to issuance of a Zoning Permit for the expansion to the parking area, the Commission shall review any history of complaints regarding the use from nearby residents related to issues of noise and traffic on local roads. If no complaints have been received by the Zoning Agent, Commission review shall not be required.
5) **Buffer Reduction.** The 50-foot landscape buffer required along the east side of the parking area pursuant to Article VI, Section B.4.q.2 of the Zoning Regulations is hereby reduced to 35 feet based on the mature forest that serves as a sufficient buffer to the adjacent property.
6) **Signage.** Prior to issuance of a zoning permit for proposed signs, the applicant shall submit written approval from the Connecticut Department of Transportation for the sign location within the Route 195 Right-of-Way and detailed sign plans including location, dimensions, materials and lighting for approval by the Director of Planning and Development.
7) **Emergency Response.** The Fire Marshall recommends that the applicant provide a copy of their safety/operations plan to the Fire Department prior to opening to assist in coordination of emergency service response.
8) **Validity.** This permit shall not become valid until the applicant obtains the special permit form from the Planning Office and files it on the Land Records.

MOTION PASSED UNANIMOUSLY.

b. **Special Permit Application, 54 residential apartments, 73 Meadowbrook Lane, Whispering Glen-Lakeway Farms, L.P., owner/applicant: PZC File #1284-2**
Tabled-Pending Continued Public Hearing on 1/7/13.

c. **Subdivision Application, Beacon Hill Estates, Section II, Mansfield City Road, west of Beacon Hill Road; Eagleville Development Group, LLC, applicant: PZC File #1214-3**
Tabled-Pending Public Hearing on 1/7/13.

d. **Special Permit Application, Efficiency Unit, 22 Russett Lane, Jorgensen owner/applicant; PZC File #1314**
Tabled-Pending Public Hearing on 1/7/13.

e. **Mansfield Tomorrow | Our Plan ▸ Our Future**
Painter thanked all who came to the Special Meeting to meet with the Consultant and to discuss their ideas and give input on the process.

Rawn MOVED, Chandy seconded, to authorize the PZC Chairman and Director to work together to identify members of the community and stakeholders to serve on the advisory boards and working groups.
MOTION PASSED UNANIMOUSLY.

New Business:
None.

Communications and Bills:
Holt noted that WINCOG has issued a revised letter regarding the Water EIE, and Painter noted that she will email the updated letter to the Commission.

Adjournment: The meeting was adjourned at 8:10 p.m. by the Vice Chair.

Respectfully submitted,

Katherine Holt, Secretary

Memorandum: January 3, 2013
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. Chernusheks'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.

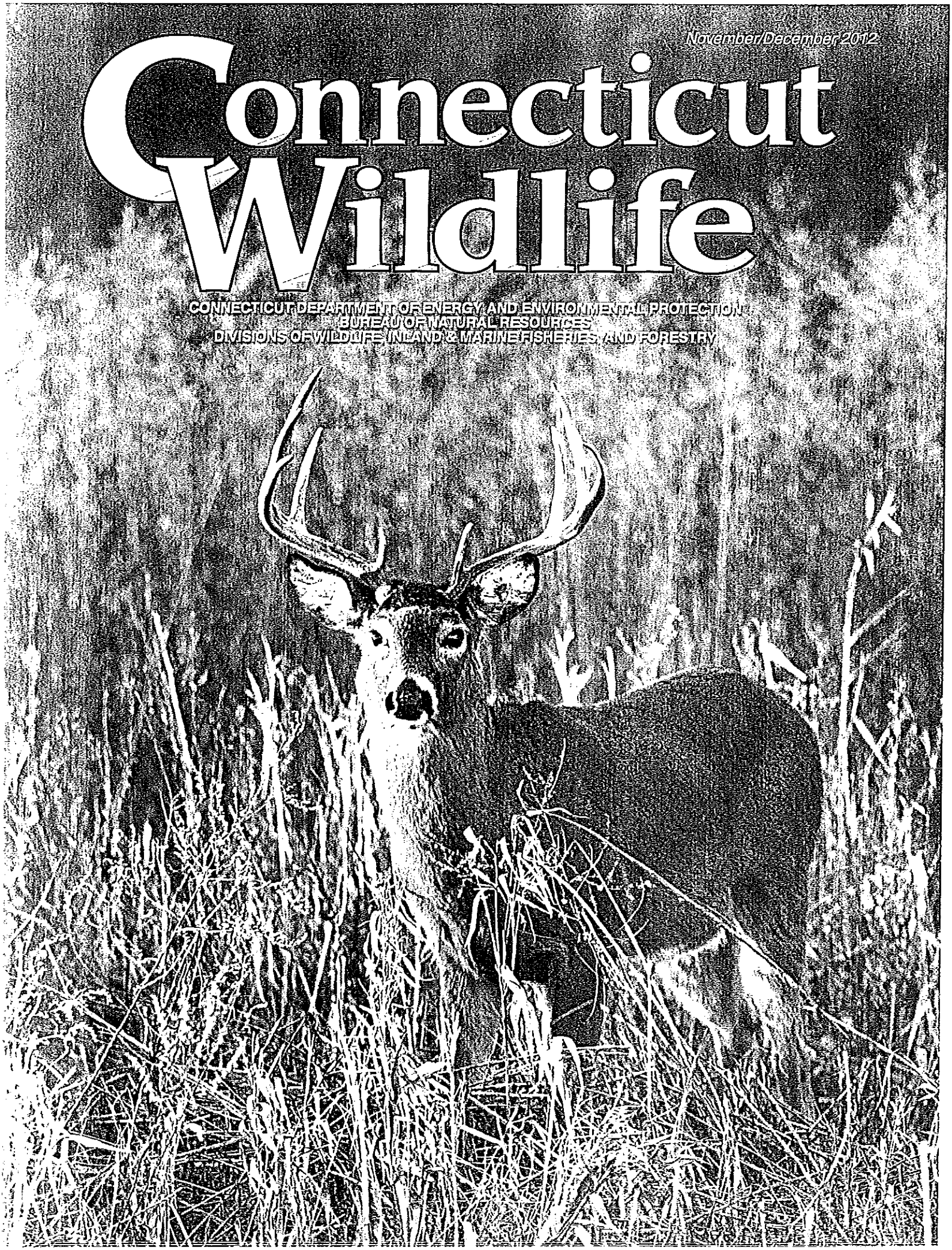
2.25.10: This application has been **withdrawn.**
6.30.10: As viewed from the adjacent property, the upstream and downstream areas have grown to a decent protected surface. I did not see indication of sediment movement.
10.26.10: A sale of the East portion of the Chernushek property has been in negotiation.
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.
4.25.11: Mr. Brodin indicates he is starting with grading and spreading hay and seed to stabilize disturbed areas.

Mansfield Auto Parts - Route 32
12.27.11: Inspection - 1 vehicle within 25' of wetlands - owner indicates it will be moved this week. Payloader is back in operation. Owner indicatees doors in "rear" lot will be moved this week. Large number of tires have been moved from lot by RR tracks - approximately 65% of tires have been removed.
2.01.12: Inspection - employee indicates payloader repair has had problems and the one car within 25' has not yet been moved. Tire removal has continued and about 90 percent of the tires have been removed. A truck from the company removing the tires arrived while I was at the site.
3.01.12: Inspection - owner indicates payloader is repaired. Owner indicates the one car within 25' will be moved. Tire removal is nearing completion.
3.28.12: On the way to see the car moved I found the payloader blocking the entrance drive to the rear area, with the mechanic under the hood. He indicated the new engine had stopped running on the way to move the remaining car. Inspection today showed the payloader in the same location.
5.01.12: Payloader remains in the same location with a bad motor.
5.17.12: Payloader and the one vehicle have been moved. There are no vehicles within 25' of wetlands.
6.22.12: Inspection - no vehicles are within 25' of wetlands.
7.10.12: Inspection - no vehicles are within 25' of wetlands.
8.16.12: Inspection - no vehicles are within 25' of wetlands.
9.19.12: Inspection - no vehicles are within 25' of wetlands.
10.05.12: Inspection - no vehicles are within 25' of wetlands.
11.01.12: Inspection - no vehicles are within 25' of wetlands.
11.20.12: Inspection - no vehicles are within 25' of wetlands.
12.13.12 Inspection - no vehicles are within 25' of wetlands.

November/December 2012

Connecticut Wildlife

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



Eye on the Wild

On September 22, 2012, the DEEP Bureau of Natural Resources and the Friends of Sessions Woods held another fun-filled and successful Connecticut Hunting & Fishing Appreciation Day at the Sessions Woods Wildlife Management Area and Conservation Education Center in Burlington. More than 1,500 people, mostly families with children, participated in a variety of FREE fishing, hunting, and outdoor activities. (A selection of photographs from the day is featured on page 19 of this issue and also on our Facebook page: www.Facebook.com/CTFishandWildlife.) The purpose of CT Hunting & Fishing Day was two-fold — a way to say thank you to sportsmen and women for their contributions to the conservation of Connecticut's natural resources and also provide an affordable opportunity for families and others to get outdoors and be introduced to fish and wildlife activities. The positive feedback we received from attendees demonstrated that Hunting & Fishing Day is accomplishing its purpose. So mark your calendar for September 28, 2013, and plan to attend next year's event! Stay tuned to our website, especially over the summer (www.ct.gov/deep/HuntFishDay).

This year's celebration of Hunting & Fishing Day was even more important as it coincided with the 75th Anniversary of the Wildlife and Sport Fish Restoration (WSFR) Program. Every issue of Connecticut Wildlife *magazine in 2012, including this one, highlighted this monumental program. The WSFR Program and the partnerships it fosters are among the most successful conservation efforts in the nation's rich history of fish and wildlife management. The final article in the series briefly looks at the past, present, and future of the WSFR Program, especially as it applies to Connecticut. When reading this article, it becomes obvious that everyone, not just hunters and anglers, needs to look at the future of fish and wildlife conservation together -- that includes those who feed and watch birds, hikers and users of our state parks, forests and wildlife management areas, wildlife photographers, amateur naturalists, and anyone who cares about our great outdoors. The fish and wildlife in Connecticut belongs to all of us, so it makes sense that state residents participate in conservation as a whole. The responsible conservation of our natural resources benefits everyone, as well as the fish, wildlife, and habitat. But, it takes adequate funding to accomplish this. Therefore, finding creative ways of obtaining more funding for nongame species will likely be a focus in the future. Although financial contributions are important, there are other ways you can help. Read the article starting on page 4 to find out how you can make a difference for Connecticut's fish and wildlife today!*

Kathy Herz, Editor

Cover:

Male white-tailed deer grow and shed antlers annually. The antlers begin to grow in April or May. They are soft and covered with a sensitive tissue known as velvet. By fall, the antlers harden; the deer scrape them against saplings to remove the velvet in preparation for the rut. Antlers are used in sparring during the mating season. They are shed from mid-December to late-January. Antler size is determined by age, genetics, and nutritional value of the deer's diet.

Photo courtesy of Paul J. Fusco

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

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New Research on CT's Ruffed Grouse Population

Written by Kelly Kubik, DEEP Wildlife Division

Historically, ruffed grouse were documented as a common bird species in Connecticut. Unfortunately, grouse have become less common in the state over the last 25 years as populations have diminished. The ruffed grouse is a unique game bird that is dependent on early successional habitat to complete its life cycle. Grouse require habitat with a mixture of high stem densities and openings within the forest canopy. While a significant part of their decline can be attributed to the lack of suitable habitat in the state, it is possible that other factors are contributing to the decline.

In pre-colonial times, early successional habitat was created when natural events, such as fires and storms, made openings in the forest canopy. During the nineteenth century, the majority of Connecticut's original forests were cleared for agriculture and settlement. As the state became more industrialized and farmland was abandoned, the amount of early successional habitat in the state took an upward trend. Wildlife species that favored young forests, such as ruffed grouse, American woodcock, and New England cottontails, thrived during this period. Currently, these forests have matured past their utility for ruffed grouse and other early successional wildlife species.

As early successional habitat continues to disappear in Connecticut, it is essential that researchers gain more knowledge about the state's grouse population. To facilitate this effort, the DEEP Wildlife Division implemented baseline grouse research in 2005. Surveys were conducted to assess distribution of birds and efforts were made to obtain age and sex composition of harvested grouse. Grouse sighting reports collected by the Wildlife Division indicate that grouse are persisting in low numbers. Observations also demonstrate that the largest concentrations of grouse occur in the northwestern portion in the state.

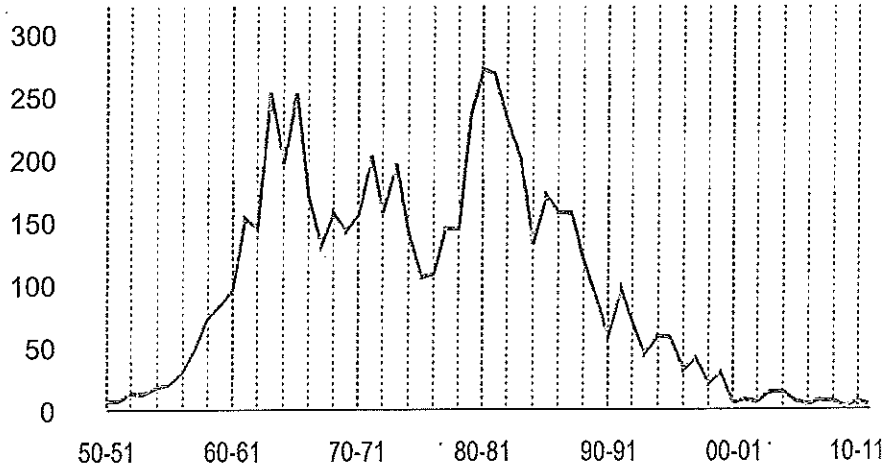

P.J. FUSCO

Critical information about ruffed grouse is still lacking, such as dispersal patterns, habitat use, and survival rates. In response, the Wildlife Division is embarking on a multi-year radio telemetry research project to determine and quantify this much needed information. Grouse will be captured in live traps, fitted with radio transmitters, and tracked on a weekly basis. Young birds will be targeted to assess dispersal patterns and survival during this critical period. Over-winter survival also will be assessed because it could be another factor regulating grouse populations. Habitat variables will be measured at each location where a grouse is found as well. The results of this work will be used to guide future management programs for Connecticut's grouse population.

WANTED:
Ruffed Grouse Observations

In an effort to obtain distribution and harvest information, the DEEP Wildlife Division is asking the public for ruffed grouse sightings and grouse parts. Grouse sightings may consist of actual bird observations or drumming activity. This information will assist biologists with determining present day locations of local ruffed grouse populations throughout Connecticut. Individuals are also asked to send in grouse wings and tails from hunter harvested or road-killed birds. These items help biologists determine the age and sex of the birds, which will assist in assessing productivity and harvest composition. To report grouse sightings and/or donate grouse parts, please contact Michael Gregonis at michael.gregonis@ct.gov or call the Franklin Wildlife office at 860-642-7239.

Status of CT's Ruffed Grouse Population, 1950-2012*

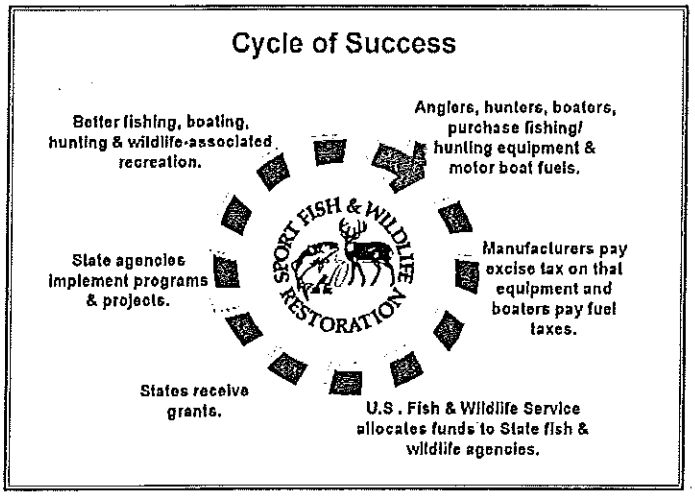


** Based on National Audubon Society Christmas Bird Counts*

– WSFR Past, Present, and Future –

In this day and age, when the subject of taxes sparks great debate, it is difficult to imagine that there was a time in our nation's history when a coalition of hunters, anglers, and other citizens specifically asked to pay federal taxes for the benefit of wildlife conservation. Their tireless efforts resulted in the establishment of the federal Wildlife and Sport Fish Restoration (WSFR) Program 75 years ago. The WSFR Program has become the most successful federal-state-conservationist-sportsmen partnership in history.

These early conservationists were motivated by a pending natural resource disaster that few even knew was happening. By the mid-1800s, while our country was busy becoming the richest and most powerful nation in the world, its people were also laying waste to some of its most precious natural resources – fish, wildlife, and their habitats. The condition of our natural resources painted a dismal picture. Vast herds of 100 million bison and 40 million pronghorn had just about vanished across the western plains. An estimated 60 million beavers had been reduced to 100,000. Tens of millions of passenger pigeons, so dense in numbers that it took literally hours for the skies to clear during their migrations, had disappeared forever. Waterfowl populations had plummeted. Swamps had been drained, prime wildlife habitat converted to agriculture, and market shooting continued unabated. American and European women wore hats festooned with the feathers of egrets, herons, and 40 varieties of native birds. America was being plucked bare.



The Wildlife Restoration Program is the oldest and most successful wildlife management program in the nation's history.

By the Numbers: WSFR Funding in Connecticut

	P-R Program	D-J Program
1st apportionment	$2,499 (1939)	$25,749 (1952)
2012 apportionment	$2,802,447	$3,497,637
Total up to 2012	$51,959,075	$72,964,692

Total WSFR funding for Connecticut = $124,923,767

Total acreage purchased with WSFR funds: 7,168 acres

The story was similar in Connecticut, where wild turkeys, beavers, black bears, fishers, wolves, and mountain lions had disappeared from the state's landscape by the mid- to late 1800s. Other wildlife populations had declined drastically, such as white-tailed deer, wood ducks, and various shorebirds and waterbirds, to name a few.

Nevertheless, most Americans at the time were not parading the streets with placards demanding conservation reform from their legislatures. Awakening America to the need for conservation was a painfully slow process. Americans simply did not understand the intricate workings of the natural systems that were being destroyed. There was little knowledge of predator/prey relationships, habitat or range requirements, and the interrelatedness of all living things.

By the early 1900s, a handful of conservation-minded free-thinkers – mainly America's sportsmen – emerged with the political will and commitment to save our country's fish and wildlife. In the first half of the 20th century, sportsmen were mainly responsible for conserving our natural resources. That's because state hunting and fishing license revenue provided the one stable funding source to protect, restore, and manage fish and wildlife resources. With the creation of state fish and game agencies in the early 20th century, fish and wildlife were given a legislative voice – and some funding. But it was not enough. Underfunded, understaffed, and prone to political interference, fledgling wildlife agencies in Connecticut and other states confronted frustration and failure more than success. The science of fish and wildlife management did not exist at the time, and little money was available to acquire land, pursue fish and wildlife restoration work, or enforce game laws.

Federal Aid in Wildlife Restoration Program

A historic change for the better began when Congress passed the Pittman-Robertson, or P-R, Act (also known as the Federal Aid in Wildlife Restoration Program) in 1937. The law established an 11% excise tax on the sale of sporting firearms, ammunition, and archery equipment, and a 10% excise tax on handguns. These taxes, collected from manufacturers by the federal government, are paid by hunting sportsmen and women and deposited into a special account, the "Federal Aid to Wildlife Restoration Fund," which is administered by the U.S. Fish and Wildlife Service (USFWS). The funds are apportioned to the states in accordance with a formula based on land area, population, and number of paid hunting license holders of each state. State wildlife agencies determine the specific usage of apportioned funds by submitting project proposals to the USFWS for review and approval. Each project must address and be designed to meet a specific agency need. Once approved, the state agency carries out the work and, upon completion, is reimbursed for up to 75% of approved costs. The agency or cooperating partners must provide a 25% match to the federal aid funding.

Connecticut was one of the first states to capitalize on the opportunity afforded by the Wildlife Restoration Program. When the first excise tax receipts began flowing in 1939, the state

P. J. FUSCO

WSFR Program funding has made it possible for the Wildlife Division to establish a successful white-tailed deer management program.

devoted $2,700 toward a study of ruffed grouse. From the outset, approved P-R projects included the purchase of land for wildlife restoration purposes; improvement of land for wildlife; research projects directed at solving wildlife restoration problems; technical assistance; and hunter education. With the help of federal aid funding, Connecticut has been able to acquire over 7,000 acres of wildlife habitat, including key wetlands along Long Island Sound and the Connecticut River. Other lands (gifts, state-funded) were used as match for past land purchases. Connecticut's Wildlife Restoration Fund apportionment has continually grown over time, from the 1939 amount of $2,499 to $2.8 million in 2012. The total amount that Connecticut has received over the past 75 years from the Wildlife Restoration Program reaches almost $52 million. This increased funding has allowed the Wildlife Division to enhance management capabilities and increase its staff of professional biologists over the years. Managing populations of select wildlife species has significantly broadened over the past 75 years to include deer, furbearer, and waterfowl programs; monitoring of upland wildlife game species, and wild turkey restoration and management.

Federal Aid in Sport Fish Restoration Program

A companion bill to establish a stable and secure mechanism to fund the restoration of America's fisheries was passed in 1950. The Federal Aid in Sport Fish Restoration Act (also known as the Dingell-Johnson, or D-J, Act) mandated a similar excise tax on fishing rods and related equipment. This reliable funding source has generated more than $5.4 billion for fisheries research, habitat restoration, recreational boating access, construction of fish hatcheries, and aquatic education. Connecticut's first apportionment in 1952 was $25,749; by 2012 it climbed to almost $3.5 million. The total amount the state has received so far from the Sport Fish Restoration Fund equals almost $73 million. The first fisheries-related projects that Connecticut undertook with D-J funding were the restoration of the Wood Creek Dam in Norfolk that impounded a 150-acre lake and the acquisition of 66 acres for permanent fishing easements along the Jeremy and Blackledge Rivers (tributaries of the Salmon River).

Who Benefits from the WSFR Program?

The American public benefits from the WSFR Program. Outdoor enthusiasts get more and better places to hunt, fish, and recreate; the industry gets a growing base of hunters, shooters, anglers, boaters, archers, and other recreational users who purchase more supplies and equipment; and state and federal agencies get more funds to meet on-the-ground conservation needs. The general public also benefits from better stewardship of the nation's natural resources. In addition, numerous nongame wildlife species benefit from WSFR-funded land acquisition and habitat management that focus on game species populations.

The historic P-R and D-J Acts were hard-won victories that took years to achieve. Federal excise taxes, combined with revenue from hunting and fishing license sales, are the key to the North American Model of Wildlife Conservation, in which wildlife are owned by all the people. It is a "user-pay, public-benefit" system where the people who use the resources (mainly hunters and anglers) are willing to pay to manage and conserve them for the good of all. Through excise taxes and license revenues,

What's in a Logo?

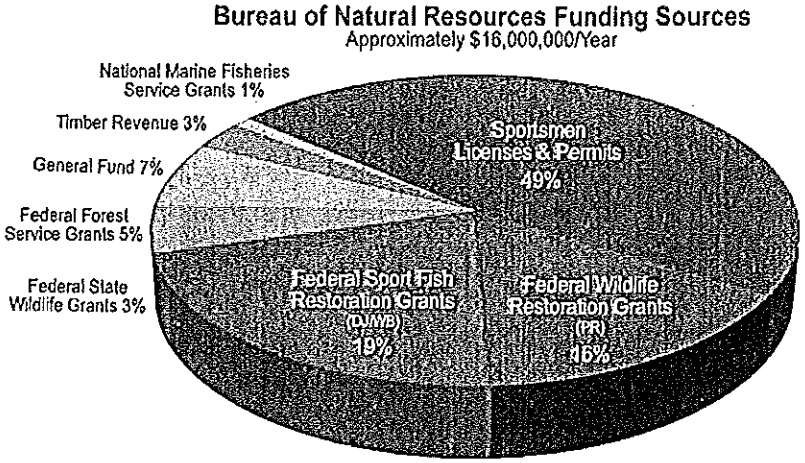
When you see these logos on outdoor sports equipment, the manufacturer has paid an excise tax on the product. Proceeds go to support fish and wildlife restoration and enhancement and expanded access to recreational resources.

At a shooting range, hunter education course, or wildlife management area, these logos say Federal Assistance funds are at work.

sportsmen and women have contributed more than $14 billion to conservation through the WSFR Program, and annually provide more than 80% of the funding for most state fish and wildlife agencies.

What Does the Future Hold?

Despite the successes of the WSFR Program over the past 75 years, many fish and wildlife species continue to decline. Nongame fish and wildlife species have only been secondary beneficiaries of habitat management efforts and land acquisitions funded by WSFR. More than 95% of fish and wildlife held in public trust by the states are not hunted nor fished, and are left out of the safety net. So, the big question is: Will our country, or even our state, ever adopt a program that uses the model of WSFR to raise money for nongame wildlife?



In 1980, the Forsythe-Chafee Fish and Wildlife Conservation Act of 1980 established a "nongame act" modeled after WSFR, but Congress never appropriated funding. The DEEP Wildlife Division established a Nongame Wildlife Program (now known as the Wildlife Diversity Program) shortly after the Act became law, but adequate funding never materialized. The national Teaming with Wildlife campaign sought an excise tax to support nongame wildlife conservation for more than a decade. This effort prompted Congress to create the Wildlife Conservation and Restoration Program and State Wildlife Grants (SWG) in 2001 which, for the first time, provided matching grants to states for managing species of "greatest conservation need." The funding was distributed to states with the condition that each state develop a State Wildlife Action Plan. While SWG has provided federal funding for nongame wildlife conservation, it depends on annual appropriations, and the amount of money available has declined in recent years. SWG apportionments to states declined by 35% from $76 million in 2010 to $49 million in 2012 (averaging about $1 million per state per year to manage thousands of nongame species).

As state wildlife agencies continue to face such modern challenges as invasive species, wildlife diseases (for example, white nose syndrome in bats), and continuous loss of habitat to development and degradation, it is becoming more and more difficult for the agencies to maintain current wildlife populations, let alone do more for nongame wildlife. SWG funding has been beneficial, but it is not enough and is too vulnerable to fluctuation in these difficult economic times. Additional dedicated funding will be necessary in the future for supporting the conservation of ALL wildlife. However, establishing a dedicated funding source for nongame wildlife would take a massive effort from a broad spectrum of supporters -- the questions are, will they commit in the same way hunters and anglers did 75 years ago? Will they get the support and momentum they need? It remains to be seen as time goes on.

How to Help Connecticut's Wildlife

In the meantime, there are several things you can do to help wildlife in our state. Buy a hunting and/or fishing license, even if you don't hunt or fish. Purchase a Connecticut Duck Stamp to help conserve our state's wetland habitats. Donate a portion of your state income tax refund to the Connecticut Wildlife/ Endangered Species Check-off Fund. Share *Connecticut Wildlife* magazine with family, friends, and neighbors. Regularly visit the Wildlife Division web page (www.ct.gov/deep/wildlife) and Facebook page (www.Facebook.com/CTFishandWildlife) to keep informed about wildlife issues and to find out how you can volunteer. Become involved with local conservation organizations that are cooperators with the DEEP. Take a moment to discover Connecticut's wildlife . . . it could be the beginning of a life-long commitment to fish and wildlife conservation.

Information for portions of this article was provided by the educational campaign for the 75th Anniversary of the Wildlife and Sport Fish Restoration Program.

Forestry on the Farm: Growing Christmas Trees in CT

Written by Kathy Kogut, Executive Director, Connecticut Christmas Tree Growers Association

Thousands of Connecticut families enjoy visiting local Christmas tree farms during the several weeks preceding December 25 to choose a tree, cut it down, load it into or onto their car, and take it home to create a cherished holiday display. Thousands more purchase locally grown, freshly cut trees directly at farms or from local non-profit organizations or commercial vendors. It is almost second nature to think of these activities as time honored traditions but they are really quite recent.

Displaying a fresh, recently-harvested conifer in the home at Christmas time is a century's old tradition for many people around the world. For most of those years, trees were randomly harvested individually or in large quantities from natural forest settings. A trend toward planting and growing Christmas trees in a more organized fashion began around the mid-20th century worldwide. In North America, tree farming began in earnest, mostly in northern states and Canada, and has spread to many other states since.

Connecticut's earliest tree farms

CONNECTICUT GROWN
THE LOCAL FLAVOR.

first appeared in the early to mid-1950s, either on farmland that was coming out of annual crop production, such as dairy silage or vegetables, or on permanently open land, such as pastures. Since then, a number of tree farms have sprung up on once cleared land that had lapsed into early succession forests or even on cleared, established forest land; however, the majority of farms still remain on historic farmland soils. Other growers have also repopulated recently-cut forest settings with Christmas trees.

"Tree farming" can be a misleading term. While farms (or plantations, as many growers call them) are usually planted in rows in an organized manner, with fields divided into sections differentiated by species or age, growers are usually more successful when they follow practices developed for forestry rather than agronomy.

Regardless of the growing environment, Connecticut's tree farmers, with considerable help from Connecticut Agricultural Experiment Station scientists, DEEP Service Foresters, and University of Connecticut Extension forestry personnel, have encountered and met numerous challenges in the nearly 60 years since those first plantings were made.

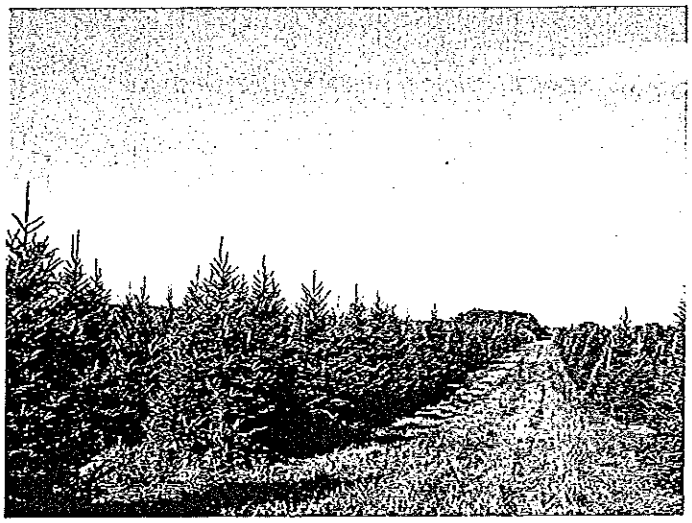
The variety of conifer species grown as Christmas trees has expanded over the 50-plus years of earnest production. Initially,

When looking for the perfect Christmas tree for the holidays, consider buying a Connecticut-grown tree from a local Christmas tree farm. Go to www.ctchristmastree.org to find locations of tree farms and get helpful tips on farm visits, tree selection, and tree care.

species native to arboreal forests, such as white spruce, Norway spruce, and Scotch pine along with locally native white pines, were grown. Each species has its own cultural peculiarities, but most of Connecticut's early tree farms had great success with one or more of them. Since then, species from different regions have been successfully introduced.

First, Douglas fir, a native of the Pacific Northwest, and Colorado blue spruce, a Rocky Mountain native, arrived. Both of these species have been fairly tolerant of Connecticut conditions, but each has difficulties in various settings. In more recent decades, true firs, such as balsam fir a northern New England/ Quebec native, Fraser fir from the Smoky Mountain region, and Canaan fir from mountain regions in West Virginia, have become popular. To various extents, the true firs have had the greatest difficulties adjusting to Connecticut conditions. Because these firs have become market favorites in recent years, growers have had to learn to adjust growing conditions, especially soil environments, to better support them and, as it turns out, all of the other popular species, too.

Conifers grown as Christmas trees have all evolved in naturally shady forest settings where shallow, organic soils prevail. Such conditions neither lend themselves to efficient large-scale production strategies nor are they likely to be found in most of Connecticut's crop production soils. Most of Connecticut's farmland soils are either stony, less well drained glacial till soils found in most of the upland areas, or the deep, well drained, potentially droughty glacial outwash soils found in the large



K. KOGUT, CONNECTICUT CHRISTMAS TREE GROWERS ASSOCIATION

There are more than 500 Christmas tree farms in Connecticut.

Connecticut River Valley and similar smaller drainage basins throughout the state.

As with all woody plants, even though conifer roots are not necessarily growing actively during winter, they need to stay alive throughout that time and be ready to grow again in spring. Glacial till soils often hold more water during winter, limiting oxygen availability needed for good root health. Similarly, sandy outwash soils may become dry enough to affect root health during some of the driest times of summer. Over time, tree growers and researchers have found that some of the basic strategies employed in sustainable forestry programs have helped.

- *Rather than keep bare soil environments around trees, growers have learned to mulch newly planted trees with decomposed organic materials, such as aged wood chips or other bulky composts. This helps to not only create a habitat more similar to forest floors, thus maintaining cooler soil and root environments during the summer months, but also to improve drainage and avoid flooded soil conditions.*
- *To further this practice, growers have learned to plant non-competitive grasses or forbs between trees within rows and often in strips between rows. This simulates a forest floor environment that protects young roots. Alternatively, some growers allow native understory species to self-establish, affording a similar environment for healthy tree growth.*
- *Growers have learned to use minimal or no-till strategies rather than traditional plowing methods when establishing fields and take similar approaches when replacing harvested trees. This brings a tree plantation as close as it can be to a true forest environment by keeping the soil and forest floor environment stable.*
- *Growers now use pest management strategies that focus on minimal pesticide use, using the natural enemies that can occupy the forest floor environment.*

Visit the Connecticut Christmas Tree Growers Association website at www.ctchristmastree.org to learn more about the organization. You also will find locations of Christmas tree farms and helpful tips on farm visits, tree selection, and tree care.

Several members of the Connecticut Christmas Tree Growers Association contributed information for this article.

Secretive Marshbird Monitoring and Rail Nesting Success

Written by Min T. Huang, DEEP Wildlife Division

P. Russo

Callback surveys include a passive listening period at the beginning of the survey at each survey point.

Among avian communities, marsh birds may be the most vulnerable to large-scale habitat stressors, including invasive vegetation, urban/suburban growth, changes in wetland hydrology/sea level rise, and/or other factors resulting from climate change. Marsh birds have long been recognized as a suite of species for which little is known about abundance, distribution, population trends, habitat relationships, or management needs. These birds can serve as indicator species for wetland health and have high recreational value to birders. An increasing emphasis on marsh bird conservation and management in the past several years has resulted in important developments in the science of marshbird monitoring.

In Connecticut, a number of historic and current projects are assessing the distribution of these sensitive birds and trying to assess some of the critical demographic parameters that govern population dynamics. The Wildlife Division has reported on several past projects that were geared towards assessing distribution of secretive marshbirds. In 2004 and 2005, 47 sites were selected for surveys. Sites were classified as low, moderate, or high probability detection sites, depending on wetland size, known vegetation characteristics, and relative geographic isolation. Callback surveys were then conducted to determine presence/absence of target species at each site. Target species included black rail, clapper rail, king rail, sora, Virginia rail common moorhen (all in Family Rallidae), American bittern, least bittern, and pied-billed grebe. Target species were detected in high quality habitats. Relative densities of target species indicate that clapper and Virginia rails (0.49 individuals/100 acres of wetland) were the most common rallids. Sora (0.04) were relatively rare, as were pied-billed grebe (0.05). Common moorhen density (0.03 individuals/100 acres of wetland), king rail (0.01), least bittern (0.01), and American bittern (0.02) densities were also low.

The Wildlife Division recently initiated a multi-year project with the University of Connecticut and a number of other partners across the Atlantic Flyway to better identify critical areas for tidal marsh bird conservation, as well as which tidal marshes and species in the Northeast/Mid-Atlantic are the most sensitive to land and seascape change (see article in the May/June 2011 issue of *Connecticut Wildlife*). The second year of data collection for this project was recently completed.

As an additional component of this work, the University of Connecticut, in collaboration with the Wildlife Division, was just awarded a large grant to establish a sentinel monitoring program that will implement a comprehensive plan to monitor climate change impacts on key wildlife and ecosystem resources in Long Island Sound. Monitoring will focus on the estimation of multiple parameters for three priority sentinels: 1) metrics of abundance, distribution, productivity, and phenology for focal bird species that depend on tidal marshes, beaches, and mudflats; 2) documentation of avian community composition, presence of tidal marsh plant indicators, and tree mortality by survey of focal habitats (coastal forests, shrublands, grasslands) in zones where marine transgression is likely; and 3) sampling of areal cover, diversity, species composition, and phenology of dominant saltmarsh plants in conjunction with the bird monitoring, and at sites with past data. This project should lay the foundation for development of long-

term monitoring programs that will enable managers to prioritize and direct conservation actions where they will be most beneficial.

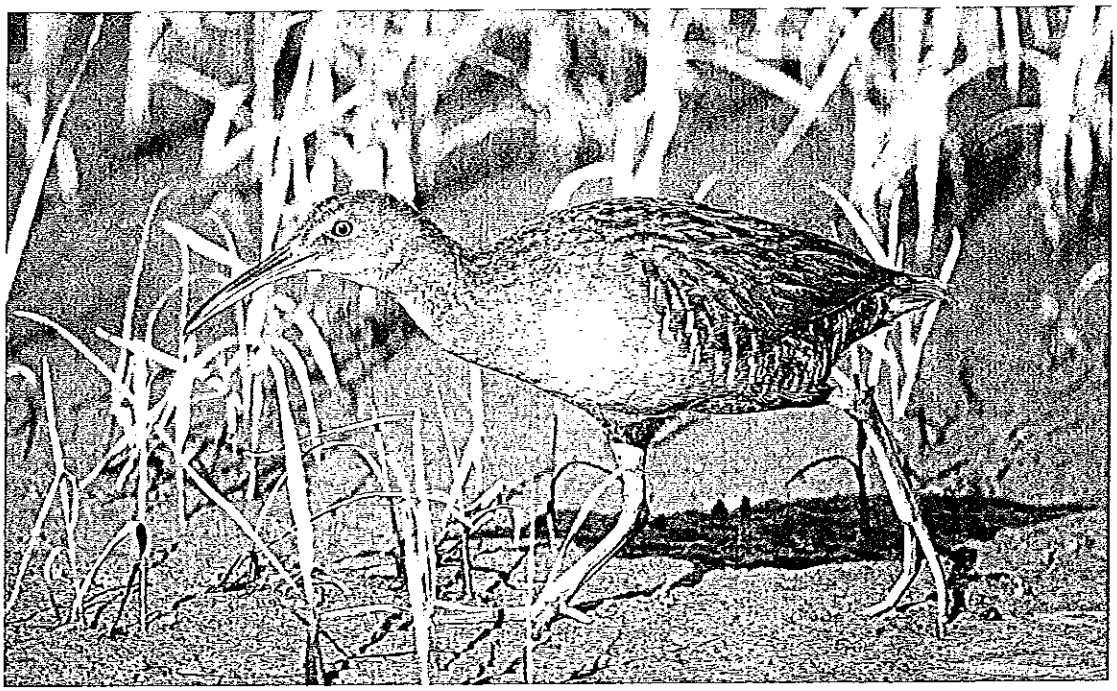
Work is also being conducted to assess nesting success of clapper rails in our coastal marshes. This work began in 2010 and concluded in 2012, although data was not collected in 2011 due to lack of staff. Research efforts were concentrated in six coastal marsh systems. Over the course of the work, researchers were able to find and monitor 10 clapper rail nests, along with 10 Virginia rail nests Hatching success was 30% for clapper rails and 50% for Virginia rails.

Unlike beach nesting species, such as piping plovers and least terns, clapper rails, it seems, are less prone to losing nests to flooding. Rail nests were found in phragmites or *Spartina alternaflora* clumps, typically within 15 feet of tidal creeks. Most of the failed rail nests were due to predation, not flooding. However, flooding was a factor in nest failure at Roger Tory Peterson Wildlife Area in Old Lyme and Great Harbor Wildlife Management Area in Guilford. As sea levels rise, it is likely that, in the absence of extensive marsh migration, rail nesting success will decline as higher mean tides flood more nests.

More information will be forthcoming on the Wildlife Division's coastal bird projects in future *Connecticut Wildlife* articles as researchers continue to analyze data and finalize reports.

P. J. FUSCO

The cryptic plumage of an American bittern frequently allows this secretive bird to go unnoticed.



P. J. FUSCO

Recent research conducted by the DEEP Wildlife Division involved the monitoring of 10 clapper rail nests. The nests had a hatching success rate of 30%.

M. HUANG

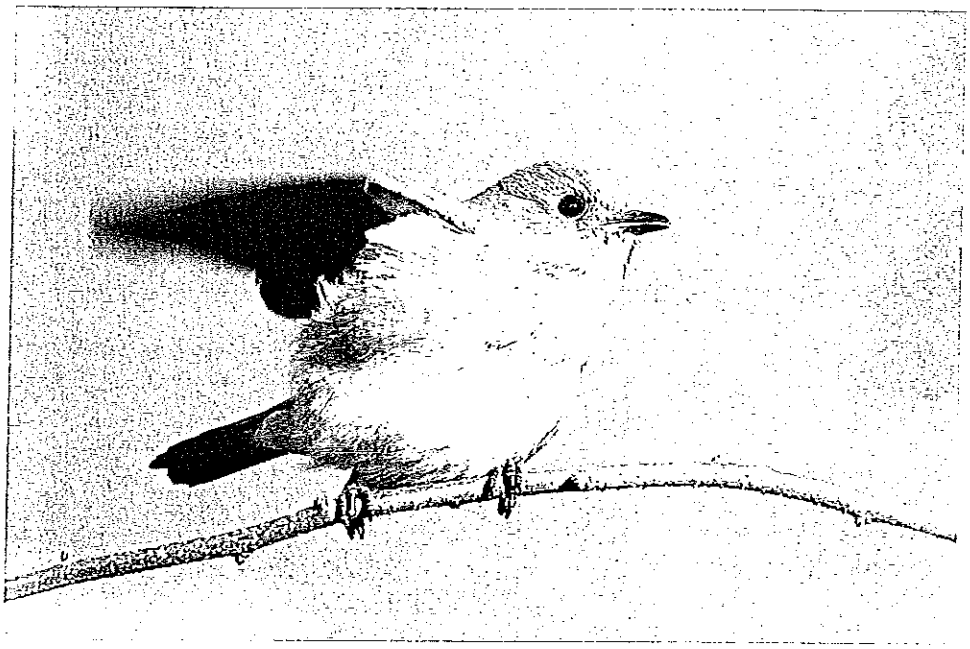
Providing Housing for Bluebirds One Box at a Time

Written by Geoffrey Krukar, DEEP Wildlife Division, photography by Paul Fusco

If you build it, they will come. Sounds simple, right? This common phrase is often used to describe situations with definite outcomes. Hang up a bird feeder and you get birds. Plant wildflowers and you get bees. Put up a bluebird nest box and you get bluebirds . . . well maybe. Truth be told, it may not be quite as straightforward as "build it and they will come." Providing a nest box does improve your chances of attracting one of these colorful birds, but other actions like selecting the right location and habitat for the box, reducing predators, and evicting non-native birds, may ultimately be the factors that determine if bluebirds eventually inhabit your yard. Regardless, the key first step is putting up a nest box. But how do you get one?

The Wildlife Division has been supporting the construction of bluebird nest boxes for over 25 years by distributing rough-cut lumber to organized groups. This annual program has been highly successful in generating tens of thousands of bluebird boxes and helping restore bluebird populations statewide.

The two most common ways of acquiring a nest box are to either purchase or build one. Fully constructed boxes are available from some stores, such as home and garden centers. These boxes may seem appealing to time-pressed individuals or folks with few woodworking skills, but buyer beware. Many of these commercial boxes are not appropriate for bluebirds. To properly function as a bluebird nest box, it must be large enough (at least 4" x 4" at the base), provide a wide enough opening (1.5 inches in diameter), be accessible for routine nest checks, and made of durable material that will protect young chicks from inclement weather.



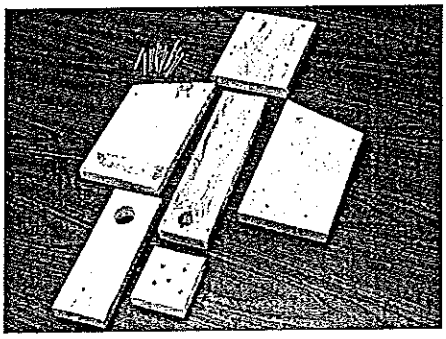
A better option is to build a bluebird nest box yourself so you can ensure it meets the correct specifications. The Wildlife Division has been supporting the construction of bluebird nest boxes for over 25 years by distributing rough-cut lumber to organized groups. This annual program has been highly successful in generating tens of thousands of bluebird boxes and helping restore bluebird populations statewide. The timber for this program comes from state forests and the lumber is milled at the state saw mill so it can be provided free-of-charge. Groups interested in participating this year should send an email to Geoffrey.Krukar@ct.gov. Be sure to include the group name, the group leader's name, a mailing address for an informational packet, and

the number of bundles requested. Each bundle of lumber yields approximately 15-20 boxes when cut up. The large size of each wood bundle has limited the availability of wood to groups only.

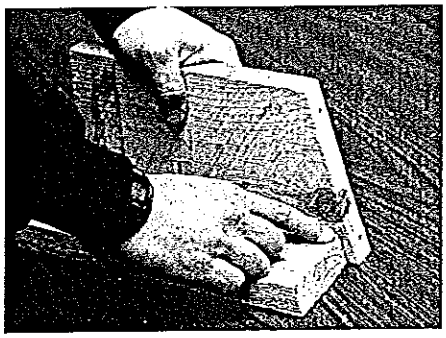
However, new for this year, a limited number of bluebird box kits are going to be available for individuals. These kits will be distributed in early 2013 on a first-come, first-serve basis. The dates and locations for pickups have yet to be determined, but it will likely be on Saturdays at state-owned facilities. Be sure to regularly check the Wildlife Division's website (www.ct.gov/deep/wildlife) and Facebook page (www.Facebook.com/CTFishandWildlife) for more information. Each kit will come with instructions. Participants will need to provide their own hardware for assembling the box.

For those that have access to a lumber supply and would like to build a nest box today, the directions for building two different styles of bluebird boxes can be found in the Eastern Bluebird Fact Sheet (www.ct.gov/dep/lib/dep/wildlife/pdf_files/outreach/fact_sheets/bbird.pdf). The fact sheet also contains information about the best places to locate bluebird boxes and how to go about checking them. Remember, if you build it, they may come.

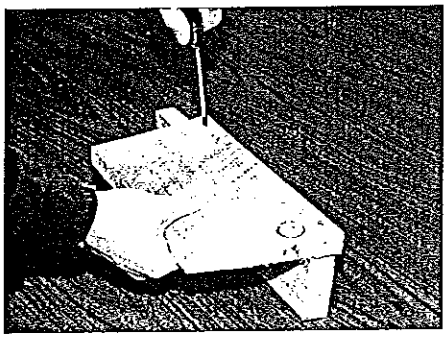
Step-by-step Guide for Building a Bluebird Nest Box



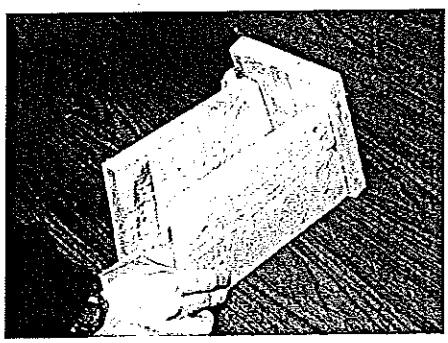
Lay out the pre-cut wooden pieces. See the Wildlife Division's Eastern Bluebird Fact Sheet for cutting dimensions.



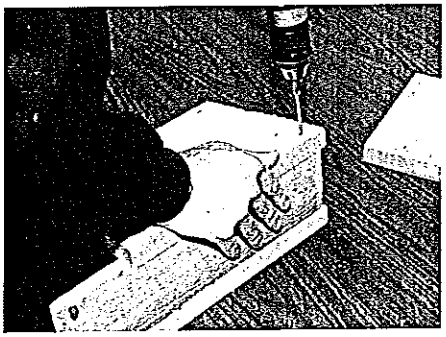
Place one of the sides along the back piece. Be sure to leave a small gap at the top.



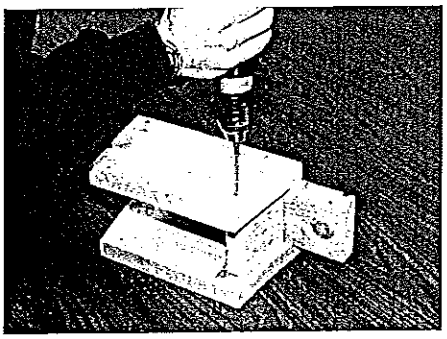
Attach the side using two screws.



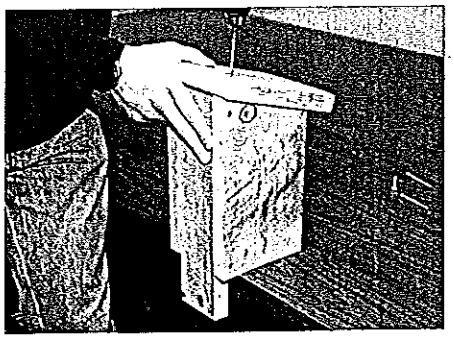
Align the other side using the top piece as a guide to ensure the sides are even.



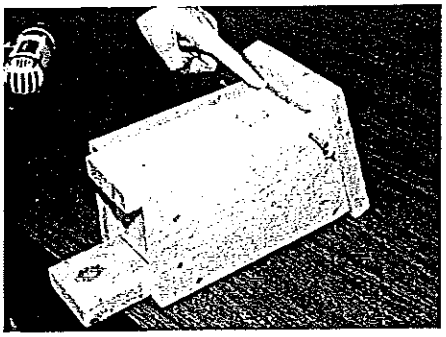
Attach the second side using two screws.



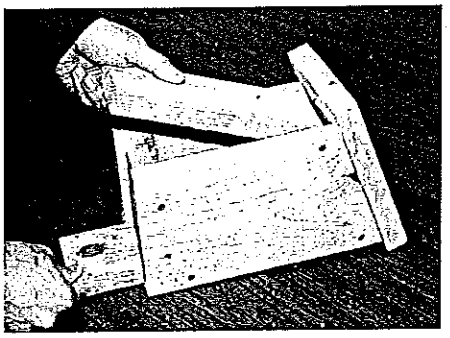
Insert and attach the floor piece approximately 1/2-inch above the bottom of the sides. Use two screws on each side and one in the back.



Attach the roof piece using at least four screws. Make sure the roof is set far enough back to prevent rain from entering the vent.



Make sure the front piece fits properly between the two sides. Leave a gap near the top of the front piece. Attach the front piece using two screws.

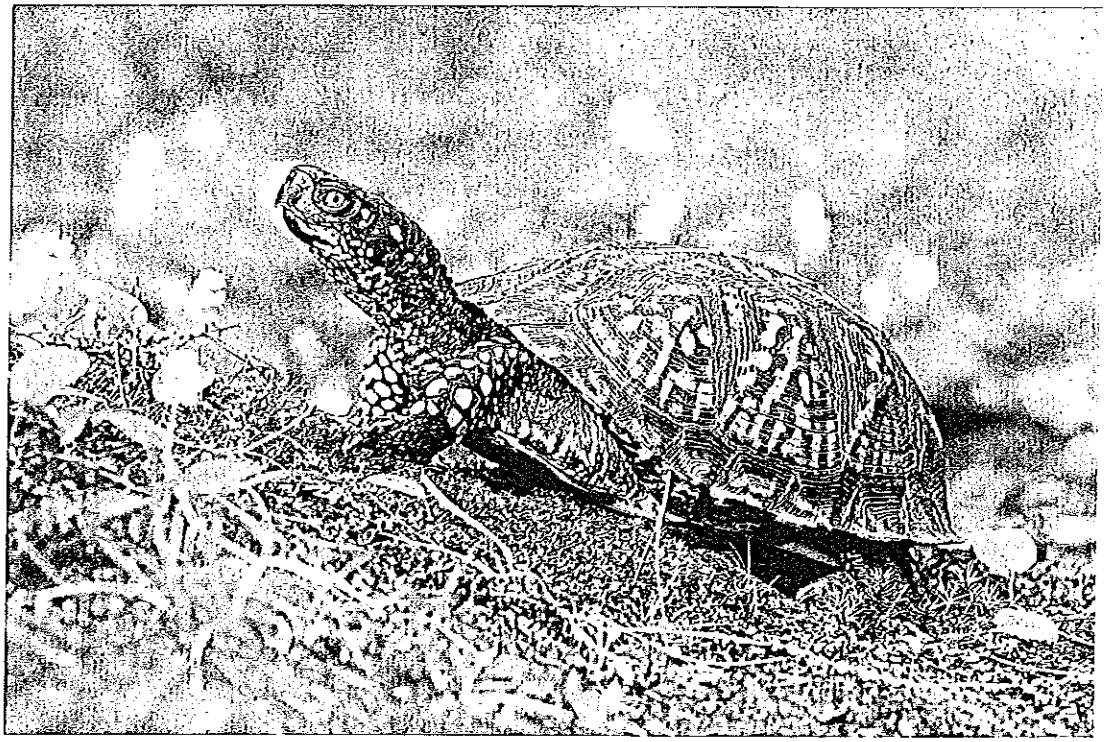


Place the screws near the top of the front piece and directly across from each other so that the front piece can swivel upwards for inspecting the nest.

What Does It Mean to Be a Land Steward?

Article and photography by Paul Fusco, DEEP Wildlife Division

As Connecticut's landscape has gradually changed over the years, we can take a look back at what it once was and where it may be going. Gone are the precolonial days of massive unbroken forest and gone are the settler days of cleared land and widespread farming. Connecticut is now in a transitional stage in more ways than one. The farmland that dominated the landscape in the 1800s and early 1900s has given way to forest succession and maturation, where the land is being reclaimed by forest. Concurrently, development in the form of 21st century progress has gobbled up land at an increasingly fast rate. Roads and suburbanization have cut into areas of the state that were once remote and hard to get to. Every town has its own plan for the future. How do these substantial changes affect the wildlife that call Connecticut home?



Many wildlife species are threatened by forest fragmentation, including the two species of land turtles found in Connecticut, the wood turtle and eastern box turtle (above).

The maturing forests are becoming more and more suitable for species that were once extirpated or very rare 100 years ago. That includes such common species as white-tailed deer, wild turkey, and more recently black bear and moose. Deer were once so uncommon that a hunting season was not established until the 1970s. Bears are increasingly becoming problem animals as the population grows while people are attempting to adapt to their presence.

Forest succession has reduced the available habitat for early successional birds, such as golden-winged warbler and American woodcock, both of which have declined precipitously in recent years as breeding birds in Connecticut. The same holds true for our only native rabbit, the New England cottontail.

Forest species are being affected by forest fragmentation, which is a by-product of suburbanization and development. As roads are built and development spreads, formerly large forests are gradually being broken into smaller and smaller pieces, creating fragmentation. This affects many species of forest-dependant wildlife in a negative way. Land turtles, grouse, tanagers, and thrushes all have been impacted. Many species of common birds are in steady, long-term population declines because of habitat loss and degradation due to development.

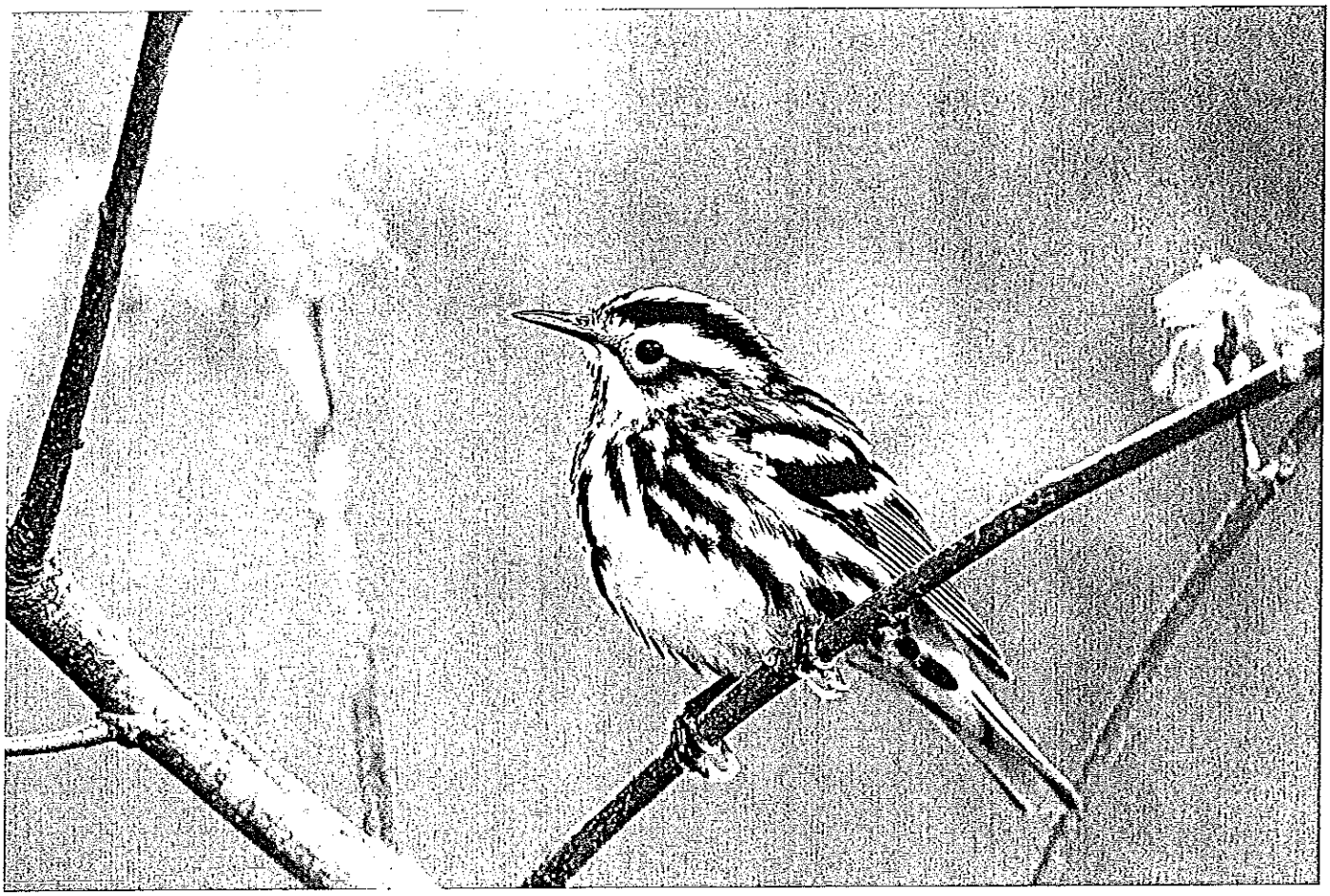
With these trends in land changes continuing into the future, it becomes even more important for private landowners and municipalities to be aware of land stewardship responsibilities and consequences for the state's habitat and wildlife. What does it mean to be a responsible land steward?

By definition, land stewardship is an ethic that incorporates responsible planning and management of land resources. With regard to habitat and wildlife, a land steward takes on the responsibility of continuing conservation to benefit both habitat and wildlife resources by making conservation-minded decisions to protect the resource.

The bottom line is that being a land steward is a personal decision for a landowner. It is up to each individual to be the kind of land steward that he or she is comfortable with being. Land stewards are not limited to being large property owners – even those with small backyards can affect the habitat on their property and in the surrounding area. Some people have dedicated and managed their entire property to benefit songbirds, while others have made decisions to provide a more mixed benefit that includes wildlife management and habitat conservation.

The biggest threat facing Connecticut's wildlife species is the loss of habitat. As more land is lost to development or degradation, there are less places where wildlife can live.

The DEEP Wildlife Division's Sessions Woods Conservation Education Center in Burlington was established in large part to educate Connecticut residents, especially landowners, about the principals and techniques of wildlife and habitat management.



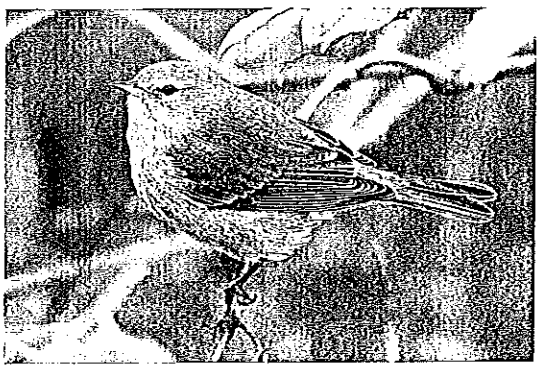
With forest being the dominant habitat type in Connecticut, many of our forest dwelling species, including the black and white warbler, are not only strongly represented in the state, but are dependant on Connecticut's forest habitat to maintain their populations.

With over 90% of Connecticut land in private ownership, the importance of responsible private land stewardship cannot be overemphasized. It is critical for the conservation and survival of wildlife and quality habitat in our state.

In the case of municipal and state lands, responsible land stewardship yields wildlife and habitat conservation for native species, economic boosts for local communities, and opportunities for the public to enjoy our natural heritage in the outdoors. Stewardship of these public lands is important because many of the properties are intact large blocks of habitat. Such large blocks are rare in private ownership in Connecticut. Many of these properties are found in relatively close proximity to residential areas, making the land easily accessible for public recreation.

Not to be forgotten is the stewardship of coastal habitat. With only a tiny proportion of Connecticut's shoreline protected as public land, the state relies on private landowners to be responsible stewards of coastal habitat, which is critical for healthy coastal ecosystems, fisheries, migratory birds, and some endangered species. Public coastal lands, particularly, should stress proper habitat management and conservation as part of routine operations.

In the end, it is up to all of us – private landowners, public land trustees, and outdoor land users – to be mindful of the responsibility for land stewardship and, with it, wildlife and habitat conservation. In a world with continuing habitat loss, conservation and land stewardship are becoming increasingly important. We are all today's stewards of tomorrow's natural resources.



Shoreline Stewardship for Migrants

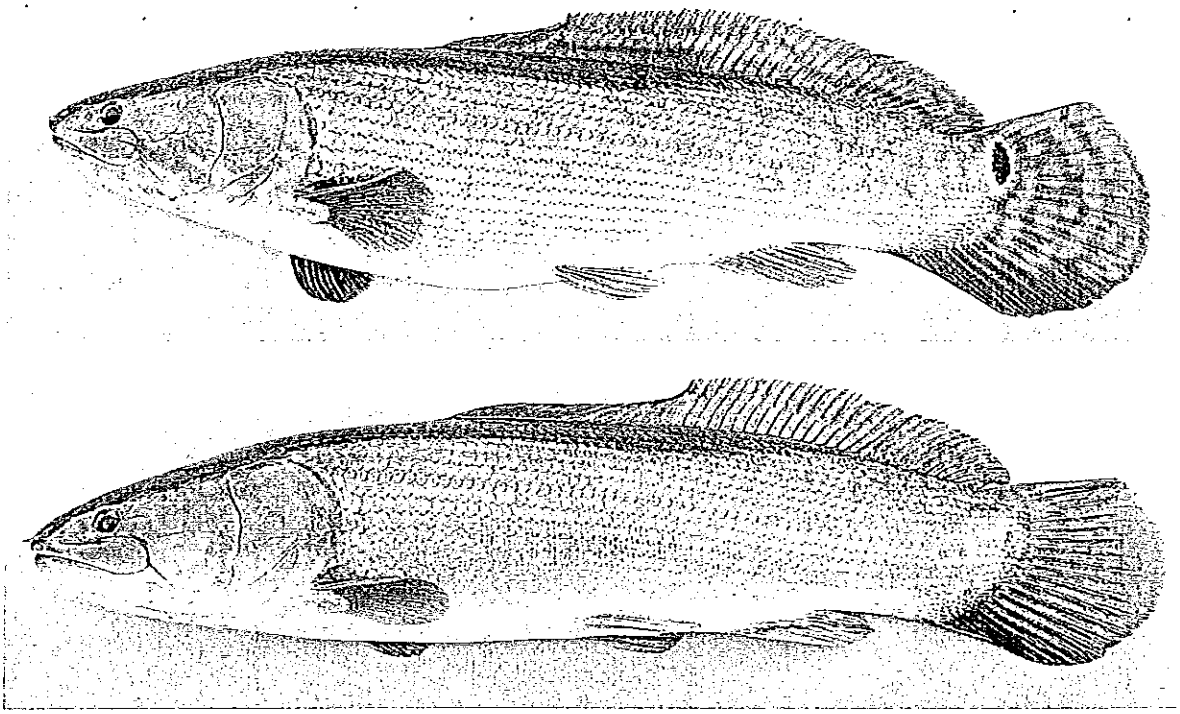
Protecting habitat for migratory birds and other wildlife is one of the main goals of the Wildlife Division. In Connecticut, coastal habitats are probably the most critical areas for the conservation of migratory birds. In general, birds tend to congregate in greater numbers at coastal areas than at 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 Connecticut's coastal habitats, large and small, is imperative to migratory bird conservation. But it doesn't end there. Not only is it important to protect habitats along the coast and close to the coast, but land stewards can play an important role in protecting smaller thickets and weedy fields further inland, as well.

Above: Many forest breeding birds migrate along and close to the Connecticut shoreline, making habitat in those areas invaluable to migrating birds, including this orange-crowned warbler.

Bowfin in Connecticut: A Nuisance or an Opportunity?

Article by Eileen O'Donnell and photos by Robert Jacobs, DEEP Inland Fisheries Division

Increasingly, anglers are reporting catching a strange-looking fish in the Connecticut River. The elongate snake-like body has a single long dorsal fin, no spines, an asymmetrical tail, tube-like nostrils, a large mouth with many sharp teeth, and a bony plate on the bottom of its lower jaw. Is this a living fossil? Not knowing what they are, many anglers mistake them for the infamous northern snakehead that has received much media coverage over the past few years. However, these fish are actually bowfin (*Amia clava*). The bowfin is an ancient species of fish that has remained largely unchanged since the Mesozoic era, and it is the only remaining species belonging to the family Amiidae. It is an interesting fish in that it can actually gulp air at the surface using a specialized swim bladder, thus enabling it to survive in waters with low oxygen. Bowfin are native to North America, ranging throughout most of the eastern United States from the Mississippi River drainage to the St. Lawrence River drainage in the north and from central Texas to Florida in the south. They are not native to the Atlantic coastal states north of Virginia (see range map); however, they have been introduced into some lakes and rivers from Massachusetts to New Jersey. Bowfin were illegally introduced in Connecticut into a private pond in Wolcott in 1976. Although this population was eradicated the following year, bowfins were caught in gill nets in Scoville Reservoir (Wolcott) in 1980, and a single specimen in Chapman's Pond, a cove of the Connecticut River (East Haddam) in 1987.



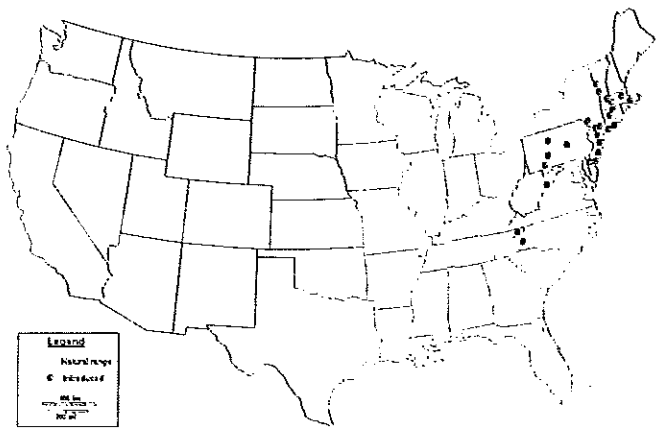
Adult male bowfin have a dark spot with a light-colored halo at the base of the tail (top). This spot fades in females (bottom).

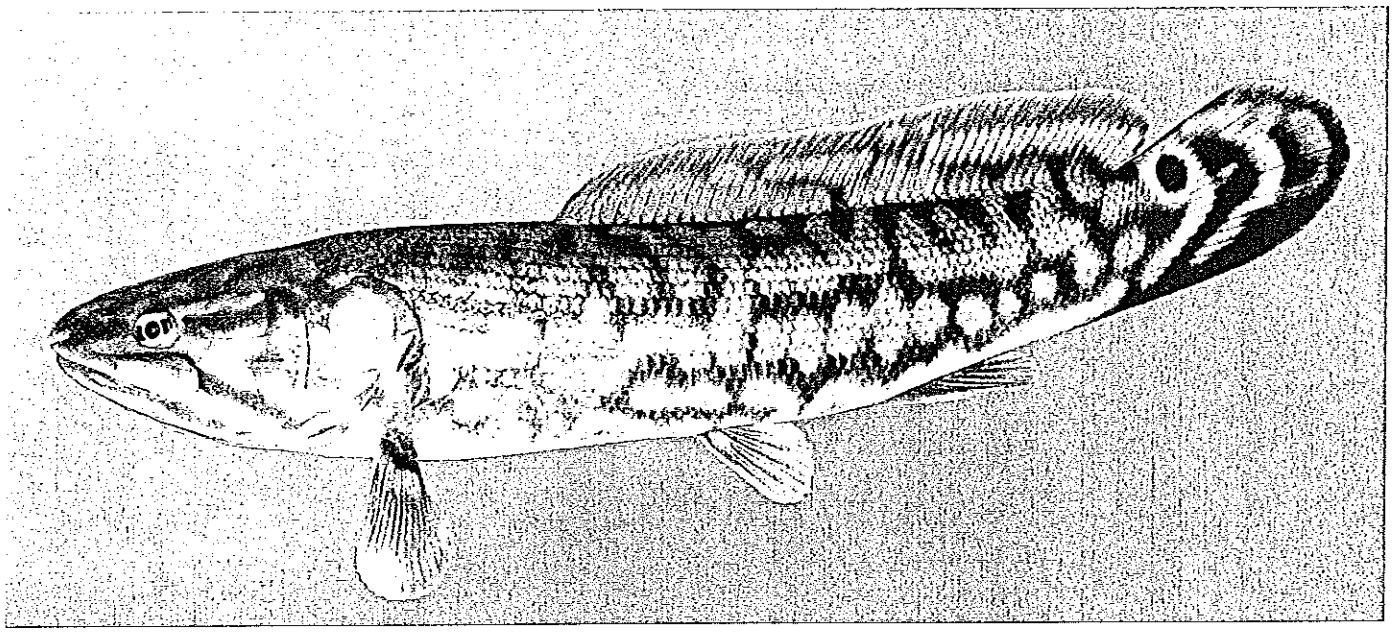
Bowfin prefer shallow, weedy lakes and slow-moving rivers. Spawning occurs in early spring when water temperatures reach 60-66 F. Males guard the nest and young until they reach about four inches in length. Like many species that offer parental care, male bowfin are aggressive during this time and, consequently, are easier to catch on hook and line. Bowfin grow quickly, reaching 16 inches in about two years. Reports of catching 25- to 30-inch fish from the Connecticut River are becoming more and more common.

Starting around 2005, the numbers of bowfin in the Connecticut River began to steadily increase. Currently, bowfin seem to be common throughout the Connecticut River in most backwater coves and ponds, from Massachusetts to as far south as East Haddam. Bowfin individuals captured in 2011 by DEEP Inland Fisheries Division electrofishing crews ranged from 10 to 25 inches, indicating that bowfin were reproducing and surviving, and creating several generations in the river.

It is unclear why this population has expanded over the past 10 years, especially after remaining at low numbers for

Native range of bowfin (green) with recent introductions (red).





Young bowfin have a dark reticulated pattern on their sides and a dark spot with a light-colored halo at the base of the tail.

the previous 15 years. It is possible that conditions in the river have changed to favor the bowfin. For instance, the water in the river is much clearer now than in the past, which has helped to increase the extent and quantity of aquatic vegetation in the river. The increase in vegetation could be adding more suitable habitat for bowfin. Additionally, there has been an increase in the frequency and height of spring flooding events, which may have resulted in improved or increased spawning areas for bowfin.

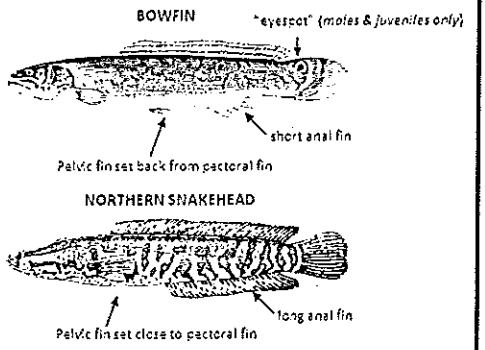
Historically throughout its native range, the bowfin has been considered an inferior game fish, "trash" species, or "rough" species. Originally, anglers felt that bowfin were "voracious top predators" that would either feed on and/or out-compete the more popular game fishes, like largemouth bass, smallmouth bass, and walleye, and thus harm recreational angling. Recent studies on the food habits of bowfin have shown their diet to consist of primarily small fishes and crayfish; these data have exonerated them to some extent. Given a river system with abundant forage, like the Connecticut River, the presence of bowfin should not significantly impact other game fish populations.

Anglers' attitudes about bowfin may be changing. Throughout the country, many anglers are coming to appreciate the aggressive nature of the bowfin and are considering it a "worthy" sport fish. In fact, Connecticut River anglers are now regularly targeting bowfin with reports that they put up an excellent fight and are fun to catch.

So, are bowfin in Connecticut "a nuisance or an opportunity to diversify angling?" The jury is still out. There were no anglers specifically targeting bowfin in the Connecticut River during the 2008-2009 angler survey. However, as Connecticut anglers become more familiar with this resource, they may find that they enjoy fishing for bowfin and begin to actively target this species. The Inland Fisheries Division will continue to monitor bowfin in the river to assess any impacts caused by this fish, as well as consider a suggestion to modify the current regulations which list bowfin as a "prohibited species," making possession of live bowfin illegal.

To learn more about bowfin, visit www.bowfinanglers.com. This website contains fishing tips, recipes, scientific information, and much more.

Differences between bowfin and snakehead



How to Fish and Prepare Bowfin

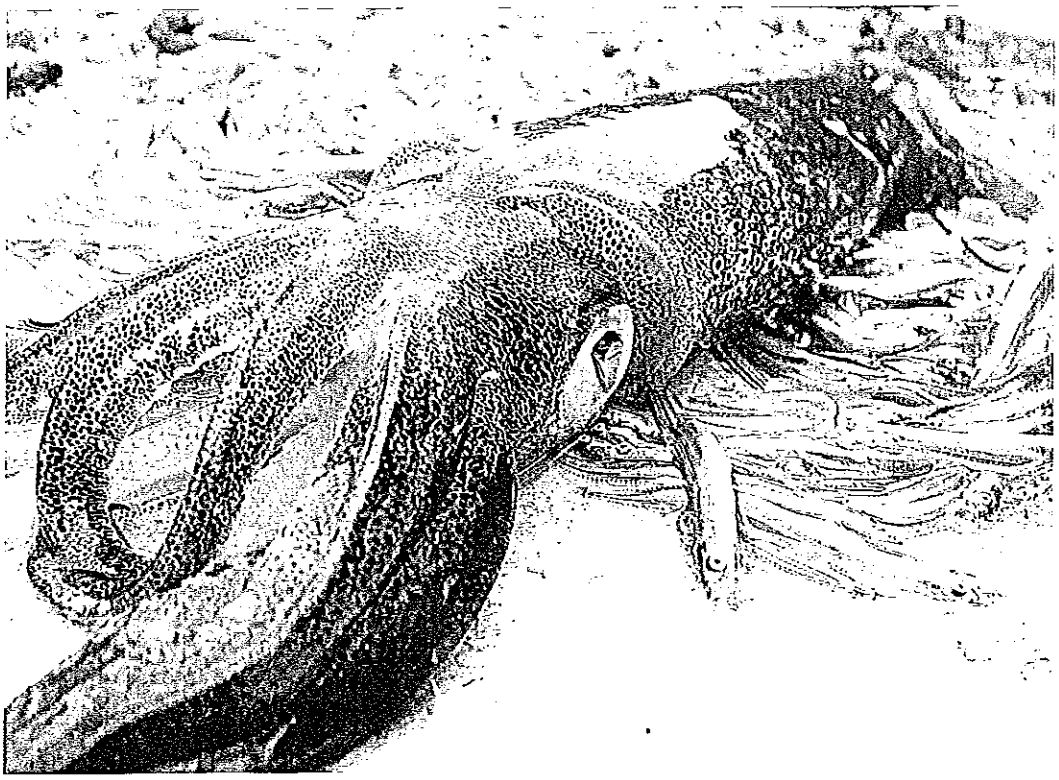
Fishing techniques for bowfin are similar to largemouth bass.

- **Seek out areas with shallow water containing weeds, rocks, and/or downed trees.**
- **Use spinnerbaits, crankbaits, plastic worms, live-bait, or cut-bait. Bowfin use scent to find prey, so cut-bait will usually work better than artificial lures.**
- **At least 10-pound test line with a wire leader is suggested because of the bowfin's numerous sharp teeth.**
- **Fishing is best in early morning and late evening during the open water season. Bowfin are readily caught through ice in winter.**
- **Bowfin flesh is good to eat, if cooked properly. Unlike most fish, the meat is dense, not flakey.**
- **The bowfin is one of only three species of North American fish (including paddlefish and sturgeon) whose eggs can be used to produce caviar.**

Squid: One of Long Island Sound's Stealth Species

Written by Penny Howell, DEEP Marine Fisheries Division

Most people are unaware that one of the most common species swimming in Long Island Sound is the long-finned squid. Squid are a major component of the Sound's forage base, especially for popular sport fish such as striped bass and bluefish. Anglers know squid as preferred bait for these game fish. Squid are also harvested commercially, showing up on our dinner plates most often as calamari. The Sound is an important nursery and feeding ground for squid. It provides protected waters where squid can flourish spring through fall before moving out to the continental shelf to overwinter.



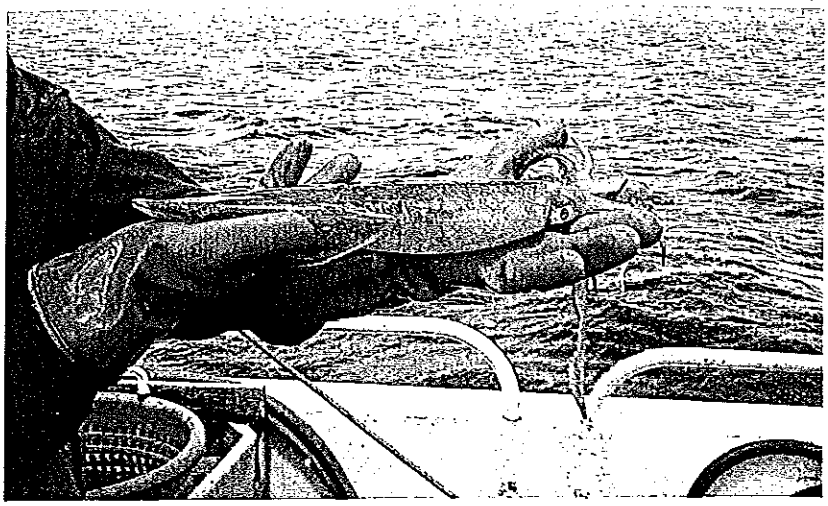
CT DEEP MARINE FISHERIES DIVISION (2)

Squid are often captured in the DEEP Long Island Sound Trawl Survey (LISTS), along with sand eels and other important forage species. The squid's large eye is one of its many advanced organs.

Although movies have been made about frightening giant squid found in deep ocean waters, the Sound's long-finned squid rarely exceed 19 inches (50 cm) in length. More visible than adult squid are squid eggs, which sometimes wash up on local beaches. Squid lay their eggs in gelatinous finger-like strands, often attached together in large masses and given the old fashioned name of "sea mops." The squid's apparent primitive reproduction and simple rocket shape belie a very advanced anatomy and behavioral repertoire. It swims by muscular jet propulsion and often escapes by jettisoning a cloud of black "ink" – moves that would make well-equipped international spies proud.

The squid's speed can be attributed to a giant nerve axon that can reach up to a quarter the length of its body. Decades ago, marine biologists, most prominently working at the Marine Biological Laboratory at Woods Hole, Massachusetts, realized that this giant nerve cell was perfect for research into how nervous systems work. Because nerve functions are similar in all animals, the nerve transmitting mechanisms studied in squid have been applied to deciphering basic biological functions such as vision and hearing, as well as human medical issues like degenerative nerve diseases.

Evolutionarily, the squid's large nerve is an ingenious survival tool. Lightning quick nerves are essential for this soft-bodied, shell-less creature to hunt and avoid predation. Its nerve cells can send extremely fast and accurate messages to the "chromatophores" covering its skin; these cells light up and give the squid its famous iridescent appearance, as well as enable it to change colors quickly so it can match its surroundings in minutes. Although it is rarely seen by anglers or swimmers in its natural habitat, the long-finned squid is just one of the many species that make up the extraordinary diversity of Long Island Sound's marine community.



Long-finned squid caught in the Long Island Sound Trawl Survey rarely exceed 12 inches (30 cm) in length, not including its long tentacles used to capture prey.

Coastal Sand Dunes

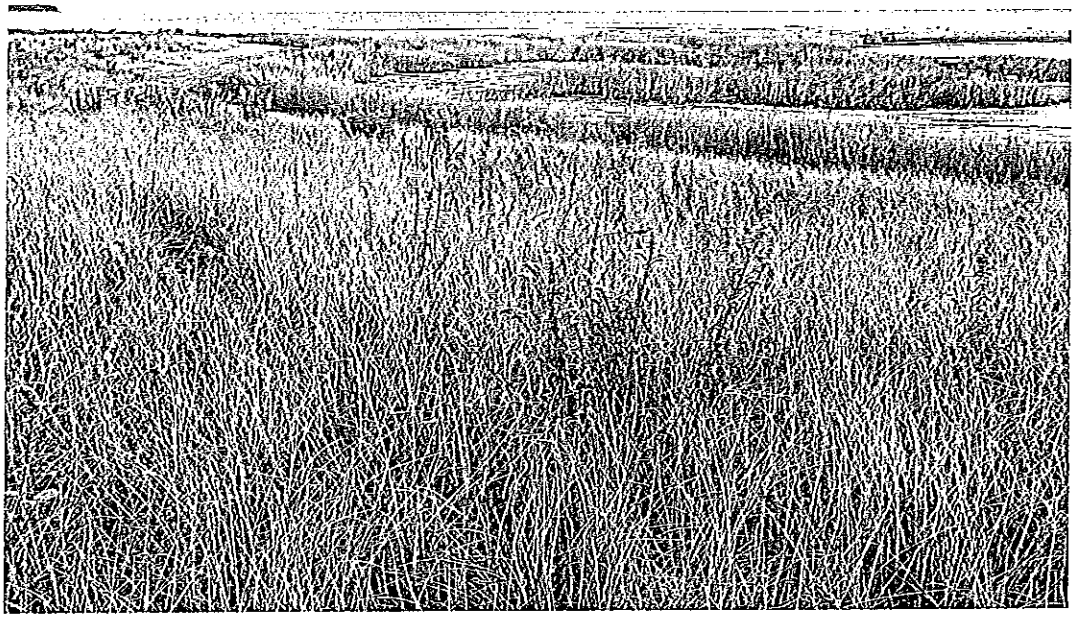
Written by Tyler Mahard and Laura Saucier, DEEP Wildlife Division

Background

Connecticut's coastal dunes may appear to be simple mounds of sand with drab vegetation, dwarfed by the spectacular dunes of Cape Cod. Most beachgoers probably do not give these small eminences much thought as they clamber over them on their way to the waterfront. However, upon closer investigation, one would find Connecticut's dunes to be dynamic geological entities of great importance that support complex ecosystems involving fascinating diversities of life. These environments can only be found on the landward sides of sandy beaches, which make up less than 20% of the state's coastline. This scarcity of habitat is reflected by the scarcity of flora and fauna that specialize in living or breeding in these areas.

As an additional consequence, most of the state's urban coastal communities are deprived of the benefits offered by natural shorelines. Dunes and associated salt marshes act as ocean buffers, protecting homes from storm surges and coastal flooding. As a bonus, these places have great aesthetic and wildlife value under natural conditions and can encourage tourism while increasing the overall appeal of a coastal town.

P.J. FUSCO



Pristine dune ecosystems are rare in modern Connecticut. Dunes and associated salt marshes act as ocean buffers, providing protection from storm surges and coastal flooding. These places have great aesthetic and wildlife value under natural conditions and can encourage tourism.

Natural dune systems make for beautiful landscapes. Large expanses of beach grass sway in unison with gusts of ocean wind. Flowering seaside goldenrod, beach plum, bayberry, sedges, and red cedar create attractive scenery with a natural and rugged feel. Seabeach sandwort, a rare plant that visually brings to mind a wild coastal version of pachysandra, can also be found on dunes; it is currently listed as a species of special concern in Connecticut. Elegant shorebirds and wading birds, such as great and snowy egrets, piping plovers, and American oystercatchers, can be seen on surrounding beaches or foraging in wetlands, while eastern cottontails will browse directly on the dunes near areas of thick vegetation. As the sun begins to go down, these birds and small mammals attract the occasional fox, raccoon, opossum, or coyote.

In late spring, diamondback terrapins use dunes and sandy upland areas bordering salt marshes for digging nests and laying eggs. These turtles are unique in that they live in brackish, estuarine environments and are the only turtles in North America to exclusively do so. The sand dune nesting sites for terrapins must be above the high tide line so that buried eggs are not uncovered and washed away. Dunes are also necessary for protecting the salt marshes where the turtles live from erosion by oceanic processes. Diamondback terrapin populations are threatened by the loss of nesting habitat (dunes), road mortality, collection as a food item, and high nest predation rates. Conservation of dune habitat helps terrapin populations by providing critical breeding and nesting areas.

State threatened piping plovers and least terns do not typically lay their eggs directly on sand dunes, but nest instead in the flat or gently sloped area in front of the dunes, also referred to as the "foredune." Dune grass and sparse vegetation are readily used by the chicks of these species to hide from predators and escape the heat during the hottest part of the day.

Building a Dune

Pristine dune ecosystems are rare in modern Connecticut. To preserve or manage these ecosystems, it is important to first understand the basic geomorphological processes that are responsible for their creation and destruction. Natural coastal landscapes are constantly altered by the forces of wind and water. In the case of dune formation, the process begins with water. Waves sloshing up on the beaches deposit sand from the bottom of Long Island Sound. On-shore wind currents and storms then push that sand further inland to the upper beach where it can be colonized by dune-building vegetation, such as American beach grass. The spreading rhizomes and grasping roots of this plant hold sand in place, while the shoots slow down wind, further minimizing erosion. The reduction in air velocity also causes wind-entrained sand particles from the lower beach to be dropped. As more sand is collected, the beach grass continues to grow and spread, creating a dune-expanding system. Eventually, larger shrubs, and even small trees, may take root, making for a well-stabilized mound of sand.

Human Impacts on Dunes and Beaches

When beachgoers tread on dunes and disrupt the growth of vegetation, the dune system falls to the mercy of the wind. For example, at Long Beach in Stratford, the upper dunes are bisected by footpaths stemming from a large established walkway. This barrier beach stretches nearly two miles, protecting the town's largest salt marsh and the airport built on top of it from erosion by the wind and waters of Long Island Sound. However, constant use of footpaths through the dunes suppresses the growth of plants and their binding roots, allowing for increased wind erosion. The established walkway prevents vegetation growth on top of the dune, inviting human activity which disturbs wildlife that would otherwise take refuge in the surrounding vegetation.

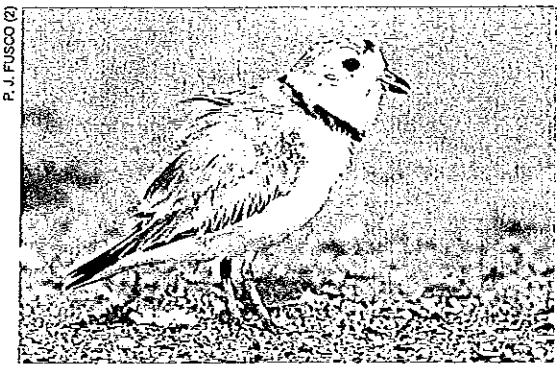
As Connecticut's shoreline has become increasingly urbanized, coastal wildlife species have experienced a drastic reduction in the amount of available habitat. Current aerial photographs of Connecticut's coast show few remaining natural and wild areas. Dune habitats have been completely removed in many areas along our coast. Houses have been built directly on top of what used to be dune habitat, in many cases less than 50 feet from the water's edge. This lack of space allows little room for natural systems to function. The channelization of our rivers minimizes inland erosion, depriving ocean-bound waters of sediments needed to replenish beaches after wind and sea erosion. Numerous dams trap much of the earthen materials contained by rivers. As a temporary solution to this interruption of sediment recycling, "groins" have been constructed to keep beaches from eroding. Groins are jetties of piled boulders that jut out from the coastline to trap sand on the side where the longshore current drifts into. However, erosion is usually worsened on the opposite side of the groin. To combat this, the structures are often constructed in a series. This engineering feat has allowed for the development of high density residential areas directly on the waterfront, encouraging intensive human use of the entire coastline. Bluff Point Coastal Reserve in Groton, east of the mouth of the Thames River and north of Fisher's Island, is one of the few places in Connecticut where the shore is devoid of human settlement and engineering. This reserve boasts one of the most diverse communities of coastal birds in the state, including species of songbirds, shorebirds, seabirds, wading birds, marsh birds, and birds of prey.

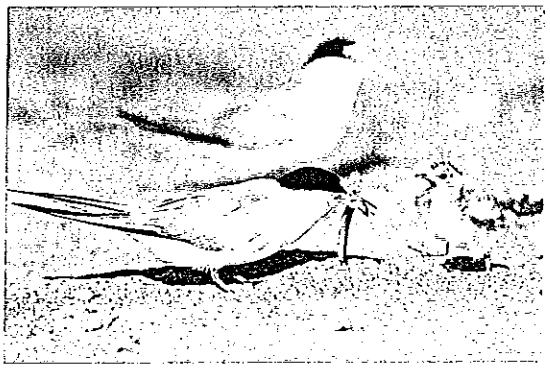
Sea Level Rise and Future Outlook

Between 1964 and 2006, the National Oceanographic and Atmospheric Administration (NOAA) measured sea level rise at a rate of approximately nine inches per 100 years in New London and at about 10 inches per 100 years in Bridgeport. Most qualified sources indicate that the sea level is continuing to rise. Satellite imagery from the National Aeronautics and Space Administration (NASA) and current studies by NOAA provide indisputable evidence that Arctic land ice has been continuously melting since the third quarter of the last century. The Intergovernmental Panel on Climate Change (IPCC) indicates in the IPCC Fourth Assessment Report that the global average temperature will continue to rise. This contributes to melting land ice that runs into the sea, as well as thermal expansion of ocean waters. The end result is an increased volume of ocean water and higher average sea levels. You can see how this would affect coastal towns by looking at an interactive map of sea level rise models at http://cteco.uconn.edu/help/ctcoasthaz_data.htm.

In light of rising sea levels and considering recent storm destruction to coastal areas, communities constructed on top of sand dunes and other natural coastal systems, rather than slightly inland, may experience more flooding and destructive events. Dunes are capable of blocking large storm surges, while wetlands are able to accommodate great influxes of water by spreading them over vast areas. Nature offers far better defenses against storm tides than most levees and residential fortifications. Connecticut's coastline presents a complicated situation, with many landowners and competing interest groups. It is a highly modified environment where natural ecosystems are struggling to persist and residents are at high risk of property damage from weather events. By reclaiming space for dunes and saltmarshes and allowing the geological processes that form them to happen, shorelines can revert back to the beautiful and protective entities they once were.

P. J. FUSCO (2)



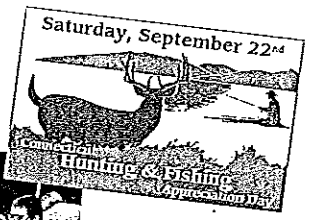


Sand Dunes and Superstorm Sandy

The *Coastal Sand Dunes* profile was selected for this issue long before Superstorm Sandy hit the state at the end of October. Because of that storm and Tropical Storm Irene in 2011, the role of sand dunes and restored salt marshes in protecting the coastline from tidal surges and storm damage has been brought to the forefront. DEEP biologists and local conservation organizations are concerned about the potential impacts of storm damage on critical shorebird nesting areas. Impacts are currently being assessed, although much may not be apparent until spring when piping plovers, least terns, and American oystercatchers return to our shoreline to establish nesting territories. The tidal surge from Sandy caused significant overwashing of sand dunes at several nesting areas. Some of these areas have experienced major erosion and are lower than before, leaving them vulnerable to flooding during high tides and subsequent storms. Overwashing in other areas actually created new dunes and scoured the vegetation, providing suitable nesting habitat that didn't exist before.

The Audubon Alliance for Coastal Waterbirds posted a series of photographs on its Facebook page depicting changes to several key shorebird nesting areas. According to the group's assessment, dunes were overwashed with sand and scoured of vegetation at Sandy Point and Morse Point in West Haven, Long Beach in Stratford, and Pleasure Beach in Bridgeport. These conditions should make great tern and plover habitat next season. Because of Storm Sandy, Griswold Point in Old Lyme is now "Griswold Island." The marshes at Great Island have become even more vulnerable to erosion from tides and surf. The full impact on nesting habitat for plovers, terns, and oystercatchers has not yet been assessed. The sand dunes at Bluff Point State Park in Groton have undergone some extreme changes, and it currently is difficult to determine what the new elevations are and how the area will fare during any future storms.

Recap: 2012 CT Hunting & Fishing Appreciation Day



The Friends of Sessions Woods, a major sponsor of CT Hunting & Fishing Appreciation Day, provided information and sold bluebird nest boxes (as a fundraiser) that were constructed and donated by Master Wildlife Conservationist Rick Vanderslice.

DEEP Wildlife Division biologist and Conservation Education/Firearms Safety Instructor Mike Gregonis assists a participant at the .22 shooting range.

Lorrie Schumacher of Talons! A Birds of Prey Experience shows off a Eurasian eagle owl during a live raptor presentation.

DEEP Wildlife Division biologist Paul Rego shows interested children how a bear trap works.

DEEP Seasonal Resource Assistant Melissa Ruszczyk demonstrates how to shoot a tranquilizer gun. Biologists shoot darts from this type of gun to immobilize wildlife for research or capture.

Kids enjoyed making crafts, like fish prints, wildlife magnets, paint a rock or butterfly, and wildlife tracks. The craft tent was staffed by Lyman Hall High School student volunteers, Wildlife Division staff, and Master Wildlife Conservationists.

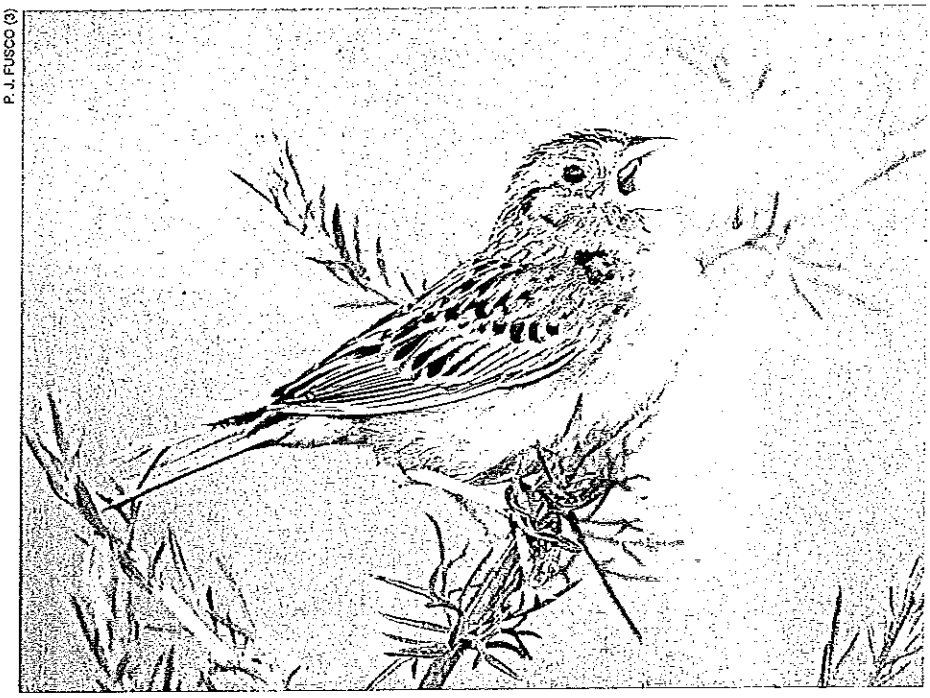
DEEP Commissioner Dan Esty poses with Foxy the Fox (played by student volunteer Emily Herz). Foxy also had her picture taken with many happy kids who attended Hunting & Fishing Day.

Several volunteer Conservation Education/Firearms Safety Instructors helped participants try their hand at the archery range.

More photographs from the 2012 CT Hunting & Fishing Day are featured on our Facebook page at www.Facebook.com/CTFishandWildlife.

Photos by Paul J. Fusco

FROM THE FIELD


P. J. FUSCO (3)

Grassland Bird Surveys

The DEEP Wildlife Division continued to monitor grassland bird populations at select sites across the state. Grasslands that support breeding populations of the upland sandpiper, horned lark, eastern meadowlark, and grasshopper sparrow are rare in Connecticut. These bird species are dubbed "area sensitive" because they only successfully breed in areas of expansive habitat. The rarity of large grasslands and subsequent rarity of these species is why they are included on Connecticut's List of Endangered, Threatened and Special Concern Species. Annual surveys are conducted to determine if these birds are indeed successfully breeding and hatching young. Juveniles of all but the eastern meadowlark were observed this past field season. The Division is fortunate to have enthusiastic volunteers who conduct surveys and submit their results for other sizeable grassland sites. We would like to extend a big thank you to our dedicated volunteers for their efforts!

Laura Saucier, DEEP Wildlife Division

Upland sandpiper

Grasshopper sparrow (top)

Bobolink

Find us on Facebook

www.facebook.com/CTFishandWildlife

Bureau of Natural Resources Staff Notes

The Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program recently welcomed two Maintainers to the Housatonic River Phragmites Project. Stephen Chowaniec and Adam Hendrick, both long-time seasonal employees with the WHAMM Program, are familiar with the specialized equipment used to restore and enhance wetland and marsh habitat. They also have experience in diagnosing problems in the field, as well as performing maintenance on the equipment.

The Inland Fisheries Division recently welcomed Mike Beauchene to the Connecticut Aquatic Resources Education (CARE) Program. Before assuming his new responsibilities, Mike served a long tenure with the DEEP's Bureau of Water Protection and Land Re-use. Mike also has assumed a new assignment as Contributing Editor from the Inland Fisheries Division for *Connecticut Wildlife* magazine. We welcome Mike to his new position and look forward to his contributions to the magazine.

Art Contest for 2014 Duck Stamp Image

Artists are invited to enter an original piece of artwork that depicts a waterfowl species (duck, goose, or brant) that occurs in Connecticut in a contest to select the image for the 2014 Connecticut Duck Stamp. Paintings that include a Connecticut scene or landmark in the background are preferred. The contest is open to all artists, regardless of residence, age, or experience. Artwork may be in any full-color medium, including acrylic, oil, colored pencil, and watercolor. Entries will be judged on originality, artistic composition, anatomical accuracy, general rendering, and suitability for reproduction. Contest entries must be received in person or postmarked on or before March 15, 2013, to be eligible. Visit the DEEP website to obtain the full contest rules, judging criteria, and where to submit entries (www.ct.gov/deep/CTDuckStamp).

Chimney Swift Update

P.J. FUSCO / MOUNT VERNON SONGBIRD SANCTUARY

Thanks to the generosity and hospitality of several Connecticut chimney swiftlords, DEEP Wildlife Division staff had the opportunity to peek into a number of nesting chimneys this year. Unfortunately, from these observations, as well as reports from homeowners, nesting success for chimney swifts was significantly lower in 2012 than it was last year. From 22 nest reports received by early September, 50% reported nest failure. An additional 18% reported that the swifts never returned to their nest chimney. The majority of nest failures (73%) appeared to be some sort of abandonment of chicks or eggs. One quarter of the swiftlords that had abandoned nests also had interesting observations of adult swifts that somewhat implied that other adult competition may have played a role in nest failure.

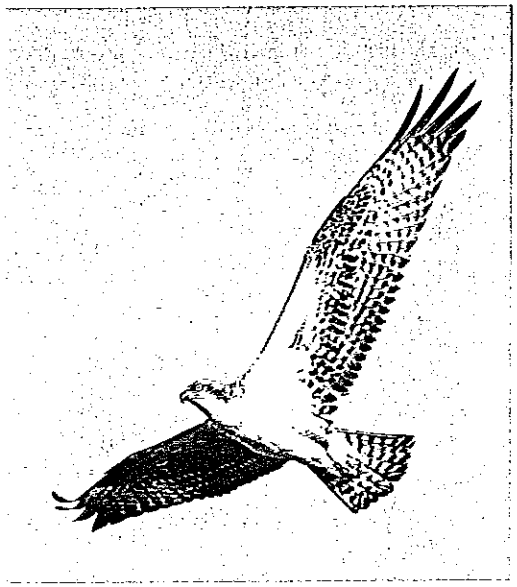
This year's nesting results are very poor compared to last year when 68% of reported nests were apparently successful. It also was noticed that numbers at the roosts during the prime breeding season seemed higher than last year, which also would imply that birds were not breeding successfully. More analysis needs to be done to determine why results from this year were so different. Division staff will look at differences in weather and potentially differences in what the swifts might have been eating to see if either of these factors might have affected nesting success this year.

More information about the Division's chimney swift efforts is available on the DEEP website (www.ct.gov/deep/wildlife), such as how to find roosts and monitor nests, as well as a color brochure on chimney swifts.

The Wildlife Division would like to thank all of the chimney swift volunteers and swiftlords for their efforts this past nesting season!

New Osprey Pole/Platform Installed by United Illuminating

An osprey nest built on a utility pole in Milford last summer made the news several times over the nesting season. In early May, there was public concern that the nest would be removed from the pole. However, United Illuminating (UI) decided not to remove the nest, but instead placed a sleeve around it to provide protection. Unfortunately in late July, shortly before the young ospreys were due to fledge, the line was hit by lightning and the nest and chicks were lost.



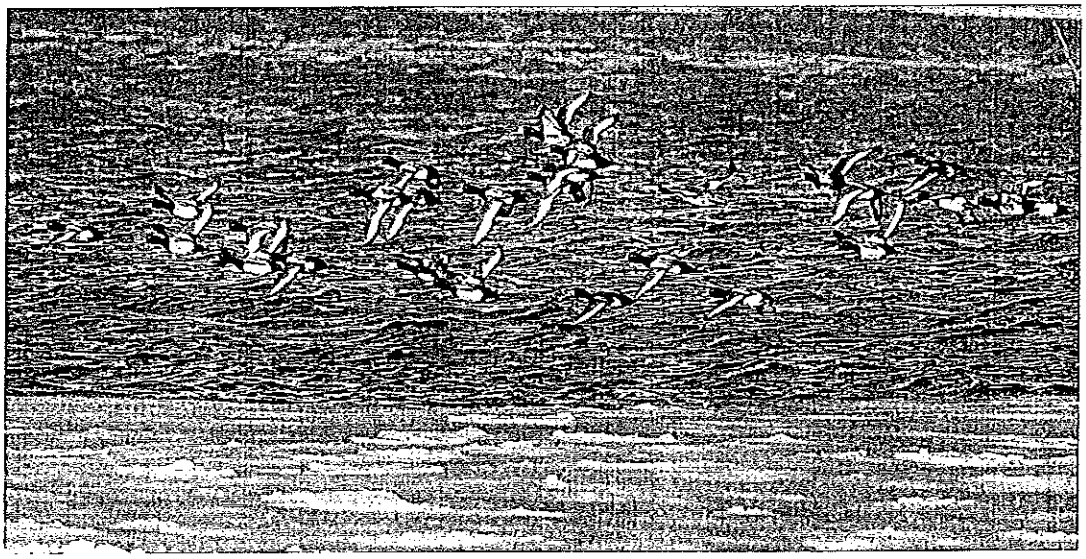
UI installed a pole and osprey nesting platform in Milford, across the street from the utility pole where an osprey nest was destroyed by lightning last year.

PHOTOS BY UNITED ILLUMINATING (above), P.J. FUSCO (OSPREY)

Osprey nests on utility poles have been presenting challenges for both UI and Connecticut Light & Power in some of their service areas. The large, stick nests can cause fires and power outages. But, nest removal also presents its own set of problems. Nest removal, especially when eggs or young are in the nest, usually sparks a large public outcry. Ospreys are protected by both state and federal laws and, as a general rule, a native migratory bird nest containing unhatched eggs cannot be moved unless it presents a potential danger to human health and safety. However, under certain circumstances, nests may be moved, and only if the proper permits are obtained from the DEEP. Nests that are heavily entwined with their surroundings are more likely to be damaged during removal. Any effort to relocate or remove an osprey nest is a coordinated effort between the utility company and either the DEEP or the U.S. Fish and Wildlife Service.

Knowing that ospreys typically return to the same nesting area each year, UI took the initiative this past September to install a new pole and osprey nesting platform at the corner of Anderson Avenue and Quirk Road in Milford, across the street from the utility pole where the nest was destroyed. DEEP would like to thank United Illuminating, Milford officials, and osprey volunteer and Master Wildlife Conservationist Carol Dunn who worked with the agency on this project to provide a safer nest site for the osprey pair next nesting season.

Waterfowl Hunter Water Survival Tips


P. J. FUSCO

Why do some waterfowl hunters lose their lives by drowning? Drownings occur because the victim made the wrong decision; did not realize the dangers of boating in rough, cold water; was not properly prepared; had the wrong equipment; or failed to wear a life jacket, also known as a personal flotation device (PFD).

Small boats are extremely unstable. Often, the victim of a small boat accident didn't realize just how unstable his craft was. Add to this, cold, rough water and the chances for survival for the sportsman fallen overboard are slim. Cold water kills – even those in excellent condition who know how to swim.

Four main causes of water deaths are:

- **Hypothermia** – the rapid loss of body heat in cold water.
- **"Dry" drowning** – constriction of the throat and the resulting suffocation due to a sudden inrush of cold water.
- **"Wet" drowning** – the displacement of air in the lungs by water.
- **Massive heart attack** in older, out-of-shape, non-swimmers in cold water.

Most boating fatalities are the result of capsizing or falls overboard and they usually occur in small, open boats on small inland bodies of water. A little knowledge, a good lookout, and common sense and courtesy could prevent many accidents. Approximately 90% of the fatalities are the result of drowning. The vast majority of those who die in boating accidents were not wearing a PFD. Most accidents are a sudden, unexpected occurrence. Victims have little, if any, warning ahead of time to prepare. A PFD could save a person's life, but it will be of little use if it is not worn and does not fit properly. Connecticut boating law states that anyone on board a manually propelled craft between October 1 and May 31, must be wearing a life jacket at all times. The life jacket must be a Type I, II, III, or V-Hybrid. The DEEP recommends that anyone on cold waters wear a life jacket.

Capsizing and Falls Overboard

In a small boat, the weight of the passengers is greater than the weight of the boat. Therefore, movements of passengers have great effects on boat stability. Do not exceed the boat's capacity. Load the boat evenly fore and aft and side to side, keeping the weight low. An overloaded or overpowered boat is less stable and more likely to capsize. Should the boat capsize, grab a PFD if you are not wearing one (although you should be!). Do not try to swim to shore; instead, stay with the boat until help arrives. The shore is usually farther away than it looks and most boats have flotation. It is easier for rescuers to spot an overturned boat in the water than a swimmer. Only leave the safety of the boat as a last resort and after carefully assessing the situation.

Do not stand up in a small boat. This is dangerous, making a fall overboard more likely. If you need to change position in the boat, hold on to both sides and keep your weight low.

As a side note, it is important that before you venture out on the water, you inform someone where you are going and file a float plan. You never know when an accident might happen.

Hypothermia

Hypothermia is a condition in which the body loses heat faster than it can produce it. This causes a dangerous reduction of the body's inner temperature. Hypothermia results from exposure to wind and wetness. A victim of hypothermia will start to shiver violently. This may give way to muscle spasms and even loss of the use of arms and legs. Confusion and "drunken" behavior also indicate that a person may be hypothermic.

To protect yourself from hypothermia, avoid the conditions that cause it. Dress warmly and stay dry. Wear a hat. Put on rain gear before it rains and wear a wool jacket. Wool traps body heat even when wet. There also has been significant advances in clothing technology. Consult a retail store, local club, or organization for the latest clothing options. Know the effects of wind with cold weather. It may be 40 degrees F outside with the sun shining, but a 10 mph wind lowers the windchill temperature to 28 degrees F.

How long can one survive in cold water? Survival in cold water depends on many factors. Temperature of the water is only one. Others include a person's body size and condition, and activity in the water, to name a few. When a person falls into cold water, there are ways to increase the chances of survival. Do not discard clothing as it helps to trap the body's heat, and do not move around unnecessarily. By swimming or treading water, a person will cool about 35% faster than when remaining still. An "average" person, wearing light clothing and a PFD, may survive two-and-a-half to three hours in 50 degrees F water by remaining still. This survival time can be increased considerably by getting as far out of the water as possible and covering the head. Getting into or onto the boat or anything else that floats can be a real lifesaver.

Consumption of alcohol affects the many reflexes of the human body, one of which is keeping the core body temperature warm in cold weather. The decreased core body temperature brought on by intoxication could lead to hypothermia. Alcohol intensifies the disorientation that a person experiences. When a person who has been drinking is immersed in water the chances of drowning become higher.

Boating Education

Those who operate boats in Connecticut that are required to be registered, documented,

continued on page 23

Conservation Calendar

Jan. 13 ..... **Seal Search Walk at Hammonasset Beach State Park**, starting at 2:00 PM. Come stroll the beautiful trails of Hammonasset Beach State Park in Madison and see if you can spot some seals sunning offshore. A guided walk for all skill levels. Meet at Meigs Point Nature Center. No dogs please! Contact Ranger Russ Miller for more information (rangermpnc@gmail.com).

Feb. 19 ..... **Bald Eagles of Connecticut at Kellogg Environmental Center in Derby**, starting at 7:00 PM. The recovery of the bald eagle is a wildlife success story in our state and across the country. Laura Saucier, with the DEEP Wildlife Division, will present a program about the bald eagle's status in the state, its life history, and its population decline and recovery. This program is sponsored by DEEP and the Naugatuck Valley Audubon Society. A donation of $4/adult and $2/ student is suggested. For more information, contact Donna Kingston, of Kellogg Environmental Center, at 203-734-2513. Kellogg Environmental Center is located at 500 Hawthorne Avenue, Derby.

Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by calling 860-675-8130 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.

Dec. 15 ..... **Meet & Greet Reception**, from 2:00 to 4:00 PM. Visit Sessions Woods for an open house to meet photographer and Master Wildlife Conservationist Gary Melnysyn and view his award-winning photography. Gary is an avid outdoor enthusiast and has been interested in wildlife from a very young age. A self-taught photographer, Gary's travels have taken him from the far reaches of Alaska, across the Canadian tundra, through the wilderness of Montana and Wyoming, southwest to the shores of the Sea of Cortez, through the Great Divide, and into the deep woods of Maine. Gary's passion for photography, combined with his wildlife background, results in stunning, wildlife images. If you like bears, birds, and breath-taking scenes, you won't want to miss this unique opportunity.

Shepaug Bald Eagle Observation Area to Open on December 29

The Shepaug Bald Eagle Observation Area, in Southbury, opens for its 28th season on December 29, 2012. The Observation Area is run by FirstLight Power Resources, a GDF SUEZ Energy North America company, which owns and operates several hydroelectric facilities along the Housatonic River. Observation times are Wednesdays, Saturdays, and Sundays between 9:00 AM and 1:00 PM from Wednesday, December 29, 2012, through mid-March 2013. Although admission is free-of-charge, advance reservations are required and will be taken beginning Tuesday, December 7. 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.

The Shepaug Observation Area is one of the top eagle viewing locations in New England. It is a popular spot for eagles in winter when the turbulence below the dam keep the water from freezing, and the fish below the dam provide a ready food source. Specialists will be on site with high-powered telescopes to help visitors see the eagles in action and to answer questions. Visitors are encouraged to dress warmly because the Observation Area is unheated, and to bring binoculars, if possible, given the limited number of on-site telescopes.

Water Survival Tips

continued from page 22

or numbered, must obtain a Safe Boating Certificate. In order to meet the requirements for a certificate, an individual must have successfully completed an approved basic boating course or received a passing grade on an equivalency examination administered by the DEEP. To find out what boating education courses are available near you, go to the DEEP website at www.ct.gov/deep/boating or call the DEEP Boating Division at 860-434-8638. To obtain a copy of the *Connecticut Boater's Guide*, you may also go to the DEEP's website or call the Boating Division. The Guide is a handbook of boating laws and regulations, registration information, and guidelines for safe boat operation.

For those who operate canoes and kayaks, it is recommended that you take canoe and kayak safety classes offered by the DEEP Boating Division. These classes are designed for beginning paddlers, whether or not they have taken other DEEP boating courses. The classes are voluntary, and are about two hours long.

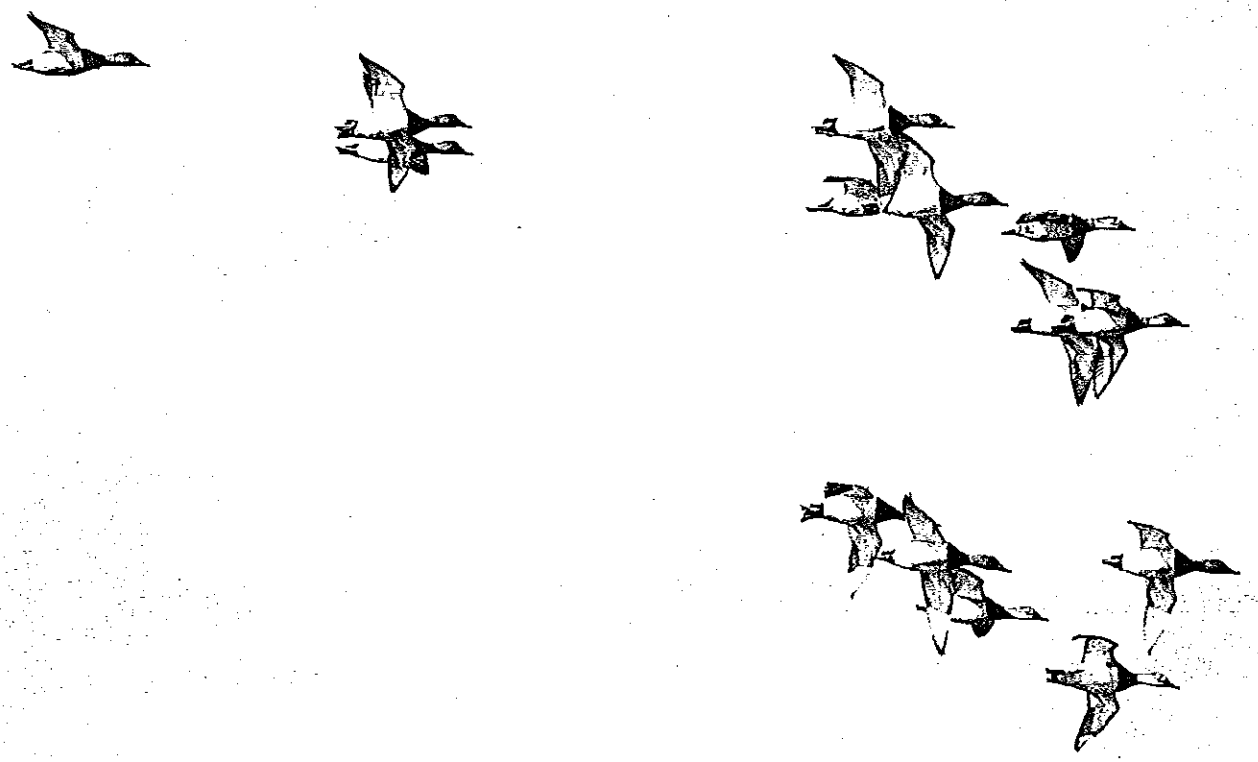
Connecticut Wildlife

PERIODICALS
POSTAGE PAID AT
BURLINGTON, CT,
AND ADDITIONAL
OFFICES

Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources / Wildlife Division
Sessions Woods Wildlife Management Area
P.O. Box 1550
Burlington, CT 06013-1550

EXPIRES COMP.
MANSFIELD CONSV/INLD WETLANDS
TOWN HALL
4 S EAGLEVILLE RD
STORRS CT 06268-2574

P. J. FUSCO



Migrant flocks of canvasbacks begin to appear in Connecticut in late November, increasing in numbers through December into early January. Canvasbacks are mostly found in the brackish waters and marshes at the mouths of tidal rivers in Connecticut. They also use large freshwater reservoirs and sheltered inlets on the coast.

CFL News

Volume 17, Issue 2—November 2012

Future Newsletters

In an effort to more effectively utilize our limited funds, CFL will be transitioning to electronic distribution of our newsletter beginning in 2013.

To ensure that you continue to receive our newsletter and other bulletins, please provide us with your e-mail address. While we have some e-mail addresses, we do not have them for the majority of those who receive our print newsletter. Please send an e-mail to Penny@CTLakes.org so that we may add you to our list. We will not sell or share your address.

We appreciate your support of the Connecticut Federation of Lakes in 2012.

INSIDE THIS ISSUE

President's Message

A New Approach to CFL Membership, Support, and Newsletters

Since 1996 the CFL has worked diligently as advocates for our wonderful lakes, reservoirs and ponds in the State. Over the years, our membership has grown some, with many of you remaining loyal supporters with your annual dues. However, the numbers of members has not grown enough to provide the kind of voice we really need to affect state-wide policy on lakes.

Over a year ago, we engaged a wonderful community foundation, the Connecticut Community Foundation, who provided a board retreat last January. We assessed where we've come from, where we are today, and where we need to go. It was clear that two areas we need to improve on are membership and fundraising. Of the two, growing the membership was the priority since financial support would naturally grow if the membership grew.

So we are taking an experimental approach to growing the membership and will be making membership in the organization free! You will no longer receive membership dues notices. If you are a member or once you become a member, you will always be a member until you ask us to remove you from the membership list. In order to raise needed funds, you will, on occasion, receive an appeal letter from us and you will have the discretion of responding to it or not. We certainly hope that those of you that have supported us with your membership dues will continue to provide financial support through the annual appeal and that others will join in providing financial support.

In the mean time, we will continue our work as advocates of Connecticut's beautiful lakes, ponds and reservoirs and also strive to grow our membership numbers into a louder, forceful voice at the State level and

you can help. We are developing a new membership brochure which we will make available on our website. Tell your friends! Or if you think you know someone or some lake community who might consider becoming a member, send along a mailing and e-mail address to Penny@CTLakes.org. We will take care of the rest. We will also be providing on our website an online form to fill out to become a member.

One of the items we will be requiring in the online registration is an email address. That is because over the next year or so we plan to transition to online newsletters as opposed to ones mailed to you. This will help us keep costs down while still keeping you informed on important lake related issues.

Key benefits to our members are continued information relevant to lakes and ponds as well as enhanced influence in legislation that will positively impact our lakes, ponds and reservoirs.

Season's Greetings from the Board of the CFL.

Larry Marsicano, President

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Hiring Launch Monitors?

By Bruce Fletcher

Greeting incoming boaters, discussing invasives, and checking (with permission of course) boats and trailers for invasives is important at every lake. Doing this on a regular basis is difficult if you are depending on volunteer Launch Monitors (formerly called Invasive Investigators in 2011). Hiring Launch Monitors (18 years old or older) trained by the DEEP would provide better coverage depending on the lake association's budget to hire, supervise, pay $10 per hour, do the payroll and IRS work, and purchase Workers' Compensation Insurance coverage. These costs are moderate, but perhaps worth it to stop invasives. The cost of prevention is always less than the cost of control once an invasive gets established.

A lawyer and an insurance agent were consulted. Figuring that a Launch Monitor was close in risk exposure to an outdoor parking lot attendant, the cost for Workers' Comp. Insurance protection for $2,000 in payroll would be about $1,800.00 for some 200 hours of launch monitoring. Your lake association might want to research this.

Another approach is to have the town hire and pay these monitors so that they would be covered by the town's "blanket" Workers' Comp. coverage. Please check this out and share what you learn with the CFL. In the meantime encourage many to become trained volunteer Launch Monitors.

For more information on upcoming training sessions please contact Wendy Flynn at 860-447-4339 or gwendolynn.flynn@ct.gov

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What Percent Of Your Association Membership Pays Their Annual Dues?

Special Taxing Districts

By Bruce Fletcher

In most voluntary lake associations in Connecticut not everyone contributes to their annual association budget. It is not fair that all enjoy their lake but only a few pay. Everyone should share in the stewardship of their lake. Since it is likely that each family's lake property is one of their top family assets, doesn't it make sense to invest in the upkeep of the lake which makes it special?

Lake associations or residents around a lake or pond can form under Connecticut General Statutes a Special Taxing District to provide services for lake residents and levy property taxes to pay for them.

Protecting water quality and improving recreational desirability help lake residents and stakeholders to better enjoy their water sports, enhance the scenic beauty of their lake, and to protect or maintain their property values. The special district tax or "dues" can be used to pay for many things such as weed mapping, invasive weed control, studies by consultants, weed and safety buoys and their maintenance, matching funds for state projects like diagnostic feasibility studies, dredging and aeration systems, algae control, lake cleanups, hiring of Launch Monitors, police and conservation officers, conservation easement donations and much more.

If residents don't pay their "dues" in any particular year, a lien for that amount can be placed on their property by the town tax collector. This arrangement ensures that all residents in this special district contribute their

share of costs for the services or projects or purchases approved by the association which benefit all.

The special taxing district is formed when 15 or more voters submit a petition to the town's selectmen specifying the proposed district's boundary. Within 30 days a meeting must be called with public notice given in a local newspaper at least 14 days before. Up to 24 hours before the meeting 200 eligible voters or at least 10% of its total eligible voters may petition for a referendum on the district's formation. Or the selectmen may call for a referendum on its own authority. In either case, the vote must be held between the next 7 to 14 days.

If two-thirds (2/3) of the voters approve the district, the voters can then name the district and elect officers by majority vote. Within 30 days of the officers' election, the district secretary or clerk must record the district's existence in the town's land records and file a report with the town clerk.

There are a number of special taxing districts in Connecticut formed to maintain a lake. A few examples are Lake Bunggee in Woodstock (1982), Lake Hayward in East Haddam (1957), Lake Garda in Farmington (1943), Amston Lake in Hebron and Lebanon (2002), and Quassett Lake in Woodstock (1976).

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Funding For CAES's Invasive Weed Program Was Nearly Cut

By Bruce Fletcher

Many of you know of Greg Bugbee and his work heading the Invasive Aquatic Plant Program [IAPP] conducted out of the Connecticut Agricultural Experiment Station in New Haven. This program helps some 200 Connecticut lakes and ponds by mapping invasive weeds, treating or helping to treat certain weed infestations, and by giving advice to lake organizations. Since most local lake groups at this time don't [and can't] raise sufficient funds to do adequate invasive prevention and treatment, the Ag Station will and does step in. IAPP's online database of interactive lake vegetation maps [www.ct.gov/caes/iapp] is used by stakeholders to track infestations, prevent expansions, and provide the scientific information critical to ecologically sensitive management strategies. Their control research also aids private, governmental and commercial groups. All of Connecticut is grateful for CAES's IAPP work made possible since 2003 by funding from the USDA [Department of Agriculture]. But continued funding was in doubt. The fear was that the Feds might stop or dramatically reduce funding to all Ag. Experiment Stations nationwide beyond fiscal year 2012. After Greg Bugbee told various lake groups about this prospect, an aggressive letter writing campaign ensued to members of the US and State congresses from affected lake associations and the CFL. The effort helped because at least for now, " the invasive species research grants will be funded at Fiscal Year [FY] 2012 levels ", says US Congressman Joe Courtney.

This is very positive news for Connecticut lakes and ponds. The CFL and the DEEP are very grateful for the IAPP work of the Connecticut Agricultural Experiment Station. The CFL also hopes the DEEP will consider again a "Sticker Program" similar to that of the State of Maine whereby more funds will be raised and become dedicated to help Connecticut battle its aquatic invasive species. It seems intuitive that Connecticut boaters would gladly pay the sticker fee to protect or improve our waterways so that their beloved water sports may continue.

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Fanwort in Bantam Lake: A Cautionary Tale

By Connie Trolle and Sabina Perkins (Northeast Aquatic Research)

Fanwort is the plant of nightmares. Once it gets into lakes, it grows so rapidly and prolifically that it is nigh on impossible for lake managers to stay ahead of it. It was a dark and spooky night in 2007 when Dr. George Knoecklein a consultant from Northeast Aquatic Research warned the members of the Bantam Lake Protective Association (BLPA) of the threat to the lake by the presence of this new and aggressive invasive aquatic plant in the Bantam River!

Dr. Knoecklein presented evidence that fanwort had rapidly increased in coverage from about 0.9 acres in 2004 to 6.2 acres in 2008likely aided in large part to the high use of the Bantam River by canoes and kayaks causing fragmentation of the plants. The growth of this plant in just a few years was staggering and scary. In 2007, the future looked bleak, the Bantam Lake Protective Association was told that there was no treatment for this most invasive of weeds. However Dr. Knoecklein and I refused to accept defeat and decided

to take a stand and fight until the threat was vanquished and the weed was eradicated from Bantam Lake! George suggested we try removing the plant by enlisting the valiant Bruce Lockhart of Lockhart Environmental to try to remove the plant using suction harvesting. Bruce started the epic battle in the summer of 2008, when he spent several weeks waging war on 3 acres of fanwort at the outlet of the lake in an attempt to keep the beast from going downstream. The battle plan was to remove the fanwort from the lake and then work to find and remove the source while continuing to keep the plant at bay in the inlet river. This first suction-harvesting project was a test for us, and we found that it worked, and worked well.

As a result of the success, the Bantam Lake Protective Association, a non-profit organization established in 1925, decided to continue the fight the next summer. With funds raised from annual membership drives, fundraisers and a coalition fund set up with funding from the Town of Morris, White Memorial Foundation, the BLPA contracted Lockhart Environmental to continue to use the suction harvesting method to remove the fanwort from the lake. We continued to have success with this method and slowly worked back to the Bantam Lake inlet eliminating much of the growth of fanwort from the lake itself. We put in a fragment barrier at the mouth of the inlet river to try to prevent any possible regrowth due to influx of fragments from upstream that can recolonize areas already harvested. This plant is not only aggressive but easily fragmented.

Due in large part to the availability of long-term data on the weeds in the lake collected by Dr. Knoecklein and the success of the demonstration suction harvesting project we applied for and were fortunate enough to receive a grant of $78,000.00 from the DEP for the "Bantam Lake Fanwort Control Project." The plan called for the removal and containment for the fanwort beds in Bantam Lake and to draft a long term management plan. BPLA contributed additional funding in the summer of 2010 and the result was an almost 100% removal of the plant from the lake itself. Starting with nearly 21 acres of the littoral zone of the lake that had some growths of fanwort, we hit the plant hard, using four different methods of control:

1) Suction harvesting of over 7 acres of dense fanwort (33 days)

2) Hunt and pick (handpulling) of over 25 acres (12 days)

3) Containment fence (666 feet of silt fence) in dense fanwort bed

4. Bottom barrier (aquascreen) over 1000 ft

Despite the success of the 2010 blitzkrieg strategy, Fanwort has still not been completely eradicated from the lake. Over the past two summers we have employed the same hunt and pick and suction harvesting procedure. We have been successful at keeping the plant from invading the lake, but have had no success with the Bantam River inlet into the lake. It has become so choked with Eurasian milfoil (another invasive) and fanwort it is almost impassible. The goal in the future is to continue to eventually remove milfoil from the Bantam River all the way to Little Pond and to survey and remove fanwort from other sites of infestation in the watershed. Despite the frightening nature of this plant, its tenacity and voracious appetite for littoral zone, the management efforts at Bantam Lake can be considered a victory for the time being and show that with the will and funding, this plant can be dealt with.

The Benefits of Baseline Mapping of Connecticut Lakes and Ponds

By Jordan A. Gibbons, Gregory J. Bugbee
Department of Environmental Sciences
Connecticut Agricultural Experiment Station
New Haven, CT 06504

Connecticut is home to more than 3,000 lakes and ponds that provide drinking water, wildlife habitat, recreational opportunities, increased real estate values, and hydrogeneration of "green" energy. These bodies of fresh water are among the State's most valuable natural resources. One of the greatest threats to our lakes and ponds is non-native invasive aquatic plants. With few natural enemies, these plants can spread rapidly and destroy native ecosystems. The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) began surveying the vegetation in lakes and ponds in 2004 to provide baseline maps that quantify the extent of the State's invasive aquatic plant problem. To date, nearly 200 maps have been completed. Over 100 plant species have been documented with 14 being classified as invasives. Approximately two-thirds of the water bodies contained one or more invasive plant species with some lakes and ponds containing as many as four.

Included in this mapping are water tests for clarity, pH, alkalinity, phosphorus, conductivity, dissolved oxygen and temperature. The CAES IAPP maps are available to the public on their website (www.ct.gov/caes/iapp).

Baseline mapping is important for determining a lakes current condition and comparing it to the past. If trends in declining water quality or increases in nuisance aquatic plants are documented corrective actions can be employed. For instance, decreasing water clarity and increasing phosphorus is a strong indication that activities in the watershed need to be scrutinized. Actions such as improvements to septic systems and changes to fertilizer usage will have stronger support. Simple depth measurements can document filling caused by erosion and leaf accumulation. Baselines aquatic plant mapping quantifies what plants are present and where they are located. Changes in the coverage or the presence of new invasive species should generate concern and result in efforts to remove it before it causes a major infestation. The updating of baseline maps provides a good opportunity to make these discoveries. When control of nuisance vegetation is employed, baseline maps can provide detailed information on the areas to be treated and the effectiveness of the method. Not only is it important to know the efficacy of the treatment on the target plant but also how it affects nontarget plants and water quality.

A simple baseline map can be an outline of the lake with hand drawn colored shading to indicate the locations of individual plant species (Figure 1, left). More sophisticated mapping is done with global positioning systems (GPS) and geographic information systems (GIS) (Figure 1, right). Setting up geo-referenced transects with GPS can offer the greatest detail of aquatic plant community. Although the CAES IAPP program has mapped many Connecticut lakes since 2004, we cannot possibly get to all the lakes in Connecticut. Many lakes would benefit from regular updates to their baseline maps. This mapping is best performed by private consultants or trained residents. CAES IAPP can offer training to interested citizens and our mapping protocol is available at our website. Two options for drawing the maps are available on the CFL website, www.ctlakes.org.

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About the Connecticut Federation of Lakes

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 DEEP. Chuck Lee of the DEEP, 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.

Lower Bolton Lake Closed Due to Toxic Blue-green Algae

By George Knoecklein and Sabina Perkins

(Northeast Aquatic Research, Mansfield CT)

Lower Bolton Lake made Connecticut history this summer when it became the first lake in the state to be closed due to the potential threat of toxic blue-green algae. In late July, director of health Robert Miller of the Eastern Highlands Health District posted a contact advisory essentially closing the lake to recreation in response to news that an unusual slick reported by lake residents was in fact a bloom of the blue-green algae. Blue-green algae, or Cyanobacteria in modern nomenclature, are microscopic single-celled plants that form tiny colonies in the water column of lake water. Only specific species of blue-green algae can produce toxins which pose health problems ranging from irritations of the skin, eyes or ears, GI problems like vomiting and diarrhea, muscle cramps, and in extreme cases, nerve or liver problems, with dogs particularly susceptible. Several different toxins (microcytin, saxatoxin, anatoxin, cylindrospermopsin, nodularin, homoanatoxin, hepatotoxin, cytotoxin, hemolysins, aplysiatoxin, scytophycin, debromoaplysiatoxin, lyngbyapeptins), have been reported around the world, but so far only the toxin microcystin have been found in Connecticut lakes.

The toxin causing algae are naturally present at low levels in our lakes. Under the right conditions of temperature, light availability, and nutrients (i.e. high phosphorous and nitrogen concentrations due to runoff from agricultural and residential land, as well as internally derived from bottom sediments) these species can increase so rapidly that they dominate the upper waters of lake. A bloom is formed when the numbers of cells of blue-green algae increase above the normally very low numbers to reach exceedingly high cell densities. When cell numbers increase above a certain threshold (see cell numbers in table below) a bloom occurs: usually manifest as neon-green or blue-green water that can look like green-pea soup, sometimes accompanied by a thick paint-like surface layer that can accumulate along the shoreline and a nasty odor. (Note: duckweed and watermeal are small, native floating plants that can mimic the effects of a harmful algal bloom on the surface of the lake, but are not toxin producers. They can be told apart because each individual duckweed or watermeal plant is visible to the naked eye, while algae are microscopic). It is unclear why the algae produce these toxins but there is good evidence that as the number of cells of algae in the water increases the quantity of toxins in the water also increases. The World Health Organization (WHO) set a recreation contact Health Alert trigger of 20 parts per billion (20 ppb or µg/L) of the toxin microcystin-LR. Higher or lower toxin levels pose greater or lesser risk as suggested by the following WHO guidance values for possible health effects during recreational exposure to cyanobacteria and microcystin-LR:

Relative Probability of Acute Health Effects	Cyanobacteria (cells/mL)	Microcystin-LR (µg/L)	Chlorophyll-*a* (µg/L)
Low	< 20,000	<10	<10
Moderate	20,000 - 100,000	10 - 20	10 - 50
High	100,000 - 10,000,000	20 - 2,000	50 - 5,000
Very High	> 10,000,000	>2,000	>5,000

http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/cyanohabs.cfm

The threat of cyanotoxins is ubiquitous world-wide and all water bodies have some likelihood of developing blooms of toxin producing blue-green algae. However, blooms become significantly more likely as phosphorus levels increase. The table below shows relative phosphorus concentrations and resulting chlorophyll-*a* levels. As phosphorus increases chlorophyll-*a* goes up—chlorophyll-*a* is the photosynthetic pigment used by algae to capture light and grow—with high levels of pigment indicative of bloom conditions. Notice how phosphorus levels required to produce moderate microcystin levels 10-50 µg/mL are typical in Connecticut lakes—table below, essentially any lake of mesotrophic or greater trophic category rating could have a bloom of cyanotoxic blue-green algae.

Category	Total Phosphorus (ppb)	Chlorophyll-*a* (ppb)
Oligotrophic	0 – 10	0 – 2
Oligo-mesotrophic	10 – 15	2 – 5
Mesotrophic	15 – 25	5 – 10
Meso-eutrophic	25 – 30	10 – 15
Eutrophic	30 – 50	15 – 30
Highly Eutrophic	50 +	30 +

Source = CT DEEP, Trophic Classification of Seventy Connecticut Lakes.1982

Currently, only 17 states have implemented standards (see table below), or guidelines that apply to cyanotoxins and cyanobacteria in recreational waters using three different criteria to determine response action: visual conditions, cell counts, and toxin levels. The thresholds for action also vary by State with Indiana and Kansas using microcystin levels over 4 µg/L to prompt action, while Vermont, Virginia, and Washington use 6 µg/L. Other states such as Rhode Island and Massachusetts have set their thresholds for beach closure at 14 µg/L, while California deems microcystin levels as low as 0.8 µg/L enough to post an advisory. The summary of the U.S. states guidance values being used to post advisories and beach closures presented below is from Monitoring Recreational Freshwaters by Jennifer L. Graham, Keith A. Loftin, and Neil Kamman (Lakeline, Summer: 2009).

State	Recreational Water Guidance/Action Level	Recommended Action
California	Microcystin: 0.8 µg/L Anatoxin-a: 90 µg/L Cylindrospermopsin: 4 µg/L	Advisory
Indiana	Level 1: very low/no risk < 4 µg/L microcystin-LR Level 2: low to moderate risk 4 to 20 µg/L microcystin-LR Level 3: serious risk > 20 µg/L microcystin-LR Warning Level: Cylindrospermopsin: 5 ppb	Level 1: use common sense practices Level 2: reduce recreational contact with water Level 3: consider avoiding contact with water until levels of toxin decrease
Iowa	Microcystin ≥ 20 µg/L	Caution - bloom present no toxin data available Warning - when toxin levels exceed 20 µg/L
Kansas	PHA: >4 µg/L to <20 µg/L for microcystin or > 20,000 cell/mL to <100,000 cell/mL cyanobacteria cell counts PHW: > 20 µg/L or > 100,000 cell/mL cyanobacterial cell counts and visible scum present	Public Health Advisory (PHA): avoid contact Public Health Warning (PHW): all contact with water is restricted
Massachusetts	14 µg/L for microcystin-LR and ≥ 70,000 cells/mL for cyanobacteria cell counts	Advisory - Avoid contact with water
Nebraska	Microcystin ≥ 20 µg/L	Health Alert
New Hampshire	>50% of cell counts from toxigenic cyanobacteria	Public Health Advisory
North Carolina	Visible discoloration of the water or a surface scum may be considered for microcystin testing	Advisory/Closure

Ohio	Microcystin-LR: PHA: 6 µg/L; NCA: 20 µg/L Anatoxin-a: PHA: 80 µg/L; NCA: 300 µg/L Saxitoxin: PHA: 0.8 µg/L; NCA: 3 µg/L Cylindrospermopsin: PHA: 5 µg/L; NCA: 20 µg/L	Public Health Advisory (PHA) - swimming and wading are not recommended, water should not be swallowed and surface scum should be avoided. No Contact Advisory (NCA) -recommend the public avoid all contact with the water
Oklahoma	100,000 cell/mL of cyanobacteria cell counts and > 20 µg/L for microcystin	Blue-Green Algae Awareness Level Advisory
Oregon	Option 1: Visible scum and cell count or toxicity Option 2: Toxigenic species >100,000 cells/mL Option 3: Microcystis or Planktothrix> 40,000 cells/mL Option 4: Toxin Testing Microcystin: 8 µg/L Anatoxin-a: 20 µg/L Cylindrospermopsin: 6 µg/L Saxitoxin: 100 µg/L	Public Health Advisory
Rhode Island	Visible cyanobacteria scum or mat and/or cyanobacteria cell count > 70,000 cells/mL and/or ≥14 µg/L of microcystin-LR	Health Advisories
Texas	>100,000 cell/mL of cyanobacteria cell counts and >20 µg/L microcystin	Blue-Green Algae Awareness Level Advisory
Vermont	4,000 cells/mL cyanobacteria cell counts or ≥ 6µg/L microcystin-LR and the visible presence of cyanobacterial scum Anatoxin-a ≥ 10 µg/L	Beach Closure
Virginia	Microcystin provisional action level: 6µg/L	Advisory/Closure
Washington	Microcystin-LR Caution: < 6 µg/L Warning: ≥6 µg/L Danger: ≥6 µg/L, report of illness or pet death Anatoxin-a Caution: <1 µg/L Warning: ≥1 µg/L Danger: ≥1 µg/L, report of illness or pet death	Tier 1. Caution: when a bloom is forming or a bloom scum is visible (toxic algae may be present) Tier 2. Warning: Toxic algae present Tier 3. Danger: Lake closed
Wisconsin	> 100,000 cells/mL or scum layer	Advisory/Closure

There are pros and cons to each method used to determine if action is necessary. Using strictly cell counts (number of blue-green algae cells in the lake water) may either underestimate or overestimate the risk. Since not all blue-greens produce toxins, and toxin producing blue-greens don't always make toxins, cell counts alone don't reflect actual health risk. However, high numbers of harmful algae in the water is a good indicator that toxins may be present or might be present in the future. Using toxin levels requires testing but getting results may take from a few to several days—in extreme cases results may not be available until the end of the season--depending on how backlogged the laboratory is. Also, testing for toxins is expensive indicating that some screening may be needed to determine if a test is warranted. Some states simply use a visual based assessment: if it looks bad it probably is.

When the Lower Bolton Lake advisory was posted no guidance criteria was available in Connecticut. Eastern Highlands Health District used protocol adopted by Massachusetts which required two consecutive tests, collected a week apart, to be below the threshold of 70,000 cells of blue-greens per milliliter of lake water and or below 14 µg/L of microcystin-LR—at the height of the bloom in Lower Bolton Lake blue-green cell numbers exceed 200,000 cells per milliliter but microcystin never exceeded 1 µg/L. This required weekly testing of lake water at multiple stations around the lake due to possible movement of the bloom by winds. Finally, on September 26th the public health advisory was lifted, more than a month after being posted. However, vexing to local officials, EHHD, and lake residents, blue-green algae continue to appear in the lake, with sightings made as recently as November 13th indicating that although well below advisory levels, the cyanobacteria has not gone away.

In the meantime if you're concerned about the possible presence of blue-green algae on your lake please contact the CFL or call us at 860-456-3179. For more information on the blue-green algae toxins, visit the EPA website at http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/cyanohabs.cfm.

Advice from a

Lake

beneath the surface ~ Stay calm ~ Shore

up friendships~Take time to reflect

~ be full of life ~

Contact the CFL

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

CFL Board

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

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. The newsletter committee includes: Bruce Fletcher, Penny Hermann, George Knoecklein.

Calendar

Board Meetings – 3rd Wednesday of January, March, April, May, June, September, and October 7PM at Northeast Utilities, Newington, CT

Annual Meeting and election of Directors and Discussion of issues of interest to CFL members April 17, 2013 at Northeast Utilities, Newington, CT.

Join the CFL

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.

CFL Application

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

_____ Optional Tax Deductible Donation (membership is free)

Name_____

_____

Address_____

_____

_____

_____

Telephone_____

E-mail_____

Lake _____

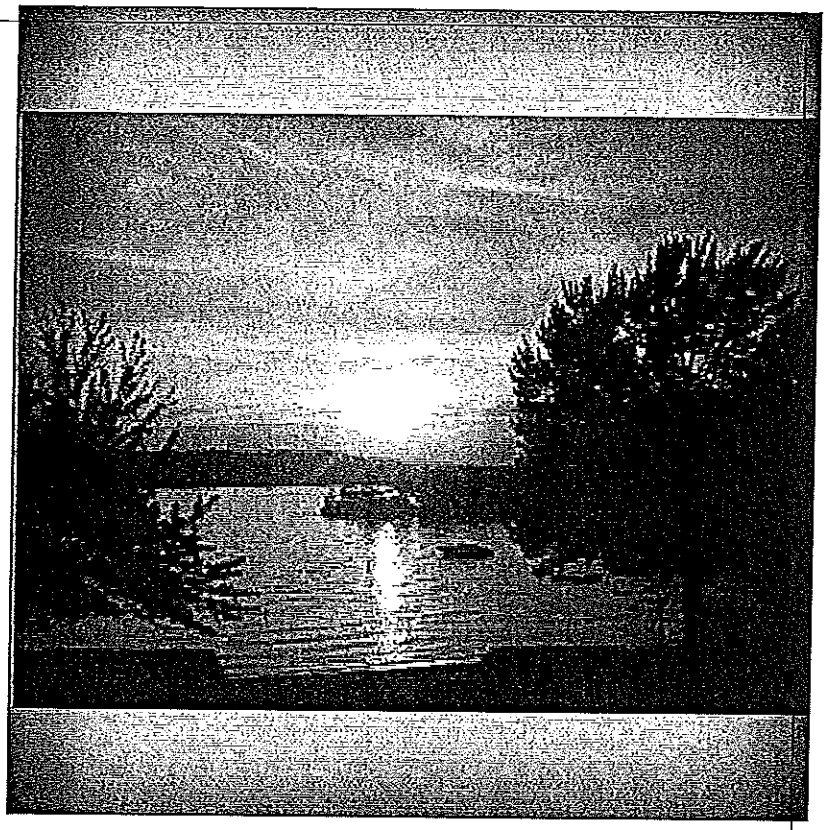
Whom may we thank for your referral?

_____

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

Advice from a Lake

beneath the surface ~ Stay calm ~ Shore up friendships~Take time to reflect ~ be full of life ~



Season's Greetings from the CFL

Connecticut Federation of Lakes
PO Box 216
Windsor, CT 06095

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Inland Wetlands
4 S Eagleville Rd
Storrs CT 06268 2574

CONNECTICUT
Land Conservation Council

Thank you! Your support really does make a difference!

December 19, 2012

Robert Dahn, Chair
Mansfield Conservation Commission
4 South Eagleville Rd.
Mansfield, CT 06268

Dear Robert,

On behalf of the CLCC Steering Committee, I am writing to ask for your conservation commission's financial support, to help our education and advocacy efforts protect funding for critical state and local conservation programs.

If you are following the updates on Governor Malloy's the most recent budget proposal to mitigate the state's budget deficit you know that the news isn't good and portends trouble for state and municipal budgets in 2013.

In 2013, conservation programs, including open space grant programs will be hit hard – again! Governor Malloy's most recent budget mitigation plan proposes transferring $5 million from the Community Investment Act (CIA) account to the general fund; a portion of these fund the open space grant program widely used by municipalities.

In addition to the $5 million reduction in CIA conservation funding a minimum of an additional $5 million cut to an already understaffed and underfunded Department of Energy and Environmental Protection (DEEP), will likely occur. There is no doubt that conservation services and support that local conservation commissions and land trusts depend on will be hit hard by the state's budget deficit mitigation plans.

As an education and advocacy organization for the land conservation community, focusing on leading a unified land conservation voice for public policies that support land conservation, CLCC has a more important role than ever to play in the next few years in ensuring that our state government keeps vital conservation programs alive, and ensuring local conservation commissions and land trusts have the tools and resources to sustain community open space protection and stewardship.

Please join us as a 2012-13 organizational member of the CLCC, at the highest level possible.

With your commission's support, CLCC will continue to provide Connecticut's conservation community with:

- A strong and effective voice for land conservation at the Capitol, DEEP and throughout the state:
  Our 2013 agenda includes advocating for conservation and stewardship funding, assisting with State POCD and Green Plan revisions, and improving mechanisms for permanent land protection. Please visit our website at www.ctconservation.org to view CLCC's Comments on the proposed draft of the State POCD.

- Direct land conservation support, technical assistance and referrals:
  CLCC presented at over 30 land trust and community meetings, conservation workshops and conferences in 2012.

- Practical and affordable opportunities to improve organizational capacity and effectiveness:
  Please visit our website to see a summary of CLCC's first offering of its new collaborative training initiative with UCONN's Center for Land Use Education and Research!

- Annual statewide land conservation conference:
  Please see the enclosed handout for info on our 2013 Connecticut Land Conservation Conference, the state's largest full day conservation gathering of land trust board members, volunteers, staff, municipal commission members, land use professionals and others interested in land conservation, scheduled for March 23 at Wesleyan University.

- Venues for bringing forward issues of importance to other conservation groups and supporting a statewide network of land trusts:
  Please visit our website to learn about CLCC's Regional Directors' Summits, which provide opportunities for land trust board and local commission members to network and share information with their regional colleagues.

- Land Trust Challenge Fund Grant Program:
  In partnership with the Land Trust Alliance, we've provided over $220,000 in funding for 40 land trusts throughout Connecticut since 2009.

With your help, CLCC will continue these initiatives in 2013 and beyond.

Thank you for your volunteer leadership and dedication to land conservation, ensuring the citizens of your town continue to enjoy the benefits of clean water, healthy air, local food and the natural habitats that define Connecticut's landscape.

Very truly yours,

Amy B. Paterson
Executive Director

P.S. *In addition to joining CLCC as an organizational member, please share this invitation with your commission members and others who may have an interest in becoming an individual member of the CLCC.*

CONNECTICUT
Land Conservation Council

Mark your Calendar!

29th Annual Connecticut Land Conservation Conference
"Can Open Space be Permanently Protected?"

Saturday, March 23, 2013
Wesleyan University, Middletown
8:30am – 4:45pm (conference)
5:00pm – 7:00pm (reception)

Join us for a full day of educational workshops and peer-to-peer networking for those involved in land conservation, followed by an informal reception with friends and colleagues from across the state.

Agenda

Plenary Session -- *New for 2013! – Interactive panel discussion exploring the issues and obstacles in protecting state, local and private lands in perpetuity.*

24 Workshops on a Variety of Topics – *Strengthening Land Protection; Land Trust Management, Leadership and Capacity Building; Communication, Marketing and Social Networking; and more!*

Lunchtime Regional Roundtables – *New for 2013! -- Join conservation peers from your region for an hour of networking, information sharing, and trouble shooting.*

Excellence in Conservation Awards – *New category for 2013! -- Recognizing outstanding achievements by organizations and individuals.*

Post Conference Reception – *New for 2013! – Join us for an evening of socializing and celebrating. Details coming soon!*

Stay tuned for further information!

For further information or to help with Conference planning, please contact Connie Manes, CLCC Training and Education Committee, at connie@manes-consulting.com or
Amy Paterson, CLCC Executive Director, at abpaterson@ctconservation.org

CONNECTICUT
Land Conservation Council

Conservation Agenda 2013

State Legislative and/or Administrative Initiatives

1. **Campaign for Open Space Acquisition and Stewardship Funding and Support for Land Conservation Programs**

   - Ensure consistent funding for state land conservation programs (Open Space & Watershed Land Acquisition Program, Recreation and Natural Heritage Trust Program, etc), adequate staffing for those programs and a coordination of these programs with federal match funding sources.

   - Protect the Community Investment Act which provides funding for state programs for open space, farmland/dairy production, historic preservation and affordable housing. Enhance public awareness of the importance of the fund and ensure that the integrity and level of funding are protected.

   - Expand coalition to support passage of the Community Redevelopment and Conservation Act which would enable, but not require, towns to enact a limited conveyance fee on buyers of real estate, with the revenue from the program placed in a local dedicated fund for conservation and other green project purposes.

   - Advocate for funding/staff resources for the Connecticut Department of Energy and Environmental Protection (DEEP) and the Department of Agriculture (DoAg) for stewardship, management and inventorying of state lands

   - Continued support for Invasive Plants Council programs and for an invasive plants coordinator.

2. **Permanent Protection of State-Owned Conservation Lands**

   - Continue to work with our conservation partners, DEEP, DoAg and leaders in the legislature to strengthen the state's land conservation programs by identifying the issues in protecting conservation land and farmland in perpetuity and proposing administrative and legislative strategies to address these issues.

   - Provide input on the updates to the Green Plan, recommendations for establishing a statewide registry and associated database to inventory/track land protected by land trusts and municipalities, and other DEEP initiatives undertaken in accordance with PA 12- 152, An Act Concerning Open Space Planning.

Federal Policy

- Continue to support Land and Water Conservation Fund, Forest Legacy Program, Land Protection Programs under the Farm Bill*, Extended Conservation Easement Tax Incentive, Recreational Trails Program and other priorities and continue to engage Connecticut land conservation community in outreach efforts. ** including, but not limited to: Wetlands Reserve Program, Farm and Ranchland Protection Program, Grassland Reserve Program, Healthy Forest Reserve Program, Conservation Reserve Program and Community Forest and Open Space Conservation Program.*

Conservation Community Outreach

- Work with land trusts to host conservation site visits for local and federal legislators
- Attend land trust board and municipal commission meetings and other events to discuss legislative priorities