

AGENDA
Inland Wetland Agency
Regular Meeting
Monday, November 7, 2011
Council Chambers, Audrey Beck Building

Call to Order: 7:00 PM

Review of Minutes of Previous Meetings and Action Thereon:

10.03.2011 - Regular Meeting

Communications:

Conservation Commission: No IWA Referrals
GM monthly business memorandum

Old Business:

W1485 - Bell - 552 Bassetts Bridge Rd - New Barn and Addition to Existing Barn
Time Extension has been received - M.A.D. is now Nov. 25, 2011

W1488 - Town of Mansfield - DEP Legislation and Regulations Advisory
re: minor changes to statutes

New Business:

None.

Reports of Officers and Committees:

Other Communications and Bills:

DEEP Approval of Authorization Re: Utilities Drainage at Depot Campus
Fall 2011 The Habitat
September/October 2011 CT Wildlife
Fall 2011 Willimantic River Review
11/12/11 CACIWC Annual Meeting & Conference

Adjournment:

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DRAFT MINUTES
MANSFIELD INLAND WETLANDS AGENCY
Monday, October 3, 2011
Council Chambers, Audrey P. Beck Municipal Building

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

Chairman Favretti called the meeting to order at 7:00 p.m. and appointed alternates Rawn and Ward to act in members' absence. He added to the 9-13-11 Field Trip minutes to the agenda.

Minutes:

09-06-11 – Hall MOVED, Ryan seconded, to approve the 9-6-11 minutes as written. MOTION PASSED UNANIMOUSLY. Hall noted that he listened to the recording of the meeting.

09-13-11 Field Trip- Holt MOVED, Ryan seconded, to approve the 9-13-11 field trip minutes as corrected. MOTION PASSED with Favretti, Beal, Holt, Rawn, Ryan and Ward in favor and all others disqualified.

Communications:

The 9-21-11 draft Conservation Commission Minutes and the 9-26-11 Wetlands Agent's Monthly Business report were noted. Meitzler stated that the grass seed for stabilization had sprouted at the Paideia site.

Old Business:

W1487 - Wright - Mansfield City Rd - deck in buffer

Holt MOVED, Ryan seconded, to grant an Inland Wetlands License under the Wetlands and Watercourses Regulations of the Town of Mansfield to Susan Wright (File W1487) for construction of a rear deck to the existing house on property owned by the applicant, located at 878 Mansfield City Road, as shown on a map dated 8/18/11, and as described in other application submission. This action is based on a finding of no significant impact, and is conditioned on the following provisions being met:

1. No erosion and sediment controls are needed, unless specified by the Wetlands Agent at start of construction. All excavated earth (for post holes) shall be spread within the existing yard area.

This approval is valid for a period of five years (until October 3, 2016), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment. MOTION PASSED UNANIMOUSLY.

W1485 - Bell - 552 Bassetts Bridge Rd - New Barn and Addition to Existing Barn

Hall disqualified himself. The Bells agreed to have all comments and testimony heard during the Wetlands meeting to be entered into the record for the Planning and Zoning Commission's Public Hearing. Wesley & Jean Bell, owners, reviewed their statement of use for the proposed wedding venue application which includes an addition to an existing barn, a new handicap parking area and a new septic system. Wesley Bell stated that they will be hosting one event per day on Friday, Saturday and Sunday from May through October. This will help to sustain their farming activities. The project will be executed in two stages, the first to include the new septic system and a 12'x26' barn addition to accommodate 2 handicap-accessible restrooms that can be accessed from outside or inside the barn. Mr. Bell also noted the noise calculations were done by Fuss & O'Neill and that the testing was done with speakers outside the barn. Their proposal, however, is for all music including speakers to be inside the barn.

Richard Mihok, consulting engineer, presented a plan depicting the wetlands and stated that no work is proposed within the wetlands. He added that the barn additions will be on slabs with no basement which will minimize the amount of excavation and disturbance.

Holt questioned the Fire Marshal's concerns for the driveway width and the impact it will have on the nearby wetlands. Meitzler stated that he believes the driveway itself is wide enough, but the edges have grown in and now have to be mowed. The subsurface is driveway material which could accommodate vehicles. There was also discussion about parking that was not clearly depicted on the plans.

The applicant has agreed to revise plans that will address the several issues identified in the analysis submitted by Linda Painter, Director of Planning and Development.

Noting no comments from the Agency or the Public, the hearing remains open until the October 17 meeting.

New Business:

None.

Communications:

None.

Adjournment:

Favretti declared the meeting adjourned at 7:27 p.m.

Respectfully submitted,

Katherine Holt, Secretary

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 19 October 2011
Conference B, Audrey P. Beck Building
(draft) MINUTES

Members present: Joan Buck (Alt.), Peter Drzewiecki (from 8:05p), Neil Facchinetti, Quentin Kessel, Scott Lehmann. *Members absent:* Aline Booth (Alt.), Robert Dahn, John Silander, Frank Trainor. *Others present:* William Shakalis.

1. The meeting was **called to order** at 7:33p by Chair Quentin Kessel.
2. The draft **minutes of the 21 September 2011 meeting**, as revised on 9/23, were approved.
3. **Porter Meadow.** The Town would like to remove trees and brush from Porter Meadow that are growing up to obscure the view of Mansfield Hollow Reservoir from Rte 195. The Commission unanimously (1) agreed that the proposed removal of trees and brush from Porter Meadow is in accord with Town's management plan for the property, which calls for maintaining a view of the reservoir and (2) approved it (**motion:** Buck, Faccinetti).
4. **Meeting Schedule for 2012.** The Commission unanimously approved (**motion:** Buck, Faccinetti) the meeting schedule proposed for 2012, save for moving the November meeting to the second Wednesday (11/14/12) to avoid Thanksgiving week. Kessel will ask Town Planner Linda Painter to accommodate the date change.
5. Jessie Shea in the Planning Office has proposed moving from paper to **electronic packets for Commission meetings**, as the cost of preparing and mailing out paper is substantial. Lehmann noted that scans of publications (like *Connecticut Wildlife*) ordinarily included in the packet will be huge bit-map files that take a long time to download; he wondered if links to these documents could be provided instead. Kessel will ask if there is a way to do this.
6. The **Windham County Conservation Consortium** is concerned about staffing for and management of the state forests. Staffing has been cut by 50% over the last 15 years, and many state forests operate with no management plan or one that is out-of-date. The Consortium is proposing a pilot program at Goodwin State Forest to improve forest management and demonstrate the economic benefits of doing so.
7. Lehmann asked about the details of a proposed **payment in lieu of conservation easement** for the Listro property, mentioned in the minutes of the OSPC and the PZC. But nobody could supply any information.
8. **Dark Skies.** William Shakalis reported that he and Kessel had met with Linda Painter and PZC member Michael Beal on 9/29 to discuss what might be done to reduce light pollution in town. Ms. Painter seemed receptive and indicated that the Town hoped to get a grant to support updating and unifying its lighting regulations.

Kessel noted that CL&P appears willing to install full cut-off fixtures for outdoor lighting in new projects and when older fixtures wear out.

Shakalis also attended a recent Downtown Partnership meeting to urge that the Storrs Center project incorporate lighting conforming to the Dark Skies model lighting ordinance; he reported that his suggestions appeared to get a receptive hearing. Faccinetti noted that outdoor lighting

for the renovated athletic fields at E.O. Smith was on the agenda for this week's PZC meeting and wondered what, if anything, could be done to limit glare from this facility.

Finally, Shakalis brought to the Commission's attention "The City Dark", an 84-minute documentary film that might be used to promote awareness of the dark skies issue. It could be rented for about \$100 for a single showing, perhaps at E.O. Smith Auditorium. If the Commission wants to sponsor a showing, it would be best to get its sister Conservation Commissions in Willington and Ashford to co-sponsor it and also to enlist the help of teachers at E.O. Smith in encouraging/coercing their students to attend. The Commission unanimously agreed (**motion:** Buck, Drzewiecki) to endorse a public showing of "The City Dark", possibly at E.O. Smith Auditorium, to promote awareness of light pollution and to encourage steps to reduce it. Kessel will contact Gary Bent at E.O. Smith to see if he is interested in working on this project.

8. Adjourned at 8:25p.

Scott Lehmann, Secretary, 20 October 2011

Memorandum:

November 3, 2011

To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
Re: Monthly Business

W1419 - Chernushek - hearing on Order

- 3.10.09: The hearing on the Order remains open and should continue until the permit application under consideration is acted upon.
(The Order was dropped on approval of the application required in the Order.)
- 4.30.09: Former rye grass seeding is beginning to show green. I spoke with Mr. Chernushek this afternoon who indicated health problems that delayed his starting but indicated he will be working this weekend. I will update on this Monday evening.
- 5.26.09: A light cover of grass growth has come in. Mr. Chernushek indicates health problems and two related deaths have delayed his start of work since the permit approval was granted. It appears that some light work has started. He has further indicated that he will start a vacation on June 22, 2009 to finish the work.
- 6.13.09: Work is underway.
- 6.21.09: Bulldozer work has been completed - finish work remains. The additional silt fencing has been placed along the northerly wetlands crossing, and the additional pipe under the southerly crossing has been installed. Remaining work includes finish grading along edges, spreading stockpiled topsoil, and establishing grass growth.
- 7.01.09: I spoke with Mr. Chernushek who indicated he expects work to be completed by September 1, 2009. (Site photo attached).
- 9.03.09: Mr. Chernushek has been working on levelling and grading. The formerly seeded areas have become fairly thick growth surrounding the central wet areas. He has further indicated that with the combination of weather and the slower moving of earth with the payloader compared to the earlier rented bulldozer has led him to contact contractors for earth moving estimates which have not yet been received. The site is not yet finished but has remained quite stable.
- 9.12.09: I met with Mr. Chernushek today and discussed again what his plans are for stabilizing this work site.
- 10.01.09: Mr. Chernushek indicated he has not heard back from the contractor he had spoken with about removing material, and is in progress of contacting others. In discussion is removal of material from the site either within the 100 cubic yard limit or obtaining a permit for such removal.
- 10.28.09: Mr. Chernushek has indicated he has made arrangements with DeSiato Sand & Gravel to remove 750 cubic yards of material. Staff is in the process of clarifying permit requirements.

W1445 - Chernushek - application for gravel removal from site

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

- 1.12.10: 65 day extension of time received.
- 2.18.10: No new information has been received.
- 2.25.10: This application has been **withdrawn**.
- 6.30.10: As viewed from the adjacent property, the upstream and downstream areas have grown to a decent protected surface. I did not see indication of sediment movement.
- 10.26.10: A sale of the East portion of the Chernushek property has been in negotiation.
- 12.27.10: The property exchange has been completed. The owner is now the neighboring property owner Bernie Brodin. He has indicated his intention to stabilize the area as weather permits.
- 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

- 9.01.10: Inspection - no vehicles are within 25' of wetlands. Mr. Bednarczyk has started removing tires from the westerly part of his site using roll-off containers. With this arrangement a moderately steady rate of removal of the tires should be possible to maintain until the tires are completely removed.
- 9.28.10: Inspection - no vehicles are within 25' of wetlands. Tire removal is continuing with 1 to 2 roll-off containers being removed per month.
- 10.07.10: Inspection - no vehicles are within 25' of wetlands. Tire removal has been continuing.
- 11.29.10: Inspection - no vehicles are within 25' of wetlands. Owner has been trucking cars for crushing with 6 tires per vehicle. He indicates 3 cars per day or 18 tires per day. The actual number is probably lower than 18.
- 12.23.10: Inspection - no vehicles are within 25' of wetlands.
- 1.07.11: Inspection - no vehicles are within 25' of wetlands.
- 1.20.11: Vehicle storage areas are snowed in and inaccessible.
- 1.26.11: Snows remain, although some clearing has been done I could not count on being able to get out.
- 2.24.11: Inspection - no vehicles are within 25' of wetlands.
- 3.09.11: Inspection - no vehicles are within 25' of wetlands.
- 3.22.11: Inspection - no vehicles are within 25' of wetlands.
- 4.25.11: Inspection - no vehicles are within 25' of wetlands.
- 5.17.11: Inspection - no vehicles are within 25' of wetlands. Mr. Bednarczyk's estimate is that approximately 100 tires per month are being removed from the site.
- 6.14.11: Inspection - no vehicles are within 25' of wetlands.
- 7.12.11: Inspection - no vehicles are within 25' of wetlands.
- 8.04.11: Inspection - no vehicles are within 25' of wetlands.
- 9.13.11: Inspection - no vehicles are within 25' of wetlands.
- 11.03.11: Inspection - two vehicles are within 25' of wetlands. Vehicle doors and a camper or trailer are stored in the extreme rear lot not approved by zoning for use.

Paideia - Dog Lane

- 8.05.11: Meeting on site with Elios Tomassos, Linda Painter, Grant Meitzler. Discussed requirements for sediment & erosion control with Mr. Tomassos.

- Contractor delivering fill has begun grading.
- 8.08.11: Inspection - silt fencing is in place and shows evidence of trapping sediment from the weekend storm which was reported as much as 4 inches in this area.
Contractor has been grading on site all day.
- 9.14.11: The filled area has been seeded and is starting to show grass growth.
- 9.26.11: Grass growth has continued to come in. This is temporary stabilization and final grading remains to be done.
- 11.02.11: Plantings have been done on the areas between the buildings and the road.

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Memorandum:

November 2, 2011

To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
re: W1485 - Bell - 552 Bassetts Bridge Rd

plan reference: dated revised October 26, 2011

More information is needed as follows:

1. proposed parking location has been moved to better locations that are farther from wetlands and in a better surfaced area for cars. A total of 54 spaces appear to be indicated.

There are still no comments regarding the control of parking and it is not clear what the defined spaces are being marked with in order to define them as individual spaces as shown on this revised plan.

A large future parking option located downhill and west of the existing "rear" parking area is shown and has 59 spaces indicated.

2. The plan now bears the statement that a full 20' driveway width will be provided. With this widening some work very near or slightly in wetlands is going to be required to have a 20' wide drive. Most of the drive will presently accommodate this width with only minor grading and clearing of weed growth.

The most work appears to be needed in the area west of Pole #3994. Standing water is present right at the edge of the present drive in this area.

3. A specific layout of the handicapped parking spaces (2) is shown in the same general areas before. Paving of these two spaces is noted. No specific limits of the paving for these 2 spaces are shown and should be added to the plan.

There is a considerable drop over the "existing stone retaining wall" at the head of these two spaces. Wheel stop protection is strongly recommended for these two spaces.

The present mandatory action date for acting on this application is November 25, 2011. The 25th is the Friday after Thanksgiving Day.

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Memorandum:

November 1, 2011

To: Inland Wetland Agency
From: Grant Meitzler, Inland Wetland Agent
Re: New Statute Revisions

There have been two new statute changes from the recent legislative session. These statute revisions have already taken effect and we are required to act according to the changes discussed here.

For setting the public hearing on these changes notice must be sent to the Commissioner of the Department of Environmental Protection by 35 days in advance of the hearing. From the November 7, 2011 IWA meeting this means either a Special Meeting on the third Monday on December 19, 2011 or Regular January 3, 2012 meeting, which is on a Tuesday.

The first applies an as-of-right exemption for emergency fire use, and to the installation of "dry hydrants" under the provisions of Section 4. The exemption for installation applies only if significant amounts of material are not involved.

The second change applies to permits approved before July 1, 2011 that did not expire before May 9, 2011. If any of these older permits have not expired before May 9, 2011 they are eligible for a total of up to 14 years from their original approval date.

A further provision is that a permit issued before July 1, 2011 that had not expired is to be valid for not less than nine years. This means an automatic extension of four years over the original five year term of validity.

Any new permit being issued after July 1, 2011 is treated just as before with a five year term and renewals extending to no more than ten years from the date of approval.

Other applicable sections for amendments to our regulations are:

Section 15.3 - The Agency shall provide the Commissioner of Environmental Protection with a copy of any proposed regulations and notice of the public hearing to consider any regulations or amendments thereto, except map amendments, at least thirty-five days before the public hearing on their adoption.

Section 15.8 - legal notice of the public hearing must appear in a local newspaper twice, the first not more than 15 days or less than 10 days before the date of the public hearing, and the second not less than two days before the date of the public hearing.

Section 15.10 - After approval of a regulation change is completed a final copy of the regulation change is to be sent to the

Commissioner of Environmental Protection.

In the past, copies of the proposed regulation changes have been sent to the Town Council, the Conservation Commission, and the Regional Planning Agency.

Section 3.0 Inventory of Inland Wetlands and Watercourses

- 3.1 The map of wetlands and watercourses entitled "Inland Wetlands and Watercourses Map, Mansfield Connecticut" (hereafter referred to as the "map") delineates the general location and boundaries of inland wetlands and the general location of watercourses. Copies of this map are available for inspection at the office of the Town Clerk, Planning Department or Town Engineer's Office. The precise location of wetlands and watercourses shall be determined by the actual character of the land, the distribution of wetland soil types and location of watercourses. The Agency may use aerial photography, remote sensing imagery, resource mapping, soils maps, site inspection observations or any other pertinent information in determining the location of the wetland boundaries and watercourses. Wetlands and watercourses (see definition in Section 2), even in they do not appear on Mansfield's Inland Wetlands and Watercourses map, are still subject to these regulations.
- 3.2 Any person may petition the Agency for an amendment to the map. All petitions for a map amendment shall be submitted in writing and shall include all relevant facts and circumstances which support the proposed amendment. The petitioner shall bear the burden of proof regarding the proposed map amendment. The Agency may require the petitioner to provide an accurate delineation of regulated areas in accordance with Section 15 of these regulations.
- 3.3 The Agency shall maintain a current inventory of regulated areas within the town. The Agency may amend its map as more accurate information becomes available.
- 3.4 All petitions for a map amendment shall be heard at a public hearing, in accordance with the procedure described in Section 15 of these regulations.

Section 4.0 Permitted Uses as of Right & Non-regulated Uses

- 4.1 The following operations and uses shall be permitted in inland wetlands and watercourses and upland review areas, as of right:
- A. Grazing, farming, nurseries, gardening and harvesting of crops and farm ponds of three acres or less essential to the farming operation, and activities conducted by, or under the authority of, the Department of Environmental Protection for the purposes of wetland or watercourse restoration or enhancement or mosquito control.

The provisions of this subdivision shall not be construed to include road construction or the erection of buildings not directly related to the farming operation, relocation of watercourses with continual flow, filling or reclamation of wetlands or watercourses with continual flow, clear cutting of timber except for the expansion of agricultural crop land, the mining of top soil, peat, sand, gravel or similar material from wetlands or watercourses for the purposes of sale;

- B. A residential home (A) for which a building permit has been issued or (B) on a subdivision lot, provided the permit has been issued or the subdivision has been approved by a municipal planning, zoning or planning and zoning commission as of the effective date of promulgation of the municipal regulations pursuant to subsection (b) of Section 22a-42a of the Connecticut General Statutes, or as of July 1, 1974, which ever is earlier, and further provided no

residential home shall be permitted as of right pursuant to this subdivision unless the permit was obtained on or before July 1, 1987;

- C. Boat anchorage or mooring, not to include dredging or dock construction
- D. Uses incidental to the enjoyment and maintenance of residential property, such property defined as equal to or smaller than the largest minimum residential lot site permitted anywhere in the municipality, provided that in any town, where there are no zoning regulations establishing minimum residential lot sites, the largest minimum lot site shall be two acres. Such incidental uses shall include maintenance of existing structures and landscaping, but shall not include removal or deposition of significant amounts of material from or onto a wetland or watercourse, or diversion or alteration of a watercourse;
- E. Construction and operation, by water companies as defined by Section 16-1 of the Connecticut General Statutes or by municipal water supply systems as provided for in Chapter 102 of the Connecticut General Statutes, of dams, reservoirs and other facilities necessary to the impounding, storage and withdrawal of water in connection with public water supplies except as provided in Sections 22a-401 and 22a-403 of the Connecticut General Statutes;
- F. Maintenance relating to any drainage pipe which existed before the effective date of any municipal regulations adopted pursuant to Section 22a-42a of the Connecticut General Statutes or July 1, 1974, whichever is earlier, provided such pipe is on property which is zoned as residential but which does not contain hydrophytic vegetation. For purposes of this subdivision, "maintenance" means the removal of accumulated leaves, soil, and other debris whether by hand or machine, while the pipe remains in place.
- G. Withdrawals of water for fire emergency purposes.

The following operations and uses shall be permitted, as non-regulated uses in wetlands and watercourses, provided they do not disturb the natural and indigenous character of the wetland or watercourse by removal or deposition of material, alteration or obstruction of water flow or pollution of the wetland or watercourse:

- A. Conservation of soil, vegetation, water, fish, shellfish and wildlife. Such operation or use may include, but is not limited to, minor work to control erosion or to encourage proper fish, wildlife and forestry management practices.
- B. Outdoor recreation including play and sporting areas, golf courses, field trials, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shell fishing where otherwise legally permitted and regulated.
- C. Testing and monitoring associated with and related to water quality and subsurface drainage and/or sewage disposal systems.
- D. The installation of a dry hydrant by or under the authority of a municipal fire department, provided such dry hydrant is only used for firefighting purposes and there is no alternative access to a public water supply. For purposes of this section, "dry hydrant" means a non-pressurized pipe system that: (A) is readily accessible to fire department apparatus from a proximate public road, (B) provides for the withdrawal of water by suction to such fire department apparatus, and (C) is permanently installed into an existing lake, pond or stream that is a dependable source of water.

- 4.2 All activities in wetlands or watercourses and upland review areas involving filling, excavating, dredging, clear cutting, clearing, or grading or any other alteration or use of a wetland or watercourse not specifically permitted by this section and otherwise defined as a regulated activity by these regulations shall require a permit from the Agency in accordance with Section 6 of these regulations, or for certain regulated activities located outside of wetlands and watercourses from the duly authorized agent in accordance with Section 12 of these regulations.

- D. A description of the ecological communities and functions of the wetlands or watercourses involved with the application and the effects of the proposed activity on these communities and wetland functions;
- E. A description of how the applicant will change, diminish, or enhance the ecological communities and functions of the wetlands or watercourses involved in the application and each alternative which would cause less or no environmental impact to wetlands or watercourses, and a description of why each alternative considered was deemed neither feasible nor prudent;
- F. A description of the amount and kind of material to be deposited and/or removed including, as appropriate, an analysis of chemical or physical characteristics of any fill material; and
- G. Management practices and other measures designed to mitigate the impact of the proposed activity, including but not limited to specific grading and seeding/re-vegetation plans and specifications and management plans for the use of fertilizers, pesticides and other chemicals.

7.6 For all applications, the applicant shall certify whether:

- A. Any portion of the property on which the regulated activity is proposed is located within 500 feet of the boundary of an adjoining municipality;
- B. Traffic attributable to the completed project on the site will use streets within the adjoining municipality to enter or exit the site;
- C. Sewer or water drainage from the project site will flow through and impact the sewage or drainage system within the adjoining municipality; or,
- D. Water run-off from the improved site will impact streets or other municipal or private property within the adjoining municipality.

7.7 Unless an applicant is otherwise directed by the Agency or its Agent, a complete application shall consist of two (2) copies of full sized maps and other application materials and as applicable, fifteen (15) copies of reduced size (11"x17") maps and special reports.

7.8 Any application to renew or amend an existing permit shall be filed with the Agency in accordance with Section 8 of these regulations. Any application to renew or amend such an existing permit shall contain the information required under Section 7 of these regulations and:

- A. The documentation and record of the prior application;
- B. A description of the extent of work completed and the schedule for completing all activities authorized in the permit;
- C. The reason why the authorized activity was not initiated or completed within the time specified in the permit; and
- D. A description of any changes in facts or circumstances involved with or affecting wetlands or watercourses or use of the land since the permit was issued;

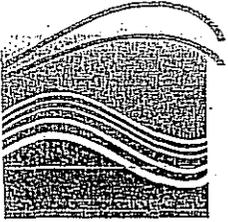
7.9 Any application to renew a permit shall be granted upon request of the permit holder unless the Agency finds that there has been a substantial change in circumstances which requires a new permit application or an enforcement action has been undertaken with regard to the regulated activity for which the permit was issued provided no permit shall be valid for more than ten years; including renewal periods, and further provided that any permit issued prior to July 1, 2011 that did not expire prior to May 9, 2011 shall be valid for no more than fourteen years.

7.10 For any permit application involving property subject to a conservation restriction or preservation restriction, the following shall apply:

- A. For purposes of this section, "conservation restriction" means a limitation, whether or not stated in the form of a restriction, easement, covenant or condition, in any deed, will or other instrument executed by or on behalf of the owner of the land described therein, including, but

watercourses including, as applicable, whether the proposed plan is preferable to the yield plan with respect to potential impacts on wetlands and watercourses.

- 11.7** Any permit issued by the Agency for the development of land for which an approval is required under Section 8-3, 8-25 or 8-26 of the Connecticut General Statutes shall be valid for five years, provided the Agency may establish a specific time period within which any regulated activity shall be conducted. Any permit issued by the Agency for any other activity shall be valid for not less than two years and not more than five years. Any permit issued by the Agency prior to July 1, 2011 that was in effect and did not expire prior to May 9, 2011 shall be valid for a period not less than nine years after the date of such approval.
- 11.8** **Modifications.** If the Agency grants a permit, the applicant may submit to the Agency a proposed modification of the application or of any permit terms, conditions, limitations or modifications. After evaluating the potential for impact on wetlands or watercourses and the approval standards of Section 10.2, the Agency shall determine whether the proposed modification is a significant or substantial alteration of the application as approved. Any significant or substantial revision of the application, as approved, shall require the filing of a new application and shall be subject to the requirements as set forth in these regulations and may under the requirements of Section 9.0 herein, be subject to a public hearing.
- 11.9** If a bond or insurance is required in accordance with Section 13 of these regulations, the Agency may withhold issuing a permit until such bond or insurance is provided.
- 11.10** **General provisions in the issuance of all permits:**
- A. The Agency has relied in whole or in part on information provided by the applicant and if such information subsequently proves to be false, deceptive, incomplete or inaccurate, the permit may be modified, suspended or revoked at the Agency's discretion.
 - B. All permits issued by the Agency are subject to, and do not derogate, any present or future rights or powers of the Agency or the Town of Mansfield, and convey no rights in real estate or material, nor any exclusive privileges, upon the land owner or applicant and are further subject to any and all public and private rights and to any federal, state, and municipal laws or regulations pertinent to the subject land or activity.
 - C. If the activity authorized by the Agency's permit also involves an activity which requires zoning or subdivision approval, or a special permit, variance or special exception under Sections 8.3(g), 8-3c, or 8-26 of the Connecticut General Statutes, no work pursuant to the wetland permit may begin until such approval is obtained.
 - D. Before starting other authorized activities, the permittee shall implement such management practices consistent with the terms and conditions of the permit as needed to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands and watercourses.
 - E. All permittees shall notify the Inland Wetlands Agent before any authorized work is commenced and again upon completion of the work. The initial notice shall include a planned work schedule.
 - F. As a condition of any permit, the Agency may require that the applicant engage at its own expense an independent consultant to report to the Agency the results of project monitoring and/or inspections. The consultant must be pre-approved by the Agency, and said consultant shall monitor, inspect and report on a schedule determined by the Agency.



Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

To: Connecticut's Municipal Inland Wetlands Agencies

From: Betsey Wingfield, Bureau Chief *BW*
Bureau of Water Protection and Land Reuse

Dated: September 8, 2011

Re: 2011 Legislation and Regulations Advisory

In 2011 the Connecticut General Assembly amended the Inland Wetlands and Watercourses Act (IWWA) with the passage of two public acts: Public Act No. 11-5 and Public Act No. 11-184.

Public Act No. 11-5 amends sections 8-3(m), 8-26c(e), 8-26g(c), and 22a-42a(g) of the General Statutes of Connecticut. Specifically, section 4 of the public act, which amends section 22a-42a(g) of the IWWA, extends the deadlines that apply to certain inland wetlands agency permits. The new language states that any permit issued by a municipal inland wetlands agency that did not expire before May 9, 2011 (the effective date of the public act), is valid for nine years from the date of approval of such permit. Further, any permit that was issued before July 1, 2011 will also be valid for nine years from the date of approval of such permit. Pursuant to the new language of section 4 amending section 22a-42a(g) of the IWWA, the combined extensions of such permit, if renewal is sought, may lengthen the validity of such permit to a maximum of fourteen years.

It is important to note that for qualifying permits the extension of the initial length of the permit is automatic. Extensions by way of renewal are subject to a timely request by the permit holder.

Public Act No. 11-184 amends section 22a-40 of the General Statutes of Connecticut. Specifically, section 1 of the public act adds the withdrawal of water for fire emergency purposes as an as-of-right operation and use in wetlands and watercourses. Further, section 1 of the public act adds the installation of dry hydrants for firefighting purposes by or under the authority of a municipal fire department and under certain specified conditions as a new non-regulated use in wetlands and watercourses, and defines the term "dry hydrant".

A complete copy of Public Act No. 11-5 and Public Act No. 11-184 is attached for your information. Newly added language is underlined and deleted language is bracketed. You should plan to revise your inland wetlands agency regulations to reflect these amendments to the IWWA. The provisions of both section 22a-42a(g) and section 22a-40 of the General Statutes of Connecticut, as amended by both Public Act No. 11-5 and Public Act No. 11-184, govern until such time as your municipal regulations are amended. Section 4 of Public Act No. 11-5 became effective from the date of passage, which was May 9, 2011; and section 1 of Public Act No. 11-184 will become effective on October 1, 2011.

The following changes to the Inland Wetlands and Watercourses Model Municipal Regulations (IWWMMR) Fourth Edition, dated May 1, 2006, as amended by the Department of Energy and Environmental Protection's 2009 Legislation and Regulations Advisory, dated March 3, 2010, are made in order to conform to Public Act No. 11-5 and Public Act No. 11-184:

Section 4: Permitted Uses as of Right & Nonregulated Uses

The underlined language noted below is new and should be added to your regulations. The bracketed language noted below should be deleted from your regulations.

- 4.1 The following operations and uses shall be permitted in inland wetlands and watercourses, as of right:
- a. ...
 - b. a residential home [(i)] (A) for which a building permit has been issued or [(ii)] (B) on a subdivision lot, provided the permit has been issued or the subdivision has been approved by a municipal planning, zoning or planning and zoning commission as of the effective date of promulgation of the municipal regulations pursuant to subsection (b) of section 22a-42a, or as of July 1, 1974, whichever is earlier, and further provided no residential home shall be permitted as of right pursuant to this subdivision unless the permit was obtained on or before July 1, 1987;
 - c. ...
 - d. ...
 - e. Construction and operation, by water companies as defined by section 16-1 of the Connecticut General Statutes or by municipal water supply systems as provided for in chapter 102 of the Connecticut General Statutes, of dams, reservoirs and other facilities necessary to the impounding, storage and withdrawal of water in connection with public water supplies except as provided in sections 22a-401 and 22a-403 of the Connecticut General Statutes [and];
 - f. Maintenance relating to any drainage pipe which existed before the effective date of any municipal regulations adopted pursuant to section 22a-42a of the Connecticut General Statutes or July 1, 1974, whichever is earlier, provided such pipe is on property which is zoned as residential but which does not contain hydrophytic vegetation. For purposes of this subdivision, "maintenance" means the removal of accumulated leaves, soil, and other debris whether by hand or machine, while the pipe remains in place[.]; and
 - g. Withdrawals of water for fire emergency purposes.
- 4.2 The following operations and uses shall be permitted, as nonregulated uses in wetlands and watercourses, provided they do not disturb the natural and indigenous character of the wetland or watercourse by removal or deposition of material, alteration or obstruction of water flow or pollution of the wetland or watercourse:

- a. Conservation of soil, vegetation, water, fish, shellfish and wildlife; [and]
- b. outdoor recreation including play and sporting areas, golf courses, field trials, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shellfishing where otherwise legally permitted and regulated [.] and
- c. The installation of a dry hydrant by or under the authority of a municipal fire department, provided such dry hydrant is only used for firefighting purposes and there is no alternative access to a public water supply. For purposes of this section, "dry hydrant" means a non-pressurized pipe system that: (A) is readily accessible to fire department apparatus from a proximate public road, (B) provides for the withdrawal of water by suction to such fire department apparatus, and (C) is permanently installed into an existing lake, pond or stream that is a dependable source of water.

Section 7: Application Requirements

The underlined language noted below is new and should be added to your regulations. The bracketed language noted below should be deleted from your regulations.

- 7.10 Any application to renew a permit shall be granted upon request of the permit holder unless the Agency finds that there has been a substantial change in circumstances which requires a new permit application or an enforcement action has been undertaken with regard to the regulated activity for which the permit was issued, provided [a)] no permit [issued during the time period from July 1, 2006, to July 1, 2009, inclusive,] shall be valid for more than [eleven] ten years, [; and b) no permit issued prior to July 1, 2006 or after July 1, 2009 may be valid for more than ten years.] and further provided that any permit issued prior to July 1, 2011 that did not expire prior to May 9, 2011 shall be valid for no more than fourteen years.

Section 11: Decision Process and Permit

The underlined language noted below is new and should be added to your regulations. The bracketed language noted below should be deleted from your regulations.

- 11.6 Any permit issued by the Agency [prior to July 1, 2006 or after July 1, 2009] for the development of land for which an approval is required under section 8-3, 8-25 or 8-26 of the Connecticut General Statutes shall be valid for five years provided the Agency may establish a specific time period within which any regulated activity shall be conducted. Any permit issued by the Agency [prior to July 1, 2006 or after July 1, 2009] for any other activity shall be valid for not less than two years and not more than five years. Any permit issued by the Agency [during the time period from July 1, 2006, to July 1, 2009, inclusive, shall expire not less than six years] prior to July 1, 2011 that was in effect and did not expire prior to May 9, 2011 shall be valid for a period not less than nine years after the date of such approval.

Should you have any further questions regarding the above changes, please feel free to contact Darcy Winther of the Wetlands Management Section at (860) 424-3019.

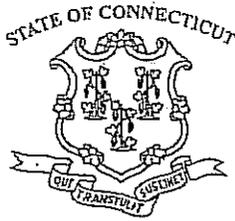
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Senate Bill No. 859

not expired prior to the effective date of this section, shall expire not less than [six] nine years after the date of such approval. Any such permit shall be renewed upon request of the permit holder unless the agency finds that there has been a substantial change in circumstances that requires a new permit application or an enforcement action has been undertaken with regard to the regulated activity for which the permit was issued, provided no such permit shall be valid for more than [eleven] fourteen years.

Approved May 9, 2011

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Senate Bill No. 859

Public Act No. 11-5

***AN ACT EXTENDING THE TIME OF EXPIRATION OF CERTAIN
LAND USE PERMITS.***

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Subsection (m) of section 8-3 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(m) Notwithstanding the provisions of this section, any site plan approval made under this section [during the period from July 1, 2006,] prior to July 1, [2009, inclusive] 2011, that has not expired prior to the effective date of this section, except an approval made under subsection (j) of this section, shall expire not less than [six] nine years after the date of such approval and the commission may grant one or more extensions of time to complete all or part of the work in connection with such site plan, provided no approval, including all extensions, shall be valid for more than [eleven] fourteen years from the date the site plan was approved.

Sec. 2. Subsection (e) of section 8-26c of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(e) Notwithstanding the provisions of this section, any subdivision

Senate Bill No. 859

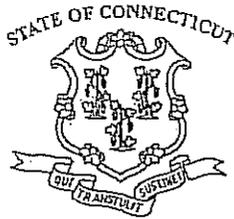
approval made under this section [during the period from July 1, 2006,] prior to July 1, [2009, inclusive] 2011, that has not expired prior to the effective date of this section, shall expire not less than [six] nine years after the date of such approval and the commission may grant one or more extensions of time to complete all or part of the work in connection with such subdivision, provided [the time for all extensions under this subsection shall not exceed eleven] no subdivision approval, including all extensions, shall be valid for more than fourteen years from the date the subdivision was approved:

Sec. 3. Subsection (c) of section 8-26g of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(c) Notwithstanding the provisions of this section, [any approval of a subdivision of land for a project of four hundred or more dwelling units made during the period from July 1, 2006, to July 1, 2009, inclusive, shall expire not less than eleven years after the date of such approval] for any subdivision of land for a project consisting of four hundred or more dwelling units and approved prior to July 1, 2011, that has not expired prior to the effective date of this section, any person, firm or corporation making such subdivision shall complete all work in connection with such subdivision not later than the date fourteen years after the date of approval of the plan for such subdivision. The commission's endorsement of approval on the plan shall state the date on which such fourteen-year period expires.

Sec. 4. Subsection (g) of section 22a-42a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(g) Notwithstanding the provisions of subdivision (2) of subsection (d) of this section, any permit issued under this section [during the period from July 1, 2006,] prior to July 1, [2009, inclusive] 2011, that has



Substitute House Bill No. 5068

Public Act No. 11-184

AN ACT CREATING A REBUTTABLE PRESUMPTION FOR THE APPROVAL OF AN INLAND WETLANDS PERMIT FOR A DRY HYDRANT.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 22a-40 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2011*):

(a) The following operations and uses shall be permitted in wetlands and watercourses, as of right:

(1) Grazing, farming, nurseries, gardening and harvesting of crops and farm ponds of three acres or less essential to the farming operation, and activities conducted by, or under the authority of, the Department of Environmental Protection for the purposes of wetland or watercourse restoration or enhancement or mosquito control. The provisions of this subdivision shall not be construed to include road construction or the erection of buildings not directly related to the farming operation, relocation of watercourses with continual flow, filling or reclamation of wetlands or watercourses with continual flow, clear cutting of timber except for the expansion of agricultural crop land, the mining of top soil, peat, sand, gravel or similar material from wetlands or watercourses for the purposes of sale;

Substitute House Bill No. 5068

(2) A residential home [(i)] (A) for which a building permit has been issued, or [(ii)] (B) on a subdivision lot, provided the permit has been issued or the subdivision has been approved by a municipal planning, zoning or planning and zoning commission as of the effective date of promulgation of the municipal regulations pursuant to subsection (b) of section 22a-42a or as of July 1, 1974, whichever is earlier, and further provided no residential home shall be permitted as of right pursuant to this subdivision unless the permit was obtained on or before July 1, 1987;

(3) Boat anchorage or mooring;

(4) Uses incidental to the enjoyment and maintenance of residential property, such property defined as equal to or smaller than the largest minimum residential lot site permitted anywhere in the municipality, provided in any town, where there are no zoning regulations establishing minimum residential lot sites, the largest minimum lot site shall be two acres. Such incidental uses shall include maintenance of existing structures and landscaping but shall not include removal or deposition of significant amounts of material from or onto a wetland or watercourse or diversion or alteration of a watercourse;

(5) Construction and operation, by water companies as defined in section 16-1 or by municipal water supply systems as provided for in chapter 102, of dams, reservoirs and other facilities necessary to the impounding, storage and withdrawal of water in connection with public water supplies except as provided in sections 22a-401 and 22a-403; [and]

(6) Maintenance relating to any drainage pipe which existed before the effective date of any municipal regulations adopted pursuant to section 22a-42a or July 1, 1974, whichever is earlier, provided such pipe is on property which is zoned as residential but which does not contain hydrophytic vegetation. For purposes of this subdivision,

Substitute House Bill No. 5068

"maintenance" means the removal of accumulated leaves, soil, and other debris whether by hand or machine, while the pipe remains in place; and

(7) Withdrawals of water for fire emergency purposes.

(b) The following operations and uses shall be permitted, as nonregulated uses in wetlands and watercourses, provided they do not disturb the natural and indigenous character of the wetland or watercourse by removal or deposition of material, alteration or obstruction of water flow or pollution of the wetland or watercourse:

(1) Conservation of soil, vegetation, water, fish, shellfish and wildlife; [and]

(2) Outdoor recreation including play and sporting areas, golf courses, field trials, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shellfishing where otherwise legally permitted and regulated; and

(3) The installation of a dry hydrant by or under the authority of a municipal fire department, provided such dry hydrant is only used for firefighting purposes and there is no alternative access to a public water supply. For purposes of this section, "dry hydrant" means a non-pressurized pipe system that: (A) Is readily accessible to fire department apparatus from a proximate public road, (B) provides for the withdrawal of water by suction to such fire department apparatus, and (C) is permanently installed into an existing lake, pond or stream that is a dependable source of water.

(c) Any dredging or any erection, placement, retention or maintenance of any structure, fill, obstruction or encroachment, or any work incidental to such activities, conducted by a state agency, which activity is regulated under sections 22a-28 to 22a-35, inclusive, or sections 22a-359b to 22a-363f, inclusive, shall not require any permit or

Substitute House Bill No. 5068

approval under sections 22a-36 to 22a-45, inclusive.

Approved July 13, 2011

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

Approval of Authorization

University of Connecticut, Fire Department
31 LeDoyt Road
Storrs, CT 06269

Attn: Chris Renshaw

Re: Approval of Authorization
Utilities and Drainage

File No.: IW-201106106GP

Town: Mansfield

Wetland / Watercourse: Unnamed Tributary to the Willimantic River

Dear Mr. Renshaw:

Your request for Authorization under the General Permit for Utilities and Drainage for the installation of a fire protection dry hydrant for emergency water supply in the Town of Mansfield in accordance with your request and plans which are part thereof filed with this Department on August 1, 2011 and dated March 25, 2011 ("the plans") has been approved.

The authorized activity will take place at the Depot Pond #1 on the University of Connecticut "Depot Campus" located adjacent to the Bergin Correctional Institution at 251 Middle Turnpike in the Town of Mansfield-Storrs ("site"). This authorization is being issued to the Connecticut Department of Energy and Environmental Protection (the "permittee") pursuant to the General Permit for Placement of Utilities and Drainage issued June 6, 2002 pursuant to Conn. Gen Stat. Section 22a-39 (the "general permit").

If you have not already done so, you should contact the U.S. Army Corps of Engineers to determine federal permit requirements on your project, if any. Write the Corps' New England Division, Regulatory Branch 696 Virginia Road, Concord, MA 01742-2751 or call at telephone number (978) 318-8388.

If you have any questions concerning this authorization, please contact staff in the Inland Water Resources Division at (860) 424-3019.

Permittee's failure to comply with the terms and conditions of this authorization and those of the general permit shall subject permittee and permittee's contractor(s) to enforcement actions and penalties as provided by law.

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PAGE

This authorization is subject to the conditions described below.

SPECIAL CONDITIONS - None

CONDITIONS OF THE GENERAL PERMIT

(a) Operating Conditions

The permittee shall assure that each action with respect to which authorization has been sought and obtained under the general permit is, as applicable, constructed and maintained in accordance with the authorization and the following conditions:

1. Time of Year Restrictions on In-water Construction

- (A) Between September 30th and May 31st the permittee shall not place fill, excavate material, or conduct any other construction activity in any watercourse unless such activity is confined by a cofferdam or other device which isolates such activity from the watercourse.
- (B) The permittee shall not place fill, excavate material, or conduct any activity in any watercourse stocked with fish by the commissioner or any other person, or in any tributary to such watercourse, from 12:01 a.m. on Monday preceding the third Saturday in April through 12:00 midnight on the Sunday preceding the fourth Saturday in April.
- (C) The permittee shall not place fill, excavate material or conduct any other construction activity in or adjacent to any watercourse, which activity may adversely affect anadromous fish, during the time period when anadromous fish are known or reasonably believed to be migrating in the watercourse.

2. Pollution Prevention/Best Management Practices

The permittee shall not cause or allow the authorized activity, including any construction associated therewith, to result in pollution or other environmental damage and shall employ best management practices to prevent such damage. The permittee shall, in addition to employing any other best management practices necessary to prevent such damage, do the following:

- (A) Controlling Erosion

The permittee shall install and maintain in optimal condition erosion and sedimentation controls to prevent and control erosion and discharge of material into any waters of the state, including wetlands, as a result of the authorized activity or any construction associated therewith. Such controls shall be installed and maintained in conformity with the *Connecticut Guidelines for Soil and Sediment Control*, as revised, published by the Connecticut Council on Soil Water Conservation pursuant to Section 22a-328 of the General Statutes.

(B) Proper Disposal of Material

All material and solid waste generated during any construction associated with such activity shall be disposed of in accordance with applicable federal, state, and local law.

(b) Reporting and Record Keeping Requirements

(1) Notice to Commissioner upon Initiation and Completion of Authorized Activity

No later than two weeks after initiating and after completing the authorized activity, the permittee shall give written notice of same to the commissioner.

(2) Record Keeping and Reporting of Drainage Maintenance Activities

With respect to a drainage maintenance plan described in subsection 3(a)(3) of this general permit and authorized hereunder, the permittee shall maintain a record of each action undertaken pursuant to such plan. Such record shall include the date(s) each such action was undertaken, a brief description thereof, the quantities of any material placed or removed in connection therewith, and the location of such activity. The permittee shall submit a copy of such record to the commissioner on January 30th of the year after the date the commissioner approved permittee's request for authorization, and shall continue every January 30th thereafter to submit to the commissioner a copy of such record as it applies to the preceding twelve months.

(3) Contractor Notification

If the authorized diversion will be constructed by a person(s) under contract to the permittee, the permittee shall (A) give a copy of the general permit and of the permittee's approval of authorization hereunder to such contractor(s) prior to the start of construction, and (B) for one year after completion of the

authorized activity, retain a written receipt for such copy, signed and dated by such contractor(s).

(c) Recording and Reporting Violations

Within 48 hours after the permittee learns of a violation of the general permit, the permittee shall report same in writing to the Commissioner. Such report shall include the following information:

- (1) the provision(s) of the general permit that has been violated;
- (2) the date and time the violation(s) was first discovered and by whom;
- (3) the cause of the violation(s), if known;
- (4) if the violation(s) has ceased, the duration of the violation(s) including exact date(s) and time(s) it was corrected;
- (5) if the violation(s) has not ceased, the anticipated date when it will be corrected;
- (6) steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented;
- (7) the signature of the permittee and of the individual(s) responsible for actually preparing such report, each of whom shall certify as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53-157b of the General Statutes, and in accordance with any other applicable statute."

(d) Modification of Authorized Activity

In constructing the operating the activity authorized by the general permit, the permittee shall not make any alternation, except a de minimis alteration, to such activity without first obtaining the written approval from the Commissioner of such alteration. For the purposes of the general permit, a de minimis alternation means a change in the design or operation of the authorized activity that does not increase its adverse environmental or other impacts and does not significantly change its location.

(e) Initiation and Completion of Authorized Activity

The permittee may not initiate the authorized activity any sooner than sixty (60) days after filing a request for authorization. If the permittee does not complete the authorized activity within three (3) years after the date of the applicable approval of authorization, said approval shall be null and void.

(f) Reliance on Request for Authorization

In evaluating the permittee's request for authorization, the Commissioner has relied on information provided by the permittee. If such information proves to be false or incomplete, the permittee's approval of authorization may be suspended or revoked in accordance with law, and the commissioner may take any other legal action provided by law.

(g) Duty to Correct and Report Violations

Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing such violation and such corrective action to the commissioner within five (5) days of the permittee's learning of such violation. Such report shall be certified in accordance with subsection 5(i) of this general permit.

(h) Duty to Provide Information

If the commissioner requests any information pertinent to the authorized activity or to compliance with this general permit or with the permittee's approval of request for authorization, the permittee shall provide such information in writing within thirty (30) days of such request. Such information shall be certified in accordance with subsection 5(i) of this general permit.

(i) Certification of Documents

Any documents, including but not limited to any notice, which is submitted to the commissioner under the general permit shall be signed by, as applicable, the registrant or the permittee in accordance with Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable

investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53-157b of the General Statutes, and in accordance with any other applicable statute.”

(j) Date of Filing

For purposes of this general permit, the date of filing with the commissioner of any document is the date such document is received by the commissioner. The word “day” as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day.

(k) False Statements

Any false statement in any information submitted pursuant to this general permit or the request for authorization may be punishable as a criminal offense, in accordance with Section 22a-6, under Section 53a-157b of the General Statutes.

(l) Correction of Inaccuracies

Within fifteen days after the date a permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with subsection 5(i) of this general permit. The provisions of this subsection shall apply both while a request for approval of request for authorization is pending and after the commissioner has approved such request.

(m) Transfer of Authorization

An approval of Request for Authorization under this general permit is transferable only in accordance with the provisions of Section 22a-6o of the General Statutes.

(n) Other Applicable Law

Page 7 of 7

Nothing in the general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state, and local law, including but not limited to the obligation to obtain any other authorization required by such law.

(o) **Other Rights**

The general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal state and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water or other natural resources of this State. The issuance of the general permit shall not create any presumption that the general permit should or will be renewed.

This document consists of the approval of authorization as mandated by Section 3(b)(1) of the general permit. This approval shall expire on June 6, 2012 unless the general permit is extended past such date or within (3) years after the date of this approval, whichever comes first.

October 4, 2011

Date

Denise Ruzicka

Denise Ruzicka

Director

Inland Water Resources Division

cc: Will Hochholzer (DEEP)

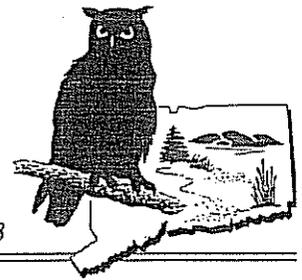
Town of Mansfield Inland Wetlands Agency, 4 South Eagleville Road, Storrs, CT 06268

Town of Mansfield Conservation Commission, 4 South Eagleville Road, Storrs, CT 06268

Town of Mansfield Planning & Zoning Commission, 4 South Eagleville Road, Storrs, CT 06268

THE HABITAT

A newsletter of the Connecticut Association of Conservation and Inland Wetlands Commissions, Inc.



fall 2011

volume 23 number 3

CACIWC's 34th Annual Meeting & Environmental Conference

November 12, 2011

New Tracks and Workshop Sessions for Conservation & Wetlands Commissioners and Agents

In response to your requests, a broad selection of workshops is offered for new as well as experienced commissioners these four areas:

- Open Space & Conservation Biology
- Land Use Law & Legal Updates
- Best Management Practices & Procedures
- Low Impact Development & Sustainability

See pages 8 & 9 for the complete list of workshops.

There is still time to submit your nominations for a CACIWC annual award! See page 9 or www.CACIWC.org for more information.

Daniel C. Esty, Commissioner of the Connecticut Department of Energy and Environmental Protection (DEEP), to address CACIWC's Annual Conference

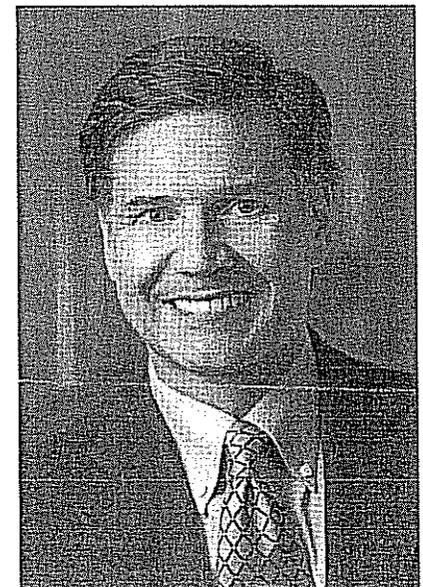
Conference Theme is "Celebrating Five Decades of Environmental Conservation and Habitat Protection"

Daniel C. Esty will be the keynote speaker at CACIWC's 34th Annual Meeting and Environmental Conference on Saturday, November 12, 2011 at MountainRidge in Wallingford. He will help us celebrate the 50th anniversary of the law establishing conservation commissions in Connecticut and the following decades of habitat protection efforts made by conservation and inland wetlands commissioners and their staff.

Almost ten years before the original Earth Day, a small coalition of local conservation groups and clubs led by Hartford Times editor Ward E. Duffy, convinced members of the 1961 Connecticut General Assembly to introduce House Bill No. 3470, which was passed as Public Act No. 310.

By this act, Connecticut municipalities were first authorized to form conservation commissions. Subsequent legislative sessions clarified and added to their duties and responsibilities and eventually led to the added responsibility of regulating inland wetlands and the formation of local wetlands agencies.

Commissioner Esty will discuss the progress that has been made in both preserving critical habitats and improving environmental quality throughout Connecticut during the fifty years since the passage of the 1961 Public Act. He will emphasize the value of dedicated local conservation and wetlands commissioners and staff in continuing their local habitat preservation efforts in partnership with the DEEP and other agencies.



Commissioner Esty was appointed by Governor Dannel P. Malloy in March, 2011 to serve as Commissioner of what was then the Connecticut Department of Environmental Protection
keynote, continued on page 14

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www.caciwc.org

CACIWC News

The CACIWC Board of Directors has continued to receive feedback in response to our new column, designed to provide conservation and wetlands commissioners, agents, directors and other readers with highlights of recent decisions and other news from our board and committee meetings. Please do not hesitate to contact us via email at board@caciwc.org if you have any questions or comments on these items or if you have other questions of your board of directors.

Thank you ~ Alan J. Siniscalchi, President

1. Based on suggestions from last year's meeting and many of you, the CACIWC Board of Directors and its Annual Meeting Committee have assembled a new series of workshops organized within revised session tracks that were designed to bring useful information to attendees of this year's meeting. Additional details of our **34th Annual Meeting and Environmental Conference**, scheduled for Saturday, November 12, 2011 at MountainRidge in Wallingford, can be found in this issue of *The Habitat*.

2. This year marks a special milestone for CACIWC with the 50th anniversary of the enabling legislation authorizing the establishment of municipal conservation commissions in Connecticut. Our keynote speaker, *Connecticut DEEP Commissioner Daniel C. Esty* will help us celebrate this anniversary. We are looking for **photographs documenting the activities of these early commissions**. Please scan or digitize the photographs and send them to us at AnnualMtg@caciwc.org along with suggested captions and information on whom to credit. Watch for additional conference news on our website: www.caciwc.org.

3. Although the Board and its Annual Meeting Committee have already received several excellent nominations for our **2011 Annual CACIWC Awards**, there is still time to submit yours! The 2011 nomination form has been placed on our website. Just print it out, scan it and email it to us at: AnnualMtg@caciwc.org.

4. Don't forget to **register early for 2011 Meeting**. While the general admission fee will be increased for 2011 meeting, the Committee had decided not to increase the registration fee for members from town commissions *who register early and are current with their membership dues*. You can print out our new conference registration form from our website: www.caciwc.org.

5. The Board has been pleased by the number of commissions who have already sent in their **2011-12 membership dues** in response to the reminder and renewal form mailed earlier in

news, continued on page 15



by Attorney Janet Brooks

State Supreme Court Rules: Farm Roads Constructed with Fill in Wetlands Not Exempt From Wetlands Permit Requirement

In a unanimous decision (6-0) released in August, the state Supreme Court ruled in *Taylor v. Conservation Commission*¹, 302 Conn. 60 (2011), that roads constructed with fill in wetlands are not exempt from the state wetlands law -- thus, a wetlands permit is required. The Supreme Court believed it was addressing only those roads involving fill. I represented the plaintiff, Jim Taylor, in his appeal to the Superior Court after the Fairfield Conservation Commission denied his request for a determination of farming exemption. In that original agency decision, in the spring of 2006, the commission denied that his plan fell within the farming exemption. The trial court ruled in 2007 that the agency failed to make a determination on each of the proposed activities. The agency was required to rule activity-by-activity whether the farming exemption applied.

At that point, February 2008, the agency determined that everything he proposed fell within the farming exemption (removal of stones, construction of stone walls, a fence, a dug well, an addition to an existing barn, the planting of a nursery, fruit trees and flower, herb and vegetable beds and the maintenance of a grass swale, the construction of a one farm road in the upland) *except* two roads in the wetlands. I represented Jim Taylor in his second appeal to the Superior Court, this time narrowly focusing on the meaning of the farm road provision in the farming exemption. The trial court upheld the agency action. On appeal to the Supreme Court, I represented the Connecticut Farm Bureau Association, Inc., amicus curiae in the appeal.

To those of you who have not had to think much about the farming exemption or any exemption under the wetlands law, you might think that construction of any road involving fill in a wetland requires a wetlands permit. But consider this -- regulated activities, the

ones which require a permit, are defined by *excluding* the activities in the statutory exemption. So, the discussion of an exemption must begin by examining the statute. The language for the farming exemption in Conn. Gen. Stat. § 22a-40 (a) (1) is not what I would call straightforward. The first sentence is clear: a number of activities are listed. Farming is one of them. (Other case law² requires us to apply the definition of farming found in Conn. Gen. Stat. § 1-1(q), if the enabling legislation [the wetlands act] does not include a specific definition of farming. [It does not.]) But then you start to wonder, what about

the farm road to get the equipment to the fields or the harvest out of the fields to the market? Is that road included? So, you proceed to the second sentence:

"We conclude that, even if road construction directly related to the farming operation is permitted as of right, such road construction is not permitted as of right if it involves the filling of wetlands, because the filling of wetlands is not permitted as of right."

"The provisions of this subdivision shall not be construed to include road construction or the erection of buildings not directly related to the farming operation, relocation of watercourses with continual flow, filling or reclamation of wetlands or watercourses with continual flow . . ."

The second sentence tells you what's *not* in the exemption, in other words, what needs a permit. It does so with a double negative. *Could the legislature have drafted this second more clearly? Absolutely.*

Here is the conflict: "road construction directly related to the farming operation" vs. "filling of wetlands."

The Supreme Court resolves that tension with this one-sentence conclusion: "We conclude that, even if road construction directly related to the farming operation is permitted as of right, such road construction is not permitted as of right if it involves the filling of wetlands, because the filling of wetlands

legal, continued on page 4

legal, continued from page 3
is not permitted as of right.”³ With the “even if” phrase, the Supreme Court informs us it hasn’t decided that the road construction is permitted as of right. The Supreme Court focused on the “filling of wetlands” exclusion to the exemption. That is clear. The Supreme Court states: “It [the statutory exemption] plainly and unambiguously does not permit the filling of wetlands as of right.”

But what is left of the “road construction” exemption? Hard to know. The Supreme Court stated in the text of the decision (quoted above) that it hasn’t decided whether there is a road construction exemption. The Supreme Court restates that in footnote 10: “We emphasize that, because we conclude that filling in wetlands is not permitted as of right, we do not address the questions of whether road construction directly related to the farming operation is permitted as of right . . .”

The word “construct” means, according to the Random House Webster’s College Dictionary, “to build or form by putting together parts.” Those parts would constitute some kind of material, which in turn, would mean, that the construction of all roads involves “fill” of some sort. I’m hard-pressed to fathom what is left of the exemption for road construction directly related to the farming operation. Yet, the Supreme Court was unwilling to express any opinion on the meaning of or breadth of the construction of farm roads.

The Supreme Court notes that the wetlands staff memo mentions that floodplain soils can be sturdy enough to drive on. The genesis of this position is from Steve Tessitore, former DEP employee in the wetlands program. Such use of land, however, isn’t the same as road construction. In that case, no road construction is necessary. But what about when road construction *is* necessary?

Back to the definition, how do you build a road without putting together parts . . . composed of materials . . . which constitute fill? The Supreme Court did not believe it needed to consider that possibility, thinking it only necessary to do so if Jim Taylor established that all roads require fill.⁴

When I read a case, I want to understand, looking back, what the court did, and looking forward, what the court will do. The Supreme Court reduced to black-and-white that Jim Taylor’s farm roads involving fill in the wetlands are not exempt and require a permit; and looking forward, no fill of a farm road will fall within the exemption. But also looking forward, what farm roads can be constructed as an exempt activity remains gray. In my view, the Supreme Court missed an opportunity to *definitely* interpret “construction of roads directly related to the farming operation.”

Looking back, I note that Jim Taylor initially filed his request for a determination of exemption in February 2006. Five-and-a-half years later he knows he needs to file for a permit without any guidance from the Supreme Court as to whether an exemption for constructing a farm road even exists.

Whenever I write about the farming exemption I end up with the same thought: don’t the wetlands agency members and those seeking to farm deserve a straightforward statute that spells out what is exempt and what is not?

Janet P. Brooks practices law in East Berlin. You can read her blog at: www.ctwetlandslaw.com.

(Endnotes)

¹ This case can be read on the judicial website at: <http://www.jud.ct.gov/external/supapp/Cases/ARocr/cr302/302CR105.pdf>. You may search for it yourself on the judicial website (www.jud.ct.gov) by going to the archives of the Supreme Court, clicking on 2011, then scrolling down to “published in the Connecticut Law Journal - 8/16/11 and clicking on the *Taylor* case.

² See *Johnson v. Board of Tax Review*, 160 Conn. 71, 75 (1970) (“To search for a definition beyond that in § 1-1 would require us to ignore the specific direction that ‘agriculture’ and ‘farming’ shall be defined as stated therein. To do so would be improper. Thus, we must apply the definitions prescribed by the legislature in § 1-1.”)

³ *Taylor v. Conservation Commission*, 302 Conn. 60, 67 (2011).

⁴ “(B)ecause the plaintiff has not demonstrated that all road construction on wetlands requires the use of fill, the plaintiff has not demonstrated that our interpretation of the statute renders the subject clause meaningless.” *Taylor v. Conservation Commission*, 302 Conn. 60, 67 n.8 (2011).



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Old Dog, New Trick: CEPA at 40

by Karl Wagener, Executive Director, Council on Environmental Quality

Editor's Note: Conservation Commissions should understand and have a working knowledge of the Connecticut Environmental Policy Act (CEPA). The CT Council on Environmental Quality, recently saved from budget cuts, is an excellent source for CEPA information.

The Connecticut Environmental Policy Act (CEPA) is one of our bedrock environmental laws. In 2011, CEPA turned forty years old and also underwent an important change in the way it is implemented by state agencies. Municipal commissions should be aware of the change to avoid being taken by surprise when the bulldozers show up. Fortunately, I can suggest a way to avoid any such calamities.

CEPA is the state law that requires state agencies to prepare Environmental Impact Evaluations (EIEs) for state-sponsored or state-funded projects. Prior to preparing an EIE, the agency is required to publish a "scoping notice", which is a solicitation of public comments during the early stages of project development. Such notices are posted in the Environmental Monitor (www.ct.gov/ceq/monitor), which is published online twice a month by the Council on Environmental Quality.

In the past, a scoping notice was almost always followed in a few months by an EIE unless the project was abandoned. This is no longer true. If an agency posts a scoping notice and receives no comments that suggest the impacts might be significant (and perhaps even if such comments ARE received), then the agency may publish a "post-scoping notice" in the Environmental Monitor. There is no public comment on post-scoping notices; after publication, the project is good to go.

Here is my suggestion: If you have an interest in a state-sponsored or state-funded project and are concerned about its potential impacts, be sure to submit com-

ments during the scoping period. Many people who are interested in a state project do not comment during the scoping period, figuring that they will get a chance later to submit detailed comments on the EIE. That used to be a valid conclusion, but no longer. For some projects, the scoping period might be the only opportunity for public comment.

This change was made without any amendment to the CEPA statute or regulations. It is a process spelled out in the new Environmental Classification Documents that guide agencies' decisions to prepare (or not) an EIE. More information is available by clicking the "What is CEPA?" link on the Environmental Monitor page and following the relevant links on the CEPA pages of the Office of Policy and Management website. (Note that if you read the agencies' Environmental Classification Documents you will not actually find the term "post-scoping notice"; that is a term invented by the editors of the Environmental Monitor to improve public understanding of what officially is termed a "written memorandum".)

If you want to be sure you don't miss anything, I encourage you to sign up for e-alerts on the CEQ website to receive an email each time the Monitor is published. Please feel free to contact me at any time if you have questions or if you encounter any problems signing up for e-alerts.

Karl Wagener can be reached at 860-424-4000;

karl.wagener@ct.gov; www.ct.gov/ceq



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Municipal Inland Wetlands Commissioners Training Program

State of Connecticut, Department of Energy and Environmental Protection

Segment 3 of the 2011 Municipal Inland Wetlands Commissioners Training Program will be held in October and November. This year's workshop is titled "Connecticut's Inland Wetlands and Watercourses Act: *Connecticut's Soils*". The workshop consists of morning classroom presentations followed by an afternoon field visit to examine three exposed soil profiles. Brochures were mailed to every municipal inland wetlands agency during the week of September 12, 2011.

Dates and locations are:

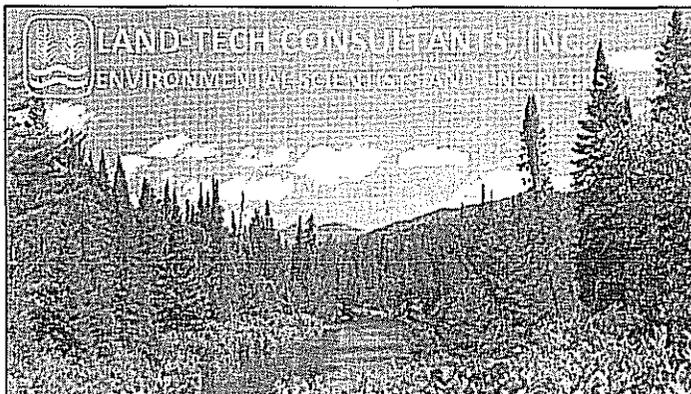
- October 22, 2011 - Sessions Woods Wildlife Mgmt 341 Milford Rd, Burlington, CT
- October 25, 2011 - Session Woods Wildlife Mgmt 341 Milford Rd, Burlington, CT
- November 3, 2011 - Tolland County Agricultural Center, 24 Hyde Ave, Vernon, CT
- November 7, 2011 - Tolland County Agricultural Center, 24 Hyde Ave, Vernon, CT

The time is 9:00 a.m. to 4:00 p.m. for all workshops. Plan to arrive between 8:30 a.m. and 9:00 a.m. to sign in and receive course materials. The workshops will be held rain or shine. Please dress appropriately for the weather; water resistant footwear suitable for hiking is strongly recommended. In the case of severe weather the afternoon field portion may be canceled.

In Burlington the field component will involve walking on a dirt/gravel road to access the soil pits. The gravel road is fairly smooth, but the terrain is hilly. The soil pits are located in the woods off of the gravel road and will involve walking on uneven forest ground.

In Vernon the field component will involve walking on grass and a dirt/gravel road. The terrain is flat. One soil pit is located in the woods off of the gravel road and will involve walking on uneven forest ground.

On-line registration is available at: <http://continuingstudies.uconn.edu/professional/dep/wetlands.html>.



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Greenway Planning, Development and Stewardship - A Survey for Municipal Land Use Commissions and Land Trusts

Your answers to this simple survey will assist in answering the following questions and help us determine how we can best design our program to support your community greenway planning, construction, and stewardship efforts:

- How and why Connecticut municipalities are planning for greenways;
- To what extent planned greenway areas are protected;
- Do those planning for greenways look beyond town and regional boundaries during the planning process;
- Where do those planning for municipal greenways look for information concerning other greenway locations; and
- What resources are needed to help plan, construct, and steward Connecticut's community greenways

The Eastern CT Resource, Conservation & Development Program (RC&D) is partnering with CACIWC to increase the focus on the development and the stewardship of greenways as a method of connecting rural, suburban, and urban communities with particular attention to natural resource protection, riparian and wildlife corridor connectivity, economic development, preservation of scenic resources and community character, and connection of environmental justice populations to public services.

This first step, the survey, is to investigate potential open space and greenway linkages across municipal and regional boundaries, with a special focus on river corridors and watersheds.

Please use this link, <http://www.surveymonkey.com/s/LRC23V7>, to participate in this survey. If you have questions please contact Tom ODell at todell@snet.net. Thank you. 



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CACIWC's Environmental Conference Workshops

— SESSION 1 —

(* Denotes Advanced Workshop)

A1. "Invasive Species: Diatoms: The Good, the Bad, and the Ugly!"

Professor Diba Khan-Bureau, Three Rivers Community College (TRCC)

Because diatoms are microscopic, many people do not know about their ecology or importance. Diatoms convert light, water and carbon dioxide into carbohydrates during photosynthesis. They are the base of the food chain in aquatic habitats and make up 40% of earth's primary productivity in regards to CO₂ fixation. They are essential for the cycling of nutrients in surface waters and other water bodies. As important as diatoms are, they can be problematic as well. The presentation will focus on the ecology and control of this nuisance diatom, *Didymosphenia geminata*, fondly called "rock snot."

*B1. "Emergency Authorization Procedures for Wetlands Agencies"

Janet Brooks, Attorney at Law, LLC

The wetlands act sets out very specific procedure to be followed for applications for regulated activities. But the law is silent when emergencies occur. Has your agency faced immediate septic system failures, road or bridge repair work that can't wait for the agency to receive an application and wait another month for action? This workshop will focus on practical solutions. Attorney Brooks will offer the various approaches employed by a number of agencies. Come add to the discussion your agency's problems and ways of resolving them.

*C1. "The Importance of Maintaining Your BMP"

Lawrence H. Galkowski, PE; Rinker Materials

The use of Best Management Practices (BMP) is an essential component of the design and maintenance of systems designed to treat stormwater run-off before it is discharged to the wetlands, brooks, and rivers of our state. The 2004 Connecticut Stormwater Quality Manual, developed by the Connecticut DEEP, has been considered an important guide for designing effective stormwater systems. Of equal importance is the guidance it provides on maintaining more than 25 various types of BMP. This presentation will review important methods for correctly designing and maintaining various BMP systems.

D1. "Low Impact Development in Planning & Permitting"

MaryAnn Nusom Haverstock, Connecticut DEEP Watershed Management Program

Low Impact Development (LID)-style best management practices (BMP), such as vegetative filter strips, pocket sand filters, and infiltration systems, have been available for the control of stormwater for several decades. The LID approach to site design is a significant change in site planning and stormwater management philosophy. LID emphasizes working within the constraints of landscapes to prevent stormwater generation, rather than shunting away stormwater and treating it. This workshop will review current guidance as an appendix for both the DEEP Erosion & Sediment Control guidelines and the CT Stormwater Quality Manual.

— SESSION 2 —

(* Denotes Advanced Workshop)

*A2. "Land Trust & Conservation Commission Collaboration: Partnerships for Land Preservation & Stewardship"

Amy B. Paterson, Esq., Executive Director, Connecticut Land Conservation Council (CLCC)

The preservation and stewardship of open space is a challenging task, particularly in this economic climate. In Connecticut, while land trusts and conservation commissions work independently to carry out this responsibility, most accomplishments in conservation are a result of forging ongoing, positive relationships amongst landowners, land trusts, governmental entities, and elected officials. This workshop will discuss the importance of collaboration; explore opportunities for collaboration; evaluate ways to overcome potential roadblocks and hear collaboration success stories.

*B2. "Wetlands Law Update and Q&A for 2011"

Janet Brooks, Attorney at Law, LLC;
David Wrinn, CT Attorney General's Office;
Mark Branse, Branse, Willis & Knapp, LLC

This trio of wetlands attorneys has been brought back by popular demand to keep you current with the latest state Supreme Court and Appellate Court cases and legislative amendments to the wetlands act. You'll hear about the August decision of the Supreme Court on whether farm roads are exempt, as well as be brought up to date on the new exemption to the wetlands act and the automatic extended permit length for certain wetlands permits. This work shop will also include a 30-min question-and-answer session that you have asked that we bring back again each year!

*C2. "BMP in Stormwater Management: Rain Gardens & Other Advanced Techniques"

Michael Dietz, CT NEMO Program Director, UCONN, Center for Land Use Education and Research (CLEAR)

A rain garden is a depressed area in the landscape designed to collect and infiltrate stormwater runoff. Rain gardens also can be beautiful additions to the home landscape. This workshop will provide an overview of the functions and features of rain gardens and other best management practice (BMP) approaches to stormwater treatment. Information on the use of other advanced BMP systems will be presented including bioretentive systems, pervious pavements that can be recommended as an alternative to more traditional systems. Performance data, advantages/disadvantages for different applications, and some cost information will be discussed.

*D2. "Low Impact Development, A More Sustainable Approach to Creating Workplaces and Homes"

Scott W. Horsley, President, Horsley Witten Group, Inc.

Low-impact development (LID) is an alternative approach to site planning, design and building that minimizes impacts to the land landscape and preserves the natural hydrologic cycle. This approach results in reduced impervious surfaces, smaller lawns and more natural landscaping, lower construction costs, lower maintenance, and a more attractive landscape. Other LID design techniques include green roofs, rain barrels, rain gardens, grassed swales, and stormwater infiltration systems. This workshop will emphasize how, through the use of these techniques, natural drainage pathways are conserved, open space is preserved, and the overall impact from development is reduced.

Open Space & Conservation Biology Track

Land Use Law & Legal Updates Track

Best Management Practices & Procedures Track

Low Impact Development & Sustainability Track

—SESSION 3—

(* Denotes Advanced Workshop)

A3. "Stalking Foxes and Wandering Cats: Current Trends among Connecticut Mammalian Predator Populations"

Andrew LaBonte, Wildlife Biologist, CT DEEP Wildlife Division
Connecticut's diverse mammalian predators range in size from the diminutive Least and Short-tailed Shrews, to the little known Short- and Long-tailed Weasels, to our increasingly-seen Black Bear. This workshop will differentiate between Gray and Red Fox species; review the latest information on our elusive population of Bobcat; present current theories on the evolution of the Eastern Coyote population, as well as the amazing story of how a mountain lion from South Dakota found his way to Connecticut! This workshop will also provide information to assist commissions and staff in responding to public inquiries and offer suggestions on supporting state and regional efforts to track and study these species.

***B3. "Development of Low Impact Development Regulations with Your Local P&Z"**

Attorney Mark K. Branse, Branse, Willis & Knapp, LLC
This workshop will discuss how municipal wetlands agencies can enhance their ability to minimize the environmental impact made by new development in their towns through the adoption of low impact development (LID) regulations in conjunction with their town's planning & zoning commissions. Other joint wetlands, conservation, and P&Z commission efforts to promote the long-term protection of important habitats within their town will also be discussed.

***C3. "Sustainable Site Design"**

Jane Didona, Didona Associates; Stuart Sachs, PRE/view Landscape Architects; & Thomas Tavella, Fuss & O'Neill, Inc.
The mission of landscape architecture has always been to balance the human experience with the health of our natural systems. This panel will explore sustainable site design concepts, and the American Society of Landscape Architects "Sustainable Sites Initiative", a new system of standards to guide builders to reduce impacts on the landscape component of their developments. This panel will explore how sustainable design is applicable to site and regional planning programs. The principals of the US Green Building Council and the Leadership in Energy and Environmental Design process will be explored; as well as stormwater management techniques that create preferred landscapes benefiting the community.

***D3. "Sustainability in Town Planning: Long-term vs. Short-term thinking"**

John D. Calandrelli, CT Sierra Club Program Director
What constitutes a "sustainable community?" What is sustainability? The factors that go into a sustainable community and examples of these factors will be discussed in this workshop and Q/A session. If municipal staff and commissioners began to use a definition of sustainability as meeting our needs while allowing the opportunity for future generations to meet theirs, could this alter the endless cycle of expanding growth and diminishing open space? What are the environmental and economic factors involved? What would sustainability mean for our parks, forests, farms, wetlands, town centers, jobs, and budgets? Join the discussion and consider a new approach for Connecticut cities and towns.

**Nominations for CACIWC's
2011 Annual Recognition Awards**

Presentations will be made at Annual Meeting & Environmental Conference

Saturday, November 12, 2011

There is still time to submit your nominations for a CACIWC annual award. Nominations will be accepted until **October 17, 2011** in six award categories:

1. Wetlands Commission of the Year
2. Conservation Commission of the Year
3. Wetlands Commissioner of the Year
4. Conservation Commissioner of the Year
5. Commission Agent or Staff of the Year
6. Lifetime Achievement Award

Please see www.CACIWC.org for the nomination form and additional information. Completed nomination forms should be emailed to the CACIWC Annual Award Nominations Committee at: AnnualMtg@CACIWC.org

SCHEDULE FOR THE DAY

Registration & Breakfast	8:30 – 9:00 am
Welcome & Business Mtg.	9:00 – 9:30 am
Session 1 Workshops	9:30 – 10:30 am
Break 1	10:30 – 10:45 am
Session 2 Workshops	10:45 am – 12:00 pm
Lunch & Keynote speaker	12:00 – 1:30 pm
Awards	1:30 – 1:45 pm
Break 2	1:45 – 2:00 pm
Session 3 Workshops	2:00 – 3:15 pm
Final display viewing	3:15 – 4:00 pm

Displays will be on view from 8:30 am – 4:00 pm.

2011 Re-issuance of the Department of the Army Programmatic General Permit for the State of Connecticut — Inland Wetlands Activities

by Cori Rose, Senior Project Manager, U.S. Army Corps of Engineers
New England District Regulatory Division

On July 15, 2011 the U.S. Army Corps of Engineers (Corps) reissued the General Permit (GP) for the State of Connecticut. The intent of the GP is to streamline reviews and reduce the duplication of regulation between State and Federal entities.

In general, a GP is an umbrella permit for categories of activities, or for a particular state program which normally includes an abbreviated review process, and/or conditional authorization for a range of activities that are similar in nature and anticipated to cause no more than minimal environmental impact, individually and cumulatively.

How does it work?

Although the Corps in New England revoked the national form of Nationwide Permits and has used GPs for implementation of the Clean Water Act and the Rivers and Harbors Act since the 1980's, many people are still confused by how the process works. There is no *exemption* from obtaining a Clean Water Act permit for work less than 5,000 square feet. ALL activities in wetlands and waters, regardless of their acreage of impact, are required to receive a permit from the Corps.

The GP that is issued every five years is the permit, or vehicle if you will, that authorizes a particular activity. A submittal to the Corps is evaluated for its eligibility, based on a permit's specific criteria and general terms and conditions.

Following evaluation of a particular project proposal, the Corps does not issue the applicant a permit. Rather, it issues a letter of authorization stating that the proposed work complies with the previously-issued five year permit.

Since the issuance of the GP is a federal action, the Corps must document compliance with the National

Environmental Policy Act (NEPA). The Corps is therefore required to assess:

- the reasonably foreseeable effects of the individual activities approved within each five year permit,
- the anticipated cumulative effects of those activities,
- and the potential future losses of waters of the United States that are estimated to occur until the date of the permit's expiration.

"...authorization by the Corps does supersede any other agencies' jurisdiction and does not take the place of all other permits required by law."

The authorizations will expire for activities that have not started before the end date of the particular permit under which they were originally verified. Consequently, extensions cannot be granted for any work that has not commenced before expiration of the permit.

Changes to the CT General Permit

In many ways changes to the GP for 2011 have been minimal, but they exist nonetheless. First, the permit summary and Appendix 1, (which defines the categories of work and their related criteria for inland activities in the State of Connecticut (Section 1/1A)) has received a facelift. It has been separated physically from the coastal activities and work regulated by the CT Department of Energy & Environmental Protection's (CT DEEP) Office of Long Island Sound Program.

The purpose of this change is to more succinctly explain the eligibility requirements for inland activities under Category 1 and Category 2. Activities that are not eligible for consideration under either Category 1 or 2 have been given their own pages (3 of 10 and 6 of 10 respectively) within the activity matrix. The inland matrix itself has been simplified for viewing but

permit, continued on page 11

permit, continued from page 10

it still continues to break down the work types for both Category 1 and 2 as such:

- Category 1A or 2A – New fill and/or fill associated with excavation
- Category 1B or 2B – Streambank Stabilization
- Category 1C or 2C – Repair and maintenance of existing authorized or grandfathered fill

Also, similar to the 2006 GP, some activities continue to have very specific eligibility criteria in order to be covered under the GP, such as utility right-of-ways, stream crossings, and streambank stabilization.

By far the greatest change to the 2011 re-issuance is the requirement for all applicants to fill out and return a Certification Form for ALL Category 1 activities. This form is designed to allow the Corps to better meet the National Environmental Policy Act environmental assessment requirements discussed above.

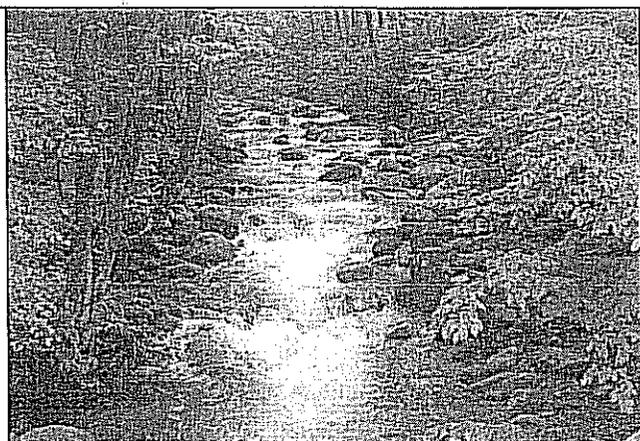
The form also does double duty as a permittee self-certification statement that the work that is to be undertaken will meet the terms and conditions of

the GP. As part of this process Corps staff will be inspecting a subset of the projects as part of our 5-year cumulative impact analysis to confirm that the work complied with the requirements of the permit.

Another format change includes separation of the main body of the GP, which contains the General Conditions (GC) for the permit, from the inland matrix. The General Conditions, in addition to the matrix criteria, have been updated in the discussion that follows:

- 1) Floodways and Floodplains - Work that otherwise meets the criteria of the GP within a Federal Emergency Management Act (FEMA) designated floodway may now be eligible under Category 1 provided a Flood Management Certification is obtained from the State of Connecticut (if one is required) or CT DEEP has reviewed and issued other permits such as those under the Dam Safety, Stream Channel Encroachment or Diversion statutes. Similarly, projects with fill within a floodplain may also be eligible under Category 1 upon receipt of one of the above

permit, continued on page 12



- * Low Impact Development Analyses, Designs & Regulations
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- * Third-party technical reviews of land development projects
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Steven Trinkaus, PE, CPESC, CPSWQ

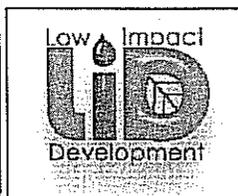
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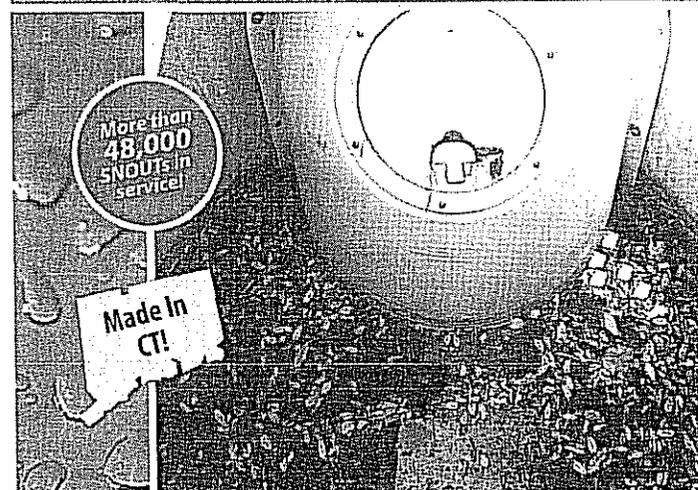
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permits and demonstration that there will be no adverse effect to hydraulic characteristics.

2) Vernal Pools – If discharge of fill in wetlands or waters will occur for a project (regardless of the acreage of fill impact) and any part of the development will be located within 100 feet of a known or suspected vernal pool, the work must be reviewed by the Corps and coordinated with the state and federal agencies. In addition, the secondary impacts to vernal pools are called out under GC 3 such that site clearing, grading or construction activities in upland habitat within the 750 foot circumference of a vernal pool must be calculated as secondary impact for the purposes of determining which GP category a project may be considered for. Of course, this requirement is only applicable if any portion of a project is within Corps jurisdiction with filling, of any amount, in wetlands or waters.

Example: Construction of a road crossing with 430 square feet of fill in wetlands for access to an upland subdivision, and approximately 4 acres of tree clearing for construction within a 750-foot radius of a vernal pool will have 430 feet of direct impact and 4 acres of secondary impact and consequently will need to be submitted to the Corps for review under Category 2 of the GP.

3) Swamp Mats – Swamp mats no longer count towards total impact calculation for a project that will be reviewed under Category 2. What this means is if the permanent impact of a project is below the one acre threshold of Category 2 and temporary mats are to be used with resulting additional impact, the footprint of swamp mats

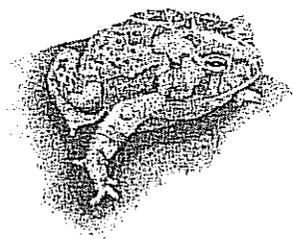
will not put an otherwise GP eligible project into Individual Permit review. However, it is important to note that this is not the case for work under Category 1. Under Category 1 the footprint of temporary mats will still count towards total project impact acreage for determining which GP category to use.

Example: Discharge within 1400 square feet of wetlands for repair of a water main and placement of 4100 square feet of swamp mats (temporary fill) over wetland for access to the site for a total of 5500 square feet will need to be reviewed for eligibility under Category 2 of the GP.

4) Dam Repair – This activity is now included under Category 1 provided there is no change in the permanent water surface elevation of the impoundment and no dredging in the impoundment other than that needed to access the repair site. In this case the secondary impact of dewatering to undertake the repair will not count towards the 5,000 square foot limit.

permit, continued on page 13

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Example: Excavation and discharge below ordinary high water over 3400 square feet for replacement of a wing wall and low-level outlet with associated dewatering of a 1.2 acre pond would be eligible under Category 1 of the GP provided it meets all other GP terms and conditions.

5) Wetland and Stream Restoration – These activities are potentially eligible for Category 2 of the GP, regardless of acreage, provided that the Corps, in concurrence with the state and other federal agencies determines that the impact of the work will be minimal.

6) GC 5 Single & Complete Projects – This condition has been updated to provide additional clarification as to what a single and complete project is. To be applicable for the GP, all phases of a planned multi-phase project must be considered together. Phases that are dependent upon other or prior phases do not have independent utility and must be considered in unison.

7) GC 6 Permit on Site – This condition clarifies that the authorization letter and a copy of the entire GP

(permit vehicle including all General Conditions) must be included in bid documents/project specification or added as an addendum to such if the authorization is issued following receipt of bids.

8) GC 15 Avoidance, Minimization & Mitigation – This condition has been updated to reflect New England District mitigation ratios, compliance with the April 10, 2008 National Compensatory Wetland Mitigation Rule and consideration of Low Impact Development practices to manage stormwater runoff at development sites.

9) GC 22 Waterway Crossings – Projects using slip lining, plastic pipes and High Density Polyethylene Pipes are not authorized under Category 1, either as new work or maintenance activities.

10) GC 26 Protection of Vernal Pools – All Category 2 projects will be required to conduct a VP survey of the entire site (not just the disturbance area) and the survey must be submitted to the Corps along with the party that conducted the survey and the survey date.

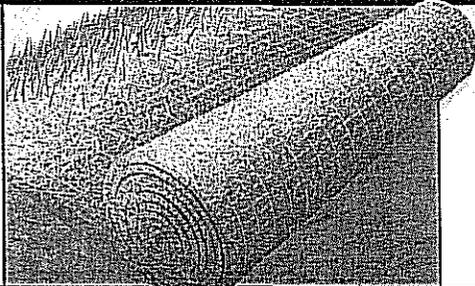
11) GC 27 Invasive Species – All Category 2 projects will be required to provide an Invasive Species Control Plan.

12) GC 28 Inspections – As discussed above submittals are now required for Category 1 inland activities. For Category 1 activities the REQUIRED submittals include the Category 1 Certification Form (Appendix 1A) and the Compliance Certification Form (Appendix 5). For Category 2 activities both the Compliance Certification Form and a Work-Start Notification Form will be REQUIRED. Failure to submit these forms is considered non-compliance of the permit.

Corps Permit, Local Permit or Both?

Finally, one of the more common questions we are asked about a Corps Permit is if it takes the place of the need to obtain a local permit. Not a change to the GP but worth pointing out nonetheless, GC 1 of the GP addresses this question. It states that an authorization by the Corps does supersede any other agencies' jurisdiction and does not take the place of all other permits required by law. Consequently, don't ever let anyone tell you otherwise.

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keynote, continued from page 1

(DEP). He became Commissioner of DEEP when that agency came into being in July of that year. This new agency is focused on better integrating energy and environmental policies and helping Connecticut to build a sustainable and prosperous 21st century economy.

Prior to becoming Commissioner, Esty was the Hillhouse Professor of Environmental Law and Policy at Yale University. He also served as the Director of the Yale Center for Environmental Law and Policy and the Center for Business & Environment at Yale.

Commissioner Esty, who holds a BA from Harvard, an MA from Oxford, and a law degree from Yale, is the author or editor of numerous books and articles on environmental policy issues and the relationships between environment and corporate strategy.

Commissioner Esty is a native of Connecticut. His career included serving in a variety of senior positions for the US Environmental Protection Agency as well as practicing law in Washington, DC, and serving as an advisor on the 2008 Obama Presidential campaign and transition team.



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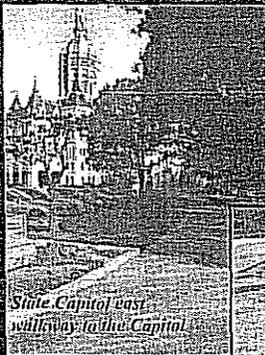
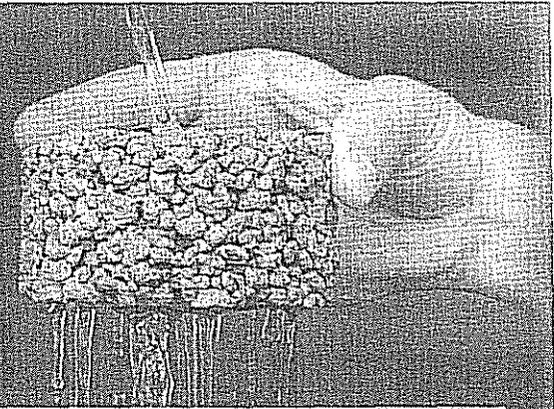
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June. A copy of this form and additional information can also be found on our website: www.caciwc.org. Would you or your company like to provide additional support to CACIWC? The website also provides a description of additional individual and business membership categories. Please consider making an additional contribution to support CACIWC education and outreach efforts!

6. We continue to hear from individuals who are interested in filling one of our current **board vacancies** following our announcement in the last two issues of *The Habitat*. We very much appreciate the response. However, several vacancies still remain. A full board strengthens our ability to represent the needs and concerns of our member towns and commissions. The CACIWC bylaws specify that any past or present member of Connecticut conservation or inland wetlands commissions or their agent is eligible to serve. Please submit your name to be considered for nomination at: board@caciwc.org Let us know if you currently do not have time to serve on the board, but wish to volunteer in support of our many administrative, education, and outreach activities.

Thank you again for your ongoing interest in CACIWC!

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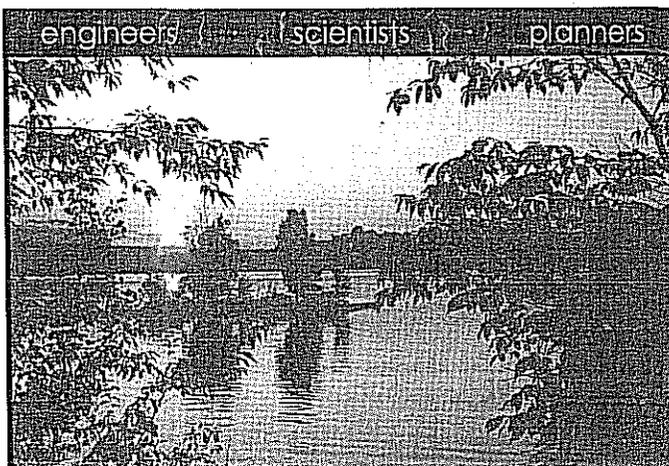
ALERT!

Report Sightings of Invasive Mile-A-Minute Vine

Mile-a-minute vine is a highly invasive annual plant from eastern Asia that can quickly cover, outcompete and replace native vegetation, damaging habitat for native plants and animals. Early detection and rapid response are essential for control.

Mile-a-minute was first found in Connecticut in Fairfield County in 1997. Since then, it has spread to 20 Connecticut towns, as far east as Stonington and as far north as Simsbury. Mile-a-minute spreads by seed and quickly grows into dense stands. Seeds are spread by wind and water.

Visit www.hort.uconn.edu/mam for additional identification tips, photographs and control information. You can also contact Logan Senack (logan.senack@uconn.edu) or Donna Ellis (860-486-6448; donna.ellis@uconn.edu) for additional information. To report a suspected mile-a-minute invasion, visit the above website or contact Donna Ellis at UConn at 860-486-6448.



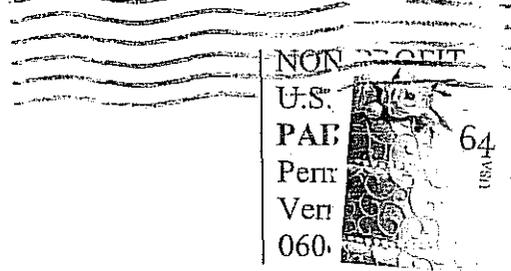
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Help Needed To Continue State Investment In Open Space

If your town has received state grant monies for an open space project within the last 10 years or so, chances are that the funding is from the CT Department of Energy and Environmental Protection's (DEEP) Open Space and Watershed Land Acquisition Program (OSWLA). Supported by state bonding and the 2005 Community Investment Act (CIA), the OSWLA program is the state's main source of funding for towns seeking to conserve land. However, due to budget constraints, the state did not offer a grant round in 2011 which has made it difficult, if not impossible, for towns to pursue open space acquisition projects.

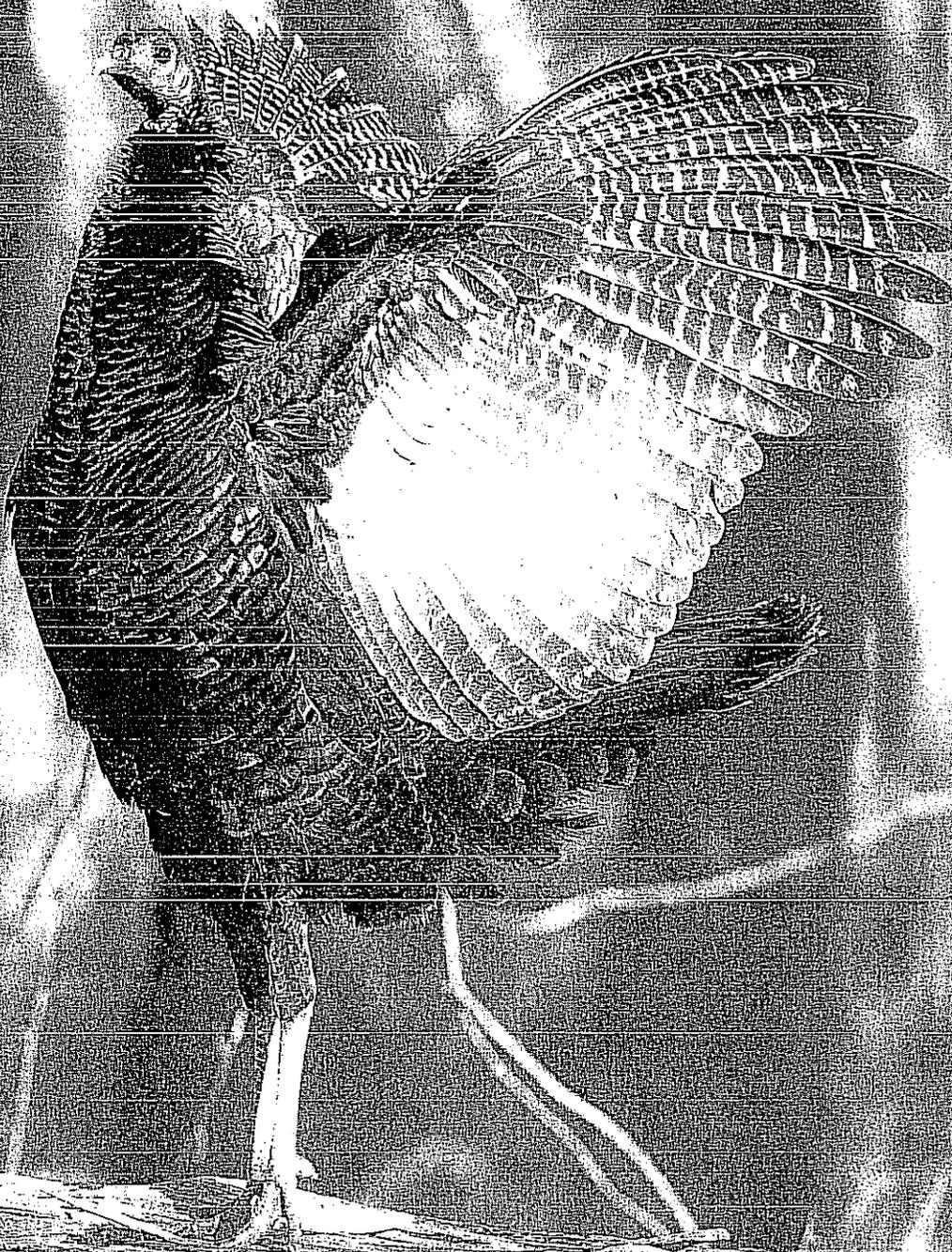
This year's state bond package included authorization to provide \$5 million in each of the next two fiscal years for open space funding, coupled with CIA funds available for the open space program. The Connecticut Land Conservation Council (CLCC) is making a concerted effort to enlist the support of municipal officials in advocating for continued state investment in open space by offering a DEEP OSWLA grant round **this year**. **If you want to help with this effort, or you know an official in your town who would be interested in talking with us, please contact Amy B. Paterson, CLCC Executive Director at (860) 685-0785 or abpaterson@ctconservation.org.**

Editor's Note: CACIWC is a founding member of the Connecticut Land Conservation Council (CLCC) and continues to support CLCC activities, including advocacy and education programs. CACIWC provides support as a member of the organization and through representation on its Steering Committee.

September/October 1991

Connecticut Wildlife

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



From the Director's Desk



Connecticut Wildlife

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No season better represents Connecticut than fall. Whether your passion is the panorama of color from a ridge top vista, the cold running waters of a local stream, or stomping about in the woods, the crisp fall air is an awe-inspiring time to go afield.

Fall treasures fill all the senses. Where better to see the splendor of nature than in the spawning colors of a male brook trout or in the whirling dervish of tens of thousands of tree swallows as they congregate in mass at sunset in the lower Connecticut River valley. For many, the sounds more than the sights of flocks of ducks and geese, quacking and honking on their southward journey, define the season.

Perhaps Henry Ford put it best when he said "Chop your own wood and it will warm you twice." There is a thrill that is hard to miss with the sound of an ax biting into a round of oak, followed by the satisfying crack as the wood splits. And, it all comes with the sense of completeness knowing that soon you'll be enjoying the warmth and rich aroma of a roaring fire.

My hope is that everyone could experience pure joy of a dog anxious to point a bird, or a young hunter side-by-side with a parent, breathless as a deer steps into sight.

Fall is a wondrous time to be outside. Don't miss it – it'll be gone before you know it.

Rick Jacobson

Director – Wildlife Division

In this issue . . .

A Cougar's Incredible Journey

Tree Stand Safety

Striped Bass: a Connecticut Comeback Story

Banding Together for Purple Martins

Year of the Turtle: Where Do Turtles Go in Winter?, Kid's

Art Contest Winners, Snapping Turtles, and Northern

Diamondback Terrapins

Bat Facts and Fables

Menagerie at the Beach

Semipalmated Sandpipers

Urban Red-tailed Hawks

A Healthy Obsession with Oak

Cover:

Connecticut hunters have the opportunity to harvest wild turkeys during the fall archery and firearms hunting seasons.

Photo courtesy of Paul J. Fusco



1/18/2010 3:20 AM

A trail camera captured this image of a cougar traveling through private land in Clark County, Wisconsin, on January 18, 2010. No DNA samples were collected at this site. However, based on other nearby sightings and DNA evidence collected at several locations, biologists agree that the cougar is possibly the same individual that eventually traveled all the way to Connecticut by June 2011.

Cougar Makes Incredible Journey from South Dakota to CT

Written by Paul Rego, DEEP Wildlife Division

The DEEP Wildlife Division has received numerous reports of cougars for decades. Many of these have been investigated and none could be confirmed by tangible, physical evidence. Identification through tracks or photographs had shown many of these sightings to be cases of mistaken identity, mainly bobcats, coyotes, and even house cats. This same scenario has been experienced by states throughout the East – sightings but no confirmation. Florida is the only eastern state with a cougar population. A small number of cougars have been documented in the eastern states, but many of these were known or suspected to be from captive sources. Earlier this year, the U.S. Fish and Wildlife Service conducted a thorough review of cougar status in the East and determined the Eastern cougar to be extinct.

After many years with no verifications of cougars, the DEEP Wildlife Division received a report of probable evidence of a large cat in Greenwich, including a blurry photograph. Within a week, 35 miles farther east in Milford, the body of a cougar was being examined where it was struck and killed on the Wilbur Cross Parkway. The vehicle-kill was the first confirmation of a cougar in the state in more than 100 years, leading to obvious questions about the animal's origin. A broad and intense investigation ensued, and, eventually, the story of an amazing behavioral feat emerged.

Where Was this Cougar From?

Prior to detailed examinations of the cougar, it seemed that the most likely explanation for this unexpected occurrence was that the cougar originated from a

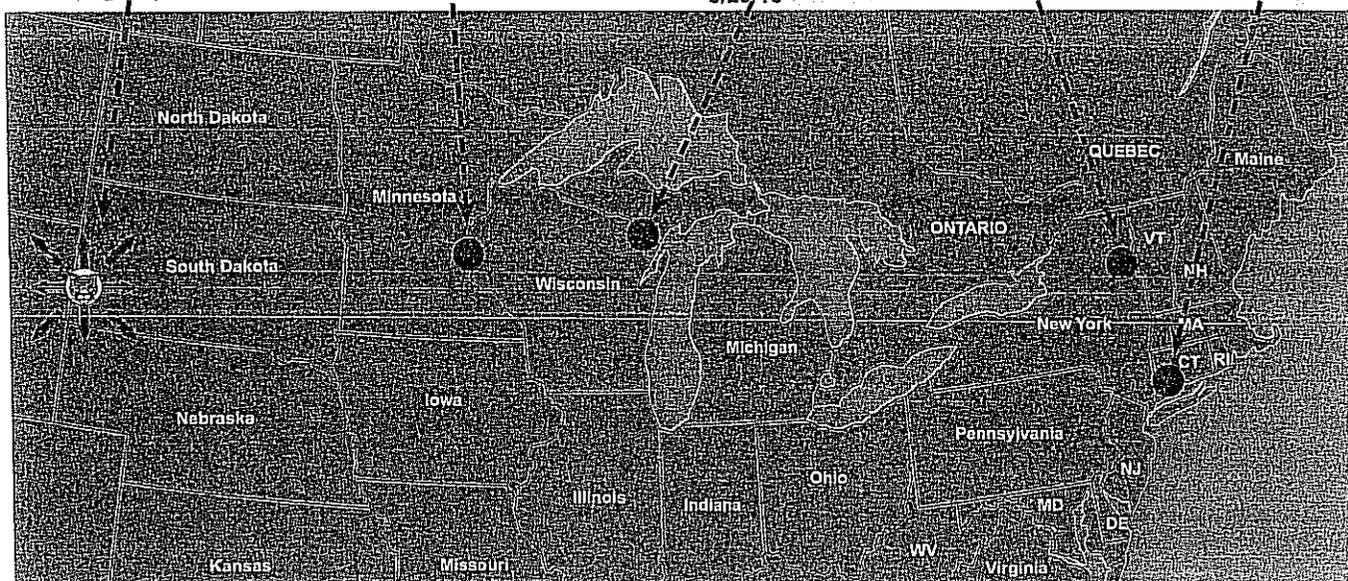
captive source. The nearest wild established populations are in Florida and the Dakotas, approximately 1,200 and 1,600 miles distant, respectively. And, although young cougars normally disperse from the area in which they are reared, they travel comparatively short distances. In addition, no cougar had been known to travel more than 1,000 miles. In Florida, young male cougars disperse an average of 40 miles and females an average of 12 miles. Research in South Dakota found that males dispersed an average of 160 miles and females an average of 30 miles. The longest documented dispersal was by a young male cougar that traveled 640 miles from South Dakota to Oklahoma.

An Extensive Investigation

The investigation began with a preliminary examination of the dead

Travels of the Connecticut Mountain Lion

Black Hills, SD Breeding Population First Confirmed Sighting 12/11/09 Photograph (most likely same individual) 5/20/10 Confirmed Sighting 12/10 Struck by vehicle June 11, 2011



1,800 Miles from Black Hills, South Dakota, Breeding Population to Connecticut

cougar. It was a young male, estimated to be two to five years old. There was no evidence of a collar and it had not been declawed or neutered. Outward injuries were consistent with it being killed on the road. Environmental Conservation Police immediately began a search for facilities that may have legally possessed cougars and possible leads for illegal possession. No sources for a released or escaped cougar were found.

Supervisory Veterinary Pathologist Tabitha Viner, DVM DACVP, from the U.S. Fish and Wildlife Service's Forensics Lab performed a detailed necropsy on the cougar, which included full body x-rays. The animal appeared to be healthy, and the stomach was empty. Porcupine quills were found under the skin. This finding suggested that the cat had spent some time in the wild (cougars commonly prey on porcupines), but it did not prove that the animal had always been wild.

Tissue samples were shipped to the U.S. Forest Service Rocky Mountain Research Station Wildlife Genetics Lab in Montana and to the Arizona Cooperative Fish and Wildlife Research Unit at the University of Arizona for genetic testing. Researchers Michael Schwartz and Kristine Pilgrim from the U.S. Forest Service lab discovered two surprising results. First, they compared the Connecticut cougar's DNA to DNA from South

American cougars and from subpopulations of cougars in North America. Many captive cougars in the pet trade have South American genetics and a positive match would have suggested captive origin. The surprising result was that the cougar's DNA matched the subpopulation in the Black Hills of South Dakota.

Researchers then took their forensic efforts further by comparing the Connecticut sample to the genetics of a number of cougar "outliers" (individuals found outside of areas known to have a cougar population). Again, a surprising result – the DNA matched a cougar that had roamed Minnesota and Wisconsin 18 months earlier! To quote the report, "*The probability that two individuals with the genetic profile of CT-PC-1 [the Milford cougar] / WI-St. Croix [the St. Croix cougar] match by random chance is 1.17×10^{-15} (i.e., greater than 1 in 854,000,000,000,000).*" Minnesota biologists first documented this cougar near the Twin Cities and collected a scat sample, which provided DNA. Within a month, the cougar was in Wisconsin where biologists snowtracked it and collected scat or hair for DNA analysis at three sites. The cougar was dubbed the St. Croix cougar because it was first documented in St. Croix County, Wisconsin.

New Questions

How did this cougar travel 1,200

miles from Wisconsin to Connecticut without being detected and why did this individual disperse so far east? Biologists believe that the cougar traveled eastward from its last confirmed location in northern Wisconsin through the Upper Peninsula of Michigan, then through lower Ontario and into southern New England. Two confirmations of cougars in May 2010, one in northeastern Wisconsin and one nearby in the Upper Peninsula, are along this route and may have been the St. Croix cougar. Detecting the cougar along the route may have been difficult because of the remoteness of the area and the low human population. Further, detection is less likely during the snow-free period – many confirmations of cougars in the Midwest have been through tracks in snow. Finally, the cougar may have been observed but, without tracks, photographs, or other tangible evidence, confirmation would have been difficult.

Subadults of many mammal species exhibit dispersal behavior. Males usually disperse farther than females, and some females stay within their mother's home range. Suggested reasons for dispersal include access to better food resources, reduced competition with other males, and increased mating opportunities. One study of cougars dispersing from the South Dakota population found that those traveling into areas with resident cougars tended to stop their dispersal, while those

traveling through areas without cougars dispersed for longer periods of time and farther distances. This seemed to be the case for two other subadult males from the Black Hills that dispersed remarkably long distances. One, fitted with a radio collar in the Black Hills in 2003, traveled southeast through Nebraska and Kansas and into Oklahoma where it was killed by a train in 2004. That 640-mile trek was the longest documented at the time. Another cougar, which had DNA that matched the Black Hills population, traveled east through southern Wisconsin and eventually into the Chicago area where it was dispatched by police in 2008. If it began its journey in the Black Hills, it too would have traveled over 600 miles. It appears that the St. Croix cougar kept traveling because it did not encounter habitat occupied with other cougars.

Cougar populations have increased in many western states. Although there will be dispersal from these populations, most will be by young males traveling modest distances. Movements by young females will be even shorter, limiting the likelihood for these populations to spread. It is unlikely that New England will soon witness another long distance disperser. The chance that female cougars will disperse this far and begin a reproducing population is much less probable.

Update: Milford Cougar Was Documented in New York

In December 2010, New York Environmental Conservation Officers investigated a cougar sighting near Lake George. They followed and photographed tracks in the snow that were believed to be from a cougar. They also collected

hair samples from a bed site and submitted some to a genetics lab for testing. New York biologists were awaiting species confirmation from the lab when they heard the news of the St. Croix cougar killed in Connecticut. Some of the collected hairs had been retained, so biologists submitted them to the Forest Service lab in Montana for comparison to samples from the St. Croix cougar. The result was a match. This confirmation of the cougar traveling through a fourth state adds another piece to the puzzle of the St. Croix cougar's amazing journey.

To read more about the travels of the St. Croix cougar through Wisconsin, visit the Wisconsin Department of Natural Resources' Cougar Sightings Web page at <http://dnr.wi.gov/org/land/er/mammals/cougar/sightings.htm>.

Outdoor Safety: Tree Stands

Because most deer hunters know the advantages of being perched 15 to 20 feet above the forest floor while hunting, tree stands are an important part of the deer hunter's field equipment. A tree stand offers the hunter a larger field of view, places his scent higher above the immediate area below the tree, and is more open to wind currents, which disperse the human scent. In addition, a hunter positioned high in a tree is generally above an animal's field of vision, reducing his chance of being seen. Because a person in a tree stand is stationary, the chances of crossing into another's hunting area and possibly interfering with someone else's hunt are reduced.

These advantages do not come without risk, however. Tree stands can be dangerous if they are used incorrectly or carelessly. Nationally, one in three hunting injuries involves a tree stand. Falls from tree stands can be caused by a variety of factors, including a weakness in the stand's structure and incorrect installation. Hunters also may fall asleep while on their stands. Tree stands can be a factor in other hunting accidents, including injury from accidental firing of a loaded firearm while the hunter is climbing to the stand.

The best way to use a tree stand safely is to become familiar with its function and actually practice with it before hauling it out on the first day of hunting season. Try to use updated equipment. When used properly, newer tree stand equipment is solid, safe, and secure. Other safety precautions include:

- Always read the manufacturer's instructions and follow them strictly. Inspect portable stands for loose nuts and bolts each time they are used. Check permanent tree stands every year before using them, and replace any worn or weak lumber.
- Do not modify the equipment.
- Make sure the equipment is in good shape and that the suspension straps and attachments are not frayed or worn.
- Above all, always wear a safety belt device, preferably a full-body harness. This improved equipment may not come with your stand, but purchasing it may be the extra measure that could save you from serious injury or death.
- Be extremely wary any time there is wet weather, especially sleet or

snow. Wear boots with non-skid soles.

- Choose only healthy, living trees. Rough-barked trees, such as oak, are best. Do not use a tree that is rotten or has dead limbs.
- Never carry equipment while climbing. Use a haul line to raise or lower your gear. Make sure guns are unloaded and broadheads are covered prior to raising or lowering firearms or bows with a haul line.
- Never put all your weight on a single branch. Keep at least one hand and one foot on a secure place when reaching for the next hold.
- Climb higher than the stand and step down onto it. Climbing up onto the stand can dislodge it.
- Tell a dependable person where you're hunting and when you plan on returning. Map your whereabouts and leave a note at camp, at home, or in your car so that you can be found.
- Don't fall asleep. This is a common cause of accidents. If you get drowsy, move your arms rapidly until you feel alert.



Tree stand safety is one of several safety topics that are covered in Connecticut's Conservation Education/Firearms Safety (CE/FS) classes. Sign up for classes on the DEEP Web site (www.ct.gov/dep/hunting) or by calling the Wildlife Division's Sessions Woods (860-675-8130) or Franklin (860-642-7239) offices.

Striped Bass: a Connecticut Comeback Story

Written by Justin Davis, DEEP Inland Fisheries Division

On a cool May morning, an angler pilots his skiff through the pre-dawn mist hanging over the mouth of the Connecticut River. Reaching his destination, he cuts the outboard and lets the boat slowly drift to a stop, taking in the beautiful scenery and the sounds of the salt marsh waking to a new day. "It's good to be back," he thinks to himself. Moments later, his line traces a thin silver arc against the brown backdrop of tall reeds lining the shore. Cast, retrieve. Cast, retrieve. The angler settles into the familiar cadence, laser-focused on the lure's zigzag path across the surface, eagerly anticipating that electric moment of connection. Cast, retrieve. Cast, retrieve. And then it happens. In the blink of an eye, a crater opens and swallows his lure, closely followed by the SLAP of a large tail spanking the surface and spraying water skywards. Adrenaline surging, the angler instinctively snaps the rod up and sets the hook. The drag sings as line melts off the reel, the unseen adversary on the other end sprinting for deeper water, trailing dinner plate sized boils in its wake. A few tense minutes later, it's all over. The angler slides a landing net underneath his spent opponent and admires the contrast of dark horizontal stripes running down bright silvery-white flanks, the fish's large scales reflecting the rays of the newly-risen sun. Feeling like he's just run into an old friend, the angler smiles and dislodges the lure from the corner of the fish's mouth. "Spring is here," he thinks, as the released fish glides back into the murky depths.

Does this scene sound familiar to you? If so, you're probably one of the thousands of Connecticut anglers who take to our coastal waters every year to pursue striped bass (*Morone saxatilis*), a



J. DAVIS, DEEP INLAND FISHERIES

Resurgent populations of striped bass are giving Connecticut anglers something to smile about.

marine finfish native to the Atlantic seaboard of the United States and Canada. If it doesn't sound familiar, then you don't know what you are missing. It's no surprise that striped bass attract so much attention. They reach lengths in excess of five feet and weights over 100 pounds, are powerful swimmers, and are found in a variety of habitats (even the freshwater portion of coastal rivers). Striped bass also will eat just about anything they can fit in their mouths. Other fish (both large and small), crabs, lobsters, squid, even worms and insect larvae – nothing is safe from this supremely-capable predator. Need proof? A recent scientific study found over 70 different prey species in striped bass stomachs off coastal Massachusetts! Large, capable, widespread, and voracious, the "striper" is the true king of the food web in Connecticut coastal ecosystems.

Historical Significance

Stripers are not only major players in their world; they also have played an outsized role in the history of coastal communities in our region. For example, did you know that the first public school built

in the New World was partially funded by taxes on the sale of striped bass? Or that striped bass were the impetus for America's first conservation law, passed by the Massachusetts Bay Colony in 1639 to prevent the use of striped bass for fertilizer? These fish have provided livelihoods and recreation for New Englanders for centuries. The story of striped bass is intertwined with our own – as Dick Russell suggested in his book "Striper Wars," the striped bass is "the aquatic equivalent of the American bald eagle."

Back from the Brink

The most recent chapter in the shared history of striped bass and coastal communities is quite possibly the biggest fisheries management success story of the twentieth century. Coastal striped bass stocks were plentiful throughout the 1960s and early 1970s. For instance, U.S. commercial landings of striped bass along the Atlantic Coast reached a historic peak of 14 million pounds in 1973. But by the 1980s, it was clear that striped bass were in trouble. Beset by a host of problems, including over-fishing, pollution, and loss of spawning habitat,

striped bass stocks began an alarming decline. By 1983, commercial landings had bottomed out at 1.6 million pounds, a 90% decline in just 10 years. It was clear that striped bass were in crisis and that without a concerted effort the economic and recreational benefits provided by this species could be lost forever.

A diverse coalition of recreational anglers, scientists, concerned citizens, and lawmakers rallied to the cause, pressing for more strict regulation of striped bass fisheries and clean-up of important spawning areas. Despite facing pitched opposition from some quarters, this coalition achieved unprecedented results. For instance, with the passage of the Atlantic Striped Bass Conservation Act of 1984, the U.S. Congress mandated, for the first time, that states implement striped bass conservation measures decided upon by the Atlantic States Marine Fisheries Commission (ASMFC). Many states also independently declared complete prohibitions on possession or sale of striped bass – a move previously unthinkable for such a prized species. And, it worked. The number of female striped bass using important spawning grounds in Chesapeake Bay doubled between 1985 and 1988, and coastwide catches by recreational anglers increased more than 400% between 1985 and 1989. By 1995, ASMFC declared the Chesapeake Bay striped bass stock (largest of the Atlantic coastal stocks) fully recovered. In 2004, coastal striped bass stocks reached the highest levels of abundance ever recorded. The recovery prompted noted conservationist Carl Safina to write “the resurgence of striped bass... is probably the best example in the world of a species that was allowed to recoup through tough management and an intelligent rebuilding plan.”

Give Stripper Fishing a Try

Recreational anglers in Connecticut now enjoy fantastic fishing, thanks to this historic recovery (commercial harvest of

striped bass was outlawed in Connecticut in 1959). Most striped bass migrate into our waters during spring and depart in fall; however, small numbers of fish overwinter in deeper areas of coastal rivers. This truly year-round fishery is accessible to both shore and boat anglers, and there is no shortage of ways to hook a hard-fighting “linesider.” If you are interested in getting in on the action and would like more information on potential locations and tactics, stop in at your local bait and tackle shore for tips or call a DEEP Fisheries Division office for guidance.

Be Aware of the Regulations

If you are thinking of bringing a striped bass home for the table (an excellent idea by the way – they are delicious), be aware of current regulations. The Connecticut striped bass fishery is managed under the auspices of the ASMFC, a multi-state Commission that includes representatives from Connecticut. For years, Connecticut anglers have been allowed to harvest two fish per day greater than or equal to 28 inches in length. However, DEEP recently instituted an experimental “bonus harvest” program for 2011 that allows anglers to harvest two fish per day between 22-28 inches long from the Connecticut River during May-June (anglers must obtain special vouchers to participate; call a DEEP Fisheries office for more information).

Recent studies by University of Connecticut (UConn) researchers found that over 80% of the striped bass present in the Connecticut River during spring were less than 28 inches long, and a 2008-2009 DEEP angler survey found that less than 10% of fish landed by Connecticut River anglers were over 28 inches long. Many anglers expressed a desire to harvest striped bass but were frustrated that catching a legal-sized fish was so difficult. The bonus harvest program was therefore instituted to provide an opportunity for Connecticut River anglers

to harvest a relatively small number of striped bass (4,000 annually) from the “stockpile” of sub-legal fish available. This experimental management measure will be evaluated after the close of the bonus harvest season, and may be re-instituted in future years.

Challenges Remain

In closing, it should be noted that although the striped bass recovery is a fantastic success story, it also has created some new challenges. As you can imagine, the rapid resurgence of a top-level predator has placed substantial (and perhaps unsustainable) demand on prey resources. Newly abundant striped bass have been implicated in the decline of a number of other species, including winter flounder, American lobster, American shad, alewife, and blueback herring. For instance, UConn researchers estimate that striped bass currently consume over 400,000 blueback herring in the Connecticut River each spring – a substantial predatory loss. The contribution of striped bass predation to declines of other species remains a hot topic in scientific circles. Regardless, this situation illustrates the need for, and the difficulties inherent in formulating, ecosystem-based management of marine resources. Robust striped bass populations may make some folks happy (think about the guy in the opening paragraph) but cause problems for others. How do we balance the needs of various stakeholders? And, how do we achieve that balance while maintaining healthy ecosystems? These are some of the most pressing questions for natural resource managers in the 21st century.

But, enough of that. If you’ve never fished for striped bass but are intrigued, I encourage you to go for it. What better way to get outside, spend some time with friends and family, and enjoy the beautiful Connecticut coastline. And, if you’re already a confirmed “striper nut” like I am, well then, I’ll see you out there!

Discover CARE!

The DEEP's Connecticut Aquatic Resources Education (CARE) program introduces people to the wonders of water, fish, and fishing. Expert volunteer instructors pass along information and expertise they've gained over the years as avid anglers. DVDs, demonstrations, and activities make learning fun for adults and kids alike. Courses include discussions on where to fish, what bait to use, and safety around water. Information on ecology and the environment also make it easier for you to find fish in the habitats they prefer. Many courses include an opportunity to practice casting (equipment provided) and will teach you to identify, clean, cook, or release your catch. Some courses are comprehensive and meet several times. Others are short and may cover specific topics, like ice fishing. Most classes are designed for families and kids age nine and up. Summer fishing classes are offered to kids in day camps, and CARE lessons are even taught in many school classrooms. Instruction and materials are offered free-of-charge.

Certified CARE instructors offer time and expertise as a service to communities where they live. Over 2,000 of them have donated the work of 45 full-time employees! CARE instructors have taught over 150,000 people, and continue to lead courses and events for thousands of families each year. To learn more about CARE or to see a list of available classes, go to www.ct.gov/dep/fishing.

Banding Together for Purple Martins

Written by Geoffrey Krukar, DEEP Wildlife Division



Geoff Krukar (left), of the DEEP Wildlife Division, records data during the banding process. DEEP staff and volunteers carefully handle each juvenile purple martin while affixing color bands to their legs.

PHOTO BY: P. J. FUSCO

The purple martin, the largest member of the swallow family in North America, has a range that stretches from the east coast of the United States and the Maritime Provinces of Canada, west to the Rocky Mountains, with isolated pockets in the western United States. Overall, the purple martin population is considered to be stable. However, based on Breeding Bird Survey data, purple martins have been showing range-wide declines in eastern North America and have been declining over most of their range in New England for the last 20 years. Early accounts from the 1920s suggested that purple martins were once widespread and abundant in New England. In Connecticut, the purple martin has declined to the point where it is listed as a threatened species.

The recovery of this species in Connecticut and throughout New England is potentially straightforward because martins in this region rely exclusively on human provided nest structures. While adult martins show great site fidelity, returning to the same nesting location

year after year, sub-adult martins (or returning juveniles) are much more likely to move to new locations. In theory, if housing is provided, sub-adult martins should find it, use it, and increase the population. However, this is not the case. Many housing locations in Connecticut, including some adjacent to active colonies, are available yet remain unoccupied. The reasons for this lack of occupancy and use are not clear. The criteria these birds use for selecting nesting sites in Connecticut are not understood. A lack of knowledge about dispersal patterns of young birds and the optimal conditions for establishing new colonies threatens to hamper recovery efforts. Where active colonies do exist, martins are often slow to colonize new locations.

To close this knowledge gap, a color banding project was initiated in early July at six known martin colonies. Four coastal colonies in Clinton, Westport, and Madison (2 sites) and two inland colonies (both in Kent) were selected to see if coastal and inland colonies exhibit similar or different dispersion patterns. From

those six sites, a total of 540 juvenile purple martins were fitted with both a standard silver United States Geological Survey (USGS) band and a color band. Each colony was assigned a different color (red, blue, green, purple, orange, or yellow) to facilitate the identification of the natal colony during future sightings of these birds. Additionally, each of the color bands has a unique alphanumeric code (CT###) so that individual birds can be identified. Other data collected by DEEP staff and volunteers included the weight and approximate age of each bird to assess its overall health.

The project will be repeated next year at the same locations with the same band colors to increase the number of banded birds, resulting in a greater likelihood of future sightings. The success of this study will be directly dependent upon the number of reported sightings of banded martins. If you see a color-banded purple martin in Connecticut, you are encour-

aged to report the sighting to the DEEP Wildlife Division by E-mail (geoffrey.krukar@ct.gov) or phone (860-675-8130). The location of the bird, date, color of the band, and alphanumeric code (if visible) are all important pieces of information.

Early reports from this past summer indicate that the juvenile martins may actually travel farther in search of new sites than was originally thought. A juvenile bird banded in Westport was observed at another colony in Clinton (a remarkable 42 miles away) less than two weeks after learning to fly. A martin banded in Kent was found 35 miles away with a colony in Cold Spring, New York. It will be interesting to see if these birds return to their natal colonies in the spring or if they decide to make new homes somewhere else in our state.



This project is supported by the Connecticut Endangered Species/Wildlife Income Tax Check-off Fund.

Where Do Turtles Go in Winter?

Written by Julie Victoria, DEEP Wildlife Division biologist, retired

As the leaves turn colors and fall off the trees and the temperatures start to get colder, most of the migrant birds have left the area for their wintering grounds and many mammals have fattened up and found dens or other shelters. But, what do cold-blooded animals like turtles do to prepare for the difficult winter ahead? Cold-blooded animals rely on their surrounding environment to keep warm. When cold weather hits, they go into a hibernation type state called "brumation" to help them survive the winter into spring.

Brumation is triggered by cold weather and a decrease in the amount of daylight during winter. Turtles in Connecticut generally begin brumation in late fall. During brumation, turtles become less active, their metabolism slows down so they don't need to eat as often, and their body temperature drops. However, turtles will often "wake up" to drink water. Turtles do not breathe during brumation, instead relying on oxygen stored in blood vessels in the throat cavity and anal sacs. To cope with the cold, turtles that live in aquatic environments move to the bottom of the pond or creek. It is advantageous if they can go deeper than the frost line, where winter temperatures tend to stabilize above freezing. Some turtles, like painted turtles, are tolerant of freezing to a certain degree. These turtles' cryogenic properties, or cryoprotectants, are even being studied to determine if they would be helpful in preserving human organs for future transplants.

When spring arrives with its warmer temperatures, most turtles emerge from brumation, becoming more active and seeking a good spot to bask in the sun.

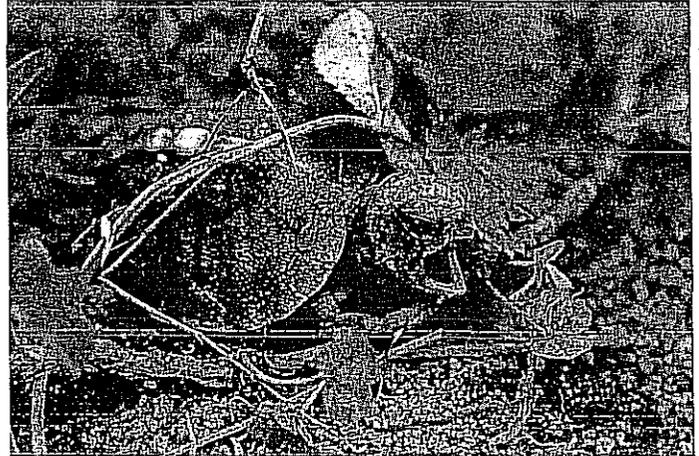
Hatchlings

Young aquatic and land turtles that hatch from eggs buried in the ground over spring can either dig out of the hole, or "nest," in the fall and brumate as the adults do, or they can remain in the nest, possibly digging further into the soil. This demonstrates why female turtles must choose an optimum site to place their nests – the female must be able to detect features of the area that make it suitable for the eggs. Therefore, homeowners who witness a turtle nesting in their yard or garden should allow the turtle to dig its nest where it chooses, leaving the turtle

and eggs alone.

Dessication and freezing are a problem for hatchlings that overwinter in the nest. Although hatchlings are able to absorb moisture from the soil around them and may even be able to tolerate freezing temperatures, some will not survive.

Whether turtle hatchlings emerge from the nest in fall or spring after brumation, the DEEP Wildlife Division reminds residents to not collect hatchlings and bring them home as pets.



P. J. FUSCO

As tempting as it may be to collect a hatchling turtle as a pet, it is best for the turtle and also your own health to leave the turtle where you found it.

Leaving turtles alone and just observing them from a distance is best for the turtle and also your own health, due to concerns about *Salmonella* (see below).

Do Not Collect Turtle Hatchlings!

Turtle hatchlings are commonly found in fall or spring when they emerge from the nest. The DEEP Wildlife Division reminds residents that native turtles should never be collected from the wild and kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed, in any developmental stage, reduces the ability of the population to maintain itself. Even if you believe you are removing a turtle from a dangerous situation or saving it by taking it to a nature center – STOP – and remember, from the overall population's perspective, any turtle removed from the wild is a dead turtle. Residents should also be reminded that it is illegal to take bog turtles, diamondback terrapins, wood turtles, and Eastern box turtles out of the wild in Connecticut. Current regulations restricting the take of these four turtles were established in an effort to stop the decline in their populations (www.ct.gov/deep/lib/deep/regulations/26/26-66-13through14.pdf). The bog turtle, Eastern box turtle, and wood turtle are also protected by Connecticut's Endangered Species Act.

Another concern involved with collecting turtles, particularly hatchlings, is *Salmonella*, which can cause serious illness in people. Although *Salmonella* infections are most commonly caused by contaminated food, these germs can also be caught by handling animals, including reptiles or amphibians, that may be carrying the germ. *Salmonella* infections also can result from having contact with reptile or amphibian environments, including the water from containers or aquariums where they live.

Salmonella can make people sick with diarrhea, vomiting, fever, and/or abdominal cramps. Sometimes, people can become so sick from a *Salmonella* infection that they have to go to the hospital, and could possibly die if not treated promptly with antibiotics. Young children, elderly persons, and those with weakened immune systems are more likely to develop severe illness from the infection.

Since 1975, it has been illegal in the United States to sell or distribute turtles with shells that measure less than four inches in length. This size was chosen because small children are more likely to treat smaller turtles as toys and put them in their mouths. This ban prohibiting the sale of small turtles likely remains the most effective public health action to prevent turtle-associated salmonellosis. Despite this ban, such turtles are still sold over the Internet and are found in some pet stores, flea markets, and with street vendors. In addition, children continue to catch wild turtles, other reptiles, and amphibians and bring them home to keep as pets.

To learn more about *Salmonella* in reptiles, go to www.cdc.gov/Features/SalmonellaFrogTurtle.

Denizens of Darkness...Facts and Fables About Bats

Written by Jenny Dickson, DEEP Wildlife Division

Halloween. It conjures up images of bare, silhouetted trees in misty dark forests, where dark shadows emerge on silent wings and begin to take form. Bats. These misunderstood creatures have long been a staple of ghost stories, Halloween decorations, and Hollywood fright films. While far from reality, the link between bats and Halloween does provide an excellent opportunity to shed some light on these unique mammals.

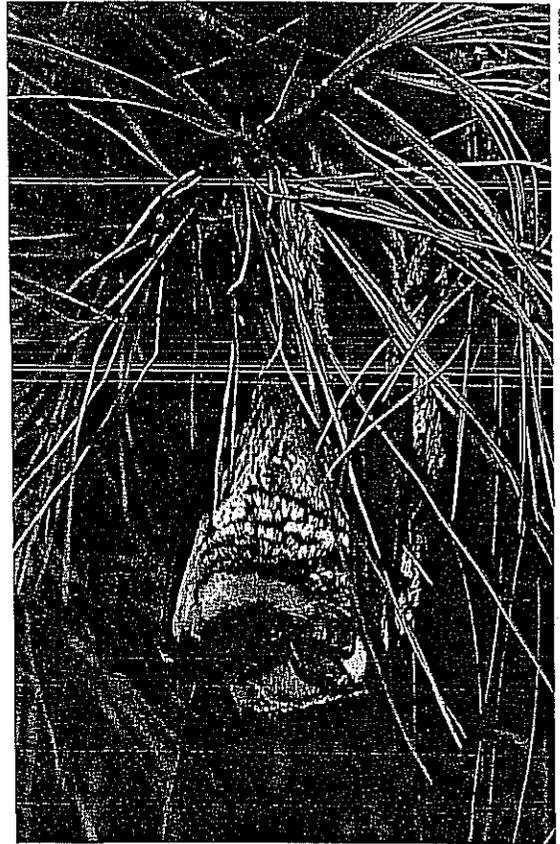
Bats are one of the most misunderstood and under appreciated wildlife species. With all the images of bats we see at Halloween, this is a good time to put fear aside and separate fact from fable with regard to these beneficial animals. Come Halloween, most of Connecticut's bats have settled into their winter homes, or hibernaculas, where they will sleep until spring.

As voracious insect-eaters, bats provide a great natural insect control service from farms to backyards. Little brown bats can consume 1,200 mosquito-sized insects in an hour. Over an entire night, that's a lot of free insect control. Bats in tropical regions pollinate flowers and disperse seeds for many commercially available plants, like almonds, avocados, bananas, figs, and allspice. Bats also have contributed to advances in navigation, vaccine and antibiotic production, birth control and fertility studies, and the development of alternative fuels like gasohol.

The tales surrounding bats, their many alter egos, and far-fetched feats have caused them to endure a bad reputation for centuries. Here are some age-old fables that can be dispelled with a few interesting facts:

- Bats are not flying mice. They are the only mammal capable of true flight and are more closely related to primates (and people) than to rodents.
- Bats do not get caught in people's hair. They are adept fliers and rely on sensitive sonar (echolocation) to navigate night skies. Bats that swoop near people are after insects like moths and mosquitoes.
- Bats are not blind. They have good eyesight, but rely on echolocation to master night flight.
- Bats are not filthy or covered with parasites. Clean wings are essential for executing intricate flight patterns, so bats spend great amounts of time grooming themselves. Parasites that feed on bats are highly specialized and do not transmit infections to humans.
- Three species of bats are known as vampire bats. They are found only in Latin America and are a parasite of birds and cattle.
- Worldwide there are almost 1,000 different kinds of bats. Connecticut has only eight native species; four of these are classified as state special concern species and one, the Indiana bat, is classified as a state and federally endangered species.

By learning more about these unique creatures, people can come to appreciate bats based on facts rather than fables. Bat conservation is critical for helping these valuable animals. Conservation begins with understanding and the Wildlife Division can help. Information sheets on bats and building bat houses are available on the wildlife section of the DEEP Web site (www.ct.gov/deep/wildlife). There's even a special "Kid's Page" devoted to bats, with fun facts and a bat kids can color.



P. J. FUSCO

The brightly-colored hoary bat is a Connecticut species of special concern. At about six inches long, it is the state's biggest bat.



Bad News from the Bat Cave

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

The DEEP, other state wildlife agencies in the Northeast, the U.S. Fish and Wildlife Service, and many other academic and conservation partners are working in concert to find solutions and stop this unparalleled mortality. Several bat species that call Connecticut home have been affected by WNS. Known as "cave bats," they include the little brown, northern long-eared, tri-colored (pipistrelle), big brown, and Indiana bats (a federally endangered species.) Since 2007, the DEEP has been an active participant in WNS response. Biologists continue to monitor hibernating bats for signs of WNS and document mortality. Over the past few years, biologists have also begun closely tracking summer maternity colonies to see if WNS is having a negative impact on bat survival and the ability to give birth and raise young.

White-nose syndrome continues to spread at an alarming pace through North America, increasing the challenges wildlife managers face in understanding the threats posed to bat populations and in developing an effective management strategy. Keep updated on WNS by visiting the DEEP (www.ct.gov/deep/wildlife) and U.S. Fish and Wildlife Service Web sites (www.fws.gov/WhiteNoseSyndrome).

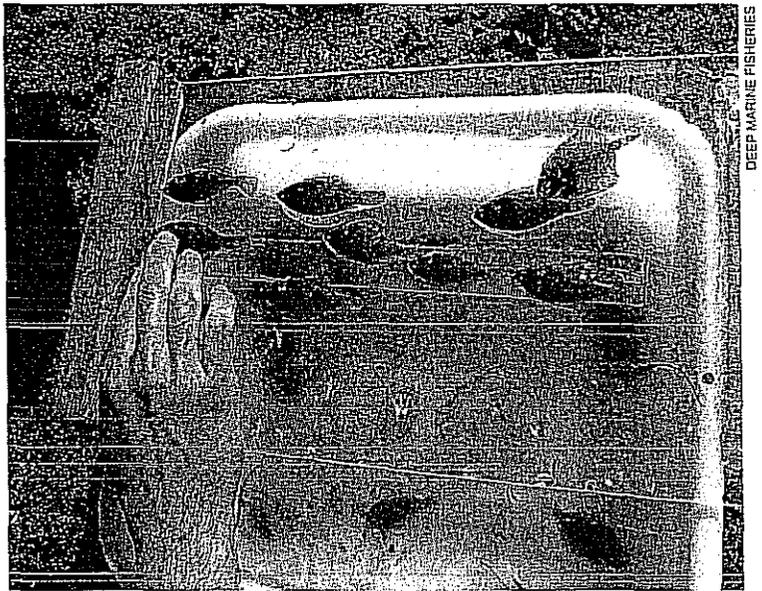
The Menagerie at the Beach

Written by Penny Howell, DEEP Marine Fisheries Division

When we go to the beach on a hot afternoon, at first glance it looks like the water we splash into has nothing in it but some seaweed and a few shells. But, if you stand still and look carefully, you will see all the other animals that share the shallow water with us and swim away as soon as they are disturbed. Connecticut's shallow water beach fronts provide a warm and (usually) quiet nursery area for newly-hatched fish, called young-of-year, and small forage species that provide ready meals for larger fish, birds, and marine mammals.

To track the abundance of these forage and young-of-year fish, DEEP Marine Fisheries Division biologists have surveyed eight beach areas from Groton to Greenwich every September since 1988. Six samples are taken with a 25-foot seine net at each of the eight beaches using standardized methodology to ensure a consistent catch rate. A pass of the net through waist-deep water at low tide for a 100-foot distance usually yields about 100 small fish. A total of 57 different species of fish have been captured, counted, and released over the 23 years of the survey. This list includes common species and tropical exotics, including Atlantic needlefish, bluespotted coronetfish, banded rudderfish, a flying gurnard, and seahorses. Along with this great diversity, the average number of fish per sample has increased significantly since the early years of the survey.

Fish species captured as young-of-year in the beach zone include many sought after by sport and commercial fishers as adults — winter flounder, tautog (blackfish), scup (porgy), striped bass, summer flounder, black seabass, and snapper bluefish. In the early years of the survey, winter flounder was the most common young-of-year fish in the seine catch. However, the abundance of this species has declined significantly over the last decade. At the same time, young-of-year tautog, scup, bluefish, and other recreationally important species have shown up in the catch in increasing numbers. This increased production of young is a good indication of effective management practices

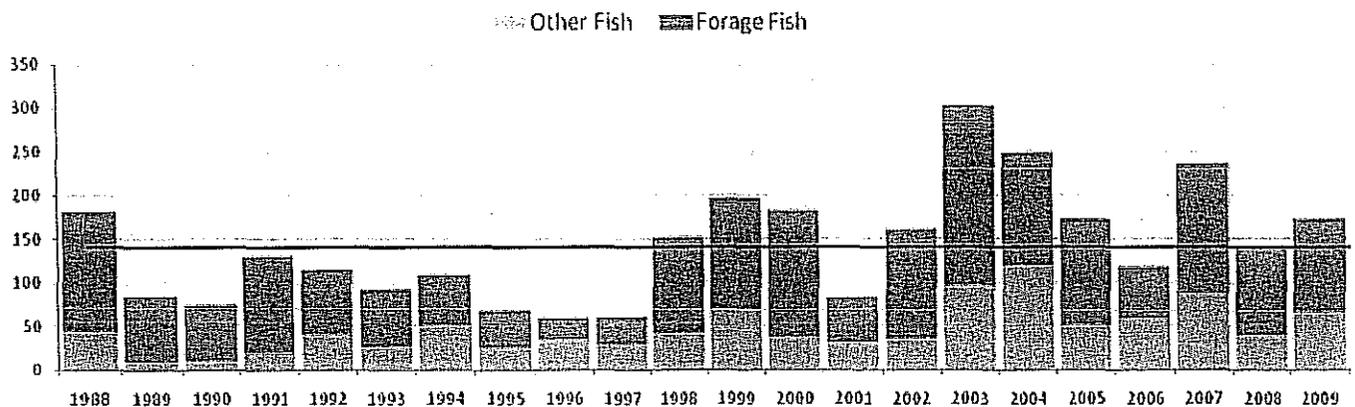


Young-of-year winter flounder and a single windowpane flounder are measured after being sorted from the seine net catch. Both species have declined in abundance since the survey began.

and hopefully a sign of increased fishing opportunities in future years.

The seine survey catch data are also used to generate a 'forage index' comprised of four common food-fish: Atlantic silver-sides, striped killifish and their more freshwater-tolerant cousin the mummichog, and sheepshead minnow. Other food favorites captured in the seine survey include anchovies, menhaden (bunker), and white mullet. The forage index also has increased since the early years of the survey, indicating that the larger animals living in Long Island Sound have plenty to eat. If the Sound's 'forage base' remains strong, it will not only continue to maintain local populations but may also attract many more migratory species to our menagerie at the beach.

Intertidal Fish Abundance at Eight Connecticut Beaches, 1988-2010



The overall index of all fish has been above its median value (red line) of 140 fish/sample in 10 of the last 13 years. The forage index, shown in dark green, also has increased since 1997.

Semipalmated Sandpiper - What Will the Future Hold?

Article and photography by Paul Fusco

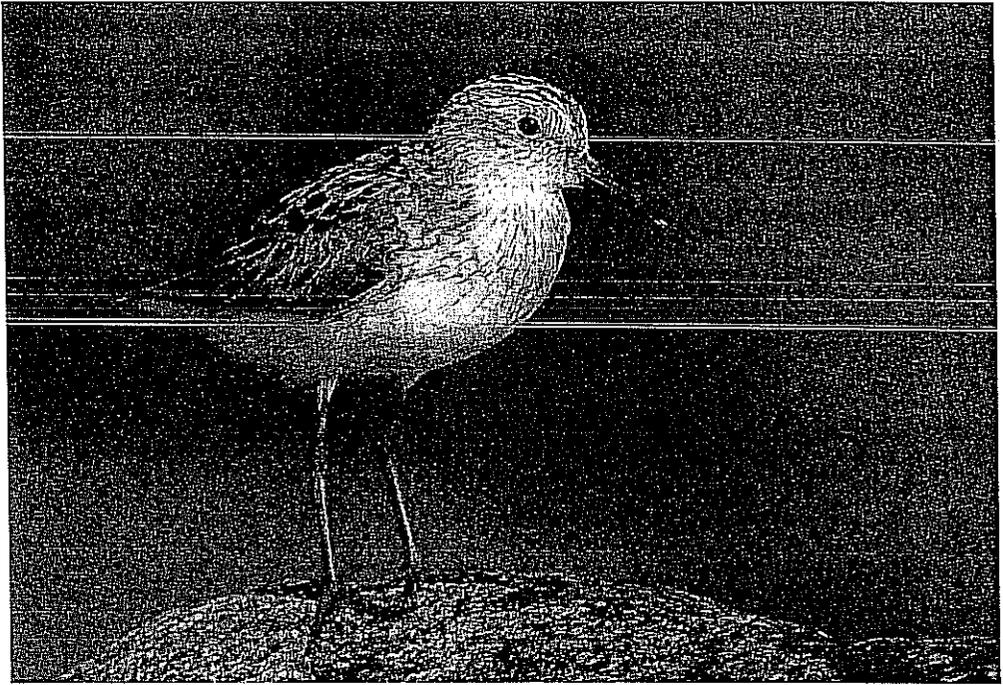
Semipalmated sandpipers are long distance migrants. Their winter range includes coastal habitat from the Caribbean islands south to southern Brazil. From there, they migrate to breeding areas that may be over 8,000 miles to the north, in the subarctic and arctic tundra regions of northern Alaska and Canada, and east to Labrador. Such a migration is extremely demanding for a small bird – especially considering that it must deal with bad weather, strong winds, predators, and human impacts along the way. This trip must be made twice a year. While these sandpipers are one of the most abundant birds in North America, they are not doing well.

Named for the partial webbing between their toes, semipalmated sandpipers can be found in Connecticut during certain times of the year as flocks migrate through the state. On their way north in spring, they are generally present in small numbers from late May to the middle of June. Amazingly, about a month or so later on their return south after breeding, larger flocks start arriving at shoreline stopover habitats. They will move through in waves with adult numbers peaking in late July and early August. Juveniles, with their crisp new plumage, start arriving a couple of weeks after the first adults show up.

Description

Semipalmated sandpipers are small, plump-bodied, wading shorebirds. They are about the size of a sparrow, with long pointed wings and a short tail. Their plumage is basically gray/brown above and white below. In flight, they show a topside white wing stripe. Their legs are dark olive, and the bill is black.

The bill varies in length, with the female's averaging a little longer than the male's. The shape and length of the bill helps in identification when the bird is compared to other similar-looking small sandpipers. In the semipalmated sandpiper, the bill is short and stout, and has a blunt tip. In comparison, the closely related western sandpiper, occasionally seen in Connecticut with semipalmateds, has a longer, tapered bill with a drooped



Migratory stopover areas are critical habitats for species, like the semipalmated sandpiper, that migrate many thousands of miles every year. The birds require places along their route for resting and feeding in order to complete their journey in both spring and fall.

and more finely pointed tip.

Migrants will use a variety of shallow water habitat, both freshwater and saltwater, including intertidal zones, marshes, beaches, and mudflats. On the shoreline, where the big flocks gather, tidal mudflats are primarily used to forage for small crustaceans, worms, and insects.

Behavior

Courtship flight displays are performed by males over breeding territories in which the bird hovers, flutters, and glides while vocalizing. The display song is a variably pitched continuous trill. Nests are built on the ground where the female typically lays four eggs. Young are able to fly after about two-and-a-half weeks.

Their call, often given in flight, is a rough "churk," or a short, high-pitched "chit." Other vocalizations, including a rapid chattering "toy-toy-toy," are given when birds are feeding, often when aggressively claiming a feeding territory from others.

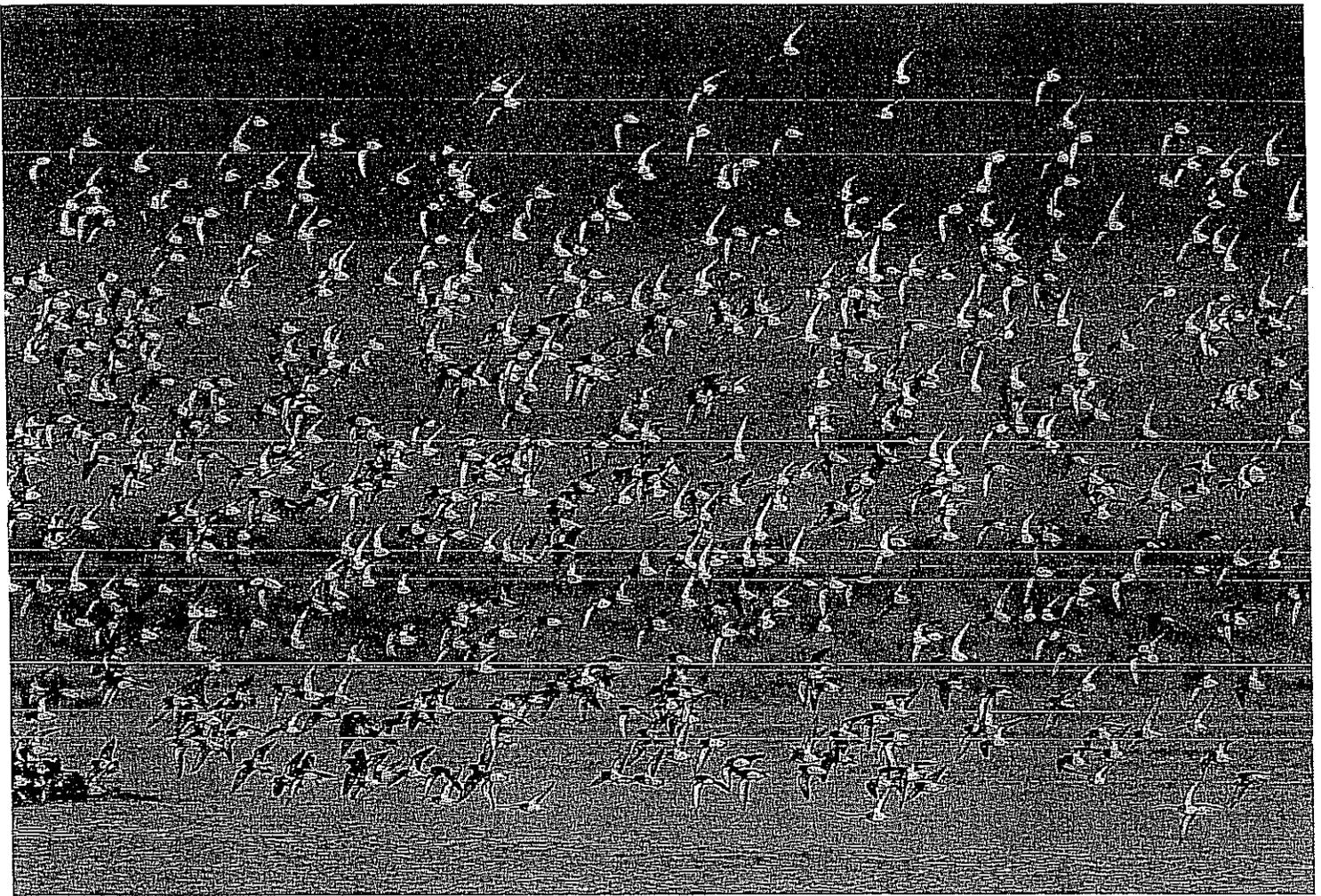
Large flocks that number several thousand may be seen at some Connecticut stopover sites. When these large flocks take flight, it is a breathtaking sight to see. They take to the air in a sudden

burst of energy, forming a tight flock as they turn with the wind in perfect synchrony. Behaving as one, the flock flies low above the water, then rockets upward, flashing dark then white, as the birds twist and change direction. How can they fly so fast and in such unison?

The cohesion of the flock is thought to be based on a number of factors, including separation between flockmates, maintaining flying direction, and steering to keep position. All of these factors influence individual birds and combine with lightning fast reaction times, resulting in moment by moment flight adjustments and maneuvers to keep the flock in synchrony. The natural instinct of the birds is to form a tight group as a defense against predators, such as a falcon. While individuals within the flock make in-flight decisions regarding direction and maneuvers, the rest of the birds must quickly average their position to maintain themselves within the flock's integrity. Any individual that is caught off guard may be separated from the flock and would be an easier target for the falcon.

Conservation

Semipalmated sandpipers are the most abundant sandpiper in our region.



The North American population has been estimated at approximately 3.5 million. But, studies have indicated that semipalmated sandpipers are in a serious long-term population decline that has continued since at least the 1980s. The rate of decline is estimated to be five percent per year. The newest estimates from the U.S. Shorebird Conservation Plan indicate that the population size is now revised downward to two million birds.

One major factor in the sandpiper's population decline is loss of quality habitat, especially along the migration paths. Loss of habitat can take many forms, including degradation by encroachment, development and pollution; overuse and disturbance by humans and pets that make habitat unusable; and the outright destruction of wetlands. Additional pressures on sandpiper populations include predation, food shortages, and severe weather. Abnormally cold and wet weather can have a devastating impact on breeding efforts.

Migration stopover sites, known as staging areas, are critical to sandpipers, which depend on a series of these locations along their migration route for food

and rest. When not resting or preening their flight feathers, the birds feed constantly on small crustaceans, worms, and insects, packing on the fat reserves they need to complete the next leg of their journey.

The migration route is made up of a series of wetland stopover areas that form a chain. The links make a connection between the birds' breeding areas and their wintering areas. Loss of a wetland along the migration path can be likened to losing or breaking a link in the chain, putting added stress on the migrants by forcing them to fly longer distances between stopover areas. Those birds that cannot find enough food to build up their energy reserves have low survival rates. As more quality habitat is lost or degraded, more birds become susceptible to the high energy demands of long distance migration and will succumb along their journey. It is truly a monumental challenge for wildlife managers and conservationists to reverse the decline of such a long range migrant that depends on stopover habitat in many places on an international level.

Connecticut has a number of regionally significant staging areas for shorebirds.

The Charles E. Wheeler Wildlife Management Area (WMA) at the mouth of the Housatonic River in Milford and the Roger Tory Peterson Wildlife Area at the mouth of the Connecticut River in Old Lyme are among the state's most important stopover sites for shorebirds. Other significant staging areas include, but are not limited to, the tidal habitats near New Haven Harbor and the wetlands of the McKinney National Wildlife Refuge in Stratford. Inland wetlands also play a role as stopover sites, but concentrations of shorebirds are not as big as those found along the coast.

Habitat management and wetland restoration projects undertaken by the Wildlife Division are benefitting shorebirds, as well as many other species that depend on wetlands. Creation of marsh ponds, restoring natural tidal flow in grid ditched areas, and tidal marsh reclamation are increasing productive habitat for shorebirds in Connecticut. Biologists in the region also are working to gather information through capture and banding projects that will shed light on why shorebird populations are declining and how to address the causes.

Study Focuses on Urban Red-tailed Hawks

Written by Joan Morrison, Trinity College, Hartford, photos provided by author



Professor Joan Morrison (third from left) with Trinity College students and the adult red-tailed hawk that nests near the Legislative Office Building in downtown Hartford, just before the hawk was released after banding.

“**P**rofessor Morrison, I just saw the coolest thing!” A common phone call and I knew what was coming next. “A really large hawk just flew down and captured a squirrel, right in front of me, on the Long Walk! Now it is eating the squirrel!” The student had just witnessed a common occurrence at Trinity College in Hartford, but an event that also occurs throughout the city – one of our urban red-tailed hawks carrying out its daily life alongside its human neighbors.

Today, the red-tailed hawk is the most common hawk in North America. Not long ago, however, its populations declined, along with those of other wildlife species, when DDT and other chemicals were widely used during the post-World War II years of industrialization. DDT and other organochlorine pesticides proved lethal to the hawks because they caused females to lay eggs with paper thin shells. Reproduction plummeted as hawk pairs were unable to incubate

their eggs successfully. After DDT was banned in 1972, the number and survival of young hawks increased, and populations of this spectacular raptor continue to expand nationwide. Red-tailed hawks are now common in rural areas, where they nest in scattered tall trees and brush. Perhaps surprisingly, though, is that these hawks have now become urban residents. Almost every American city has at least one nesting pair.

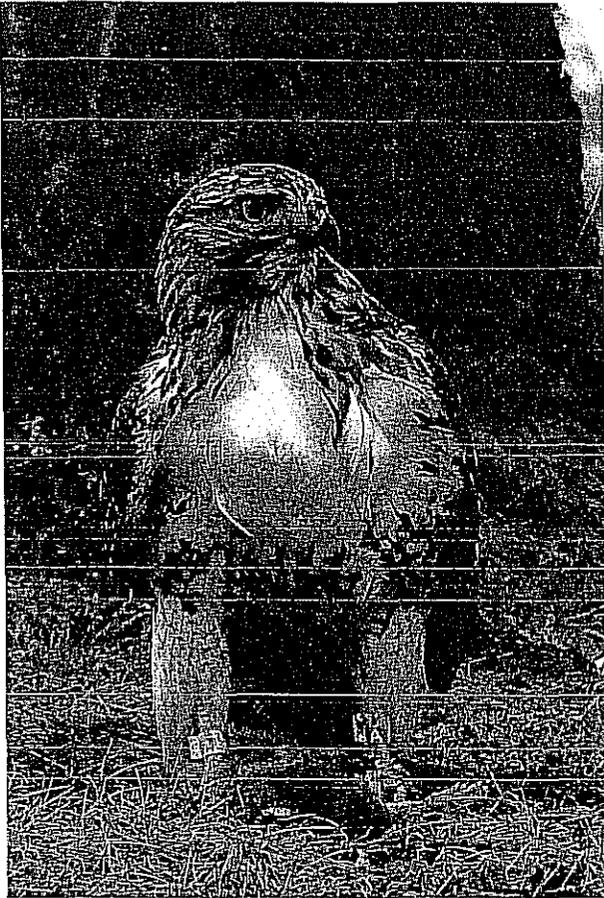
Red-tails can regularly be seen soaring on thermal air currents throughout Connecticut, and more and more pairs are taking up residence in our cities, where their favorite prey, such as squirrels and rats, abounds. These urban hawk pairs can be found nesting just about anywhere, from trees in neighborhood backyards and city parks, to ledges on high rise buildings, on support structures behind billboards, and even on the State Office Building in downtown Hartford.

Over the past five years, my students and I have been studying red-tailed

hawks in Hartford. Ours is the first scientific study of these urban hawks in the Northeast. By marking the hawks with colored leg bands and attaching small radio transmitters to some individuals, we have learned about their nesting and feeding behavior and how they are distributed within the city. At least one pair nests in every one of Hartford’s parks; pairs also nest in suburban neighborhoods, on golf courses, and even downtown. Breeding pairs are year-round residents, remaining on their territories even through winter. Perhaps pairs don’t fly south because they don’t have to; they can find sufficient prey throughout winter in the city. Or, staying in their territory all year may insure that no other hawks move in and take over their nest-

ing site. Pairs typically use the same nest site year after year. They begin to spend more time near the nest site starting in February, and shortly thereafter, nest building begins. Eggs are laid by early March and hatch in April, and chicks leave the nest by late June and early July.

Information gained by radio telemetry tells us that red-tailed hawks nesting in Hartford are highly territorial. They have carved up the city so that a map of the territories of individual pairs in Hartford looks like a set of closely-fit puzzle pieces. Hawks soaring over the city might not just be looking for prey but are probably also keeping track of their neighbors! Interestingly, however, each of these urban territories contains a significant amount of “green space,” – any open area with green vegetation, such as grass, weeds, or brush, but with few trees – where the hawks can easily hunt their prey. Although red-tailed hawks favor mammalian prey, in the city they also regularly feast on other numerous



One of our banded juvenile red-tailed hawks just after it captured a squirrel on the campus at Trinity College.

feathered residents, such as sparrows, starlings, and robins.

While many people may not be aware of our hawks during the early nesting season, once the chicks leave the nest they are often encountered by people not knowing what to make of the wide-eyed, perhaps somewhat frightening, young hawk that has just landed in their backyard and seems to be eyeing their chihuahua. "Professor Morrison, there is an enormous hawk in my backyard and it is about to attack my husband and eat my dog!" Such is another phone call I often get during late summer as these young hawks are testing their wings, explor-

ing every new situation, and learning to become "streetwise." Fortunately, these young hawks are not dangerous, just naïve, not knowing they could not possibly pick up and carry away something as large as they are, let alone a human! Fully grown red-tailed hawks weigh between two to three pounds. So, these young hawks are not a threat; instead, I like to view them as "teenagers" testing their independence, figuring out what in life is good to eat, safe, scary, or dangerous.

Unfortunately, when confronted with the myriad of threats red-tailed hawks face in the city, many do not survive. Mortality of juveniles is particularly high; less than 50% survive their first year. Most succumb to collisions with vehicles and buildings as they dive after prey, perhaps a fleeing squirrel. Others, when resting

on the ground as they often do soon after leaving the nest, may suffer attacks by dogs or feral cats.

At this stage, young hawks often can be approached and even picked up by a well-meaning human. When confronted by a hawk that does not run or fly away from you, it is best to just leave it alone. Chances are it has recently left the nest and thus doesn't even know that a human can be dangerous. For the first few days after leaving the nest, young hawks do not fly well because their flight muscles haven't developed fully, thus the bird likely cannot escape easily. The adults are almost always nearby and, in fact,

probably become highly concerned when they see one of their youngsters being approached by a person. Concerned citizens should call DEEP or me, at Trinity College, and someone will come out and assess the situation. If the hawk is really in trouble, obviously injured or sick, it should be brought to an authorized wildlife rehabilitator, but only by someone who knows how to handle the bird safely, so neither the hawk nor the human is injured.

Perhaps the most serious threat to both adult and young hawks in the city, however, is poisoning by rodenticide. Unknowingly, urban residents, who otherwise would not harm the hawks, may contribute to their mortality through widespread or irresponsible use of rat poison. If they do not perish quickly, rodents that ingest the poison may wander around outside their dens, becoming easy prey for a hungry, naïve young hawk, or even for an adult searching desperately for food for its hungry brood. One of the best ways urban citizens can help our feathered urban neighbors is through careful and limited use of rodenticide.

If the red-tails make it through the gauntlet of potential threats in their early years, they can live a long time. A hawk recently captured in New York was found to be over 27 years old, although most hawks in the wild live less than half that long. New York City residents swell with pride when they talk about Pale Male, the hawk living near Central Park for at least a decade. In Connecticut, we too should be proud to call these wild feathered creatures our neighbors. We certainly can respect them for their ability to become successful urbanites. Watching them soar above our cities and knowing they can live alongside us and successfully rear their young, perhaps even makes our days a little brighter. And, next time you are confronted with a young hawk in your backyard, remember it is just as curious as you are!

CT's Envirothon Team Places 5th in Canon Envirothon Competition

The Housatonic Valley Agriscience Envirothon Team took first place in the Connecticut Envirothon competition held at Rocky Neck State Park this past May. The team went on to represent Connecticut at the Canon Envirothon in New Brunswick, Canada, in August. The team placed fifth out of 54 in the competition that included teams from 45 states, eight Canadian provinces, and one territory (the Yukon).

Making it to the final five was a great accomplishment as the team had only achieved this one other time out of five trips to the North American event. The other top-placing teams were from Manitoba, Ontario, South Carolina, and New Brunswick. The Housatonic Valley Team also received \$7,500 in scholarship money for its accomplishment.

Congratulations for a job well done!

A Healthy Obsession with Oak

Written by David Irvin, DEEP Division of Forestry

Most people have probably seen commercials on television where a poultry CEO touts a “healthy obsession with chicken.” There are times when Connecticut state foresters are accused of the same level of obsession with managing and regenerating oak species in our state forests. Why does it seem that foresters are primarily motivated to manage for oak, when the major objective is to manage for a diversity of forest types and age classes? Foresters have even been asked why we are trying to create a monoculture of oak in our forests.

First of all, the easy answer is that oak is not simple to regenerate compared to some native trees, so any effort toward that end has a risk of less than desirable results. We could not create a monoculture if we wanted to. The successful establishment and, more importantly, survival and graduation to the forest overstory of oak is usually a multiple-phase process for foresters that requires follow-up attention. Management of oak to ensure continued survival of oak forests in Connecticut requires a lot of attention for a little success. On the other hand, black birch, red maple, and beech regenerate easily, so management specific to these species is not as necessary. These tree species demand no attention for a lot of success.

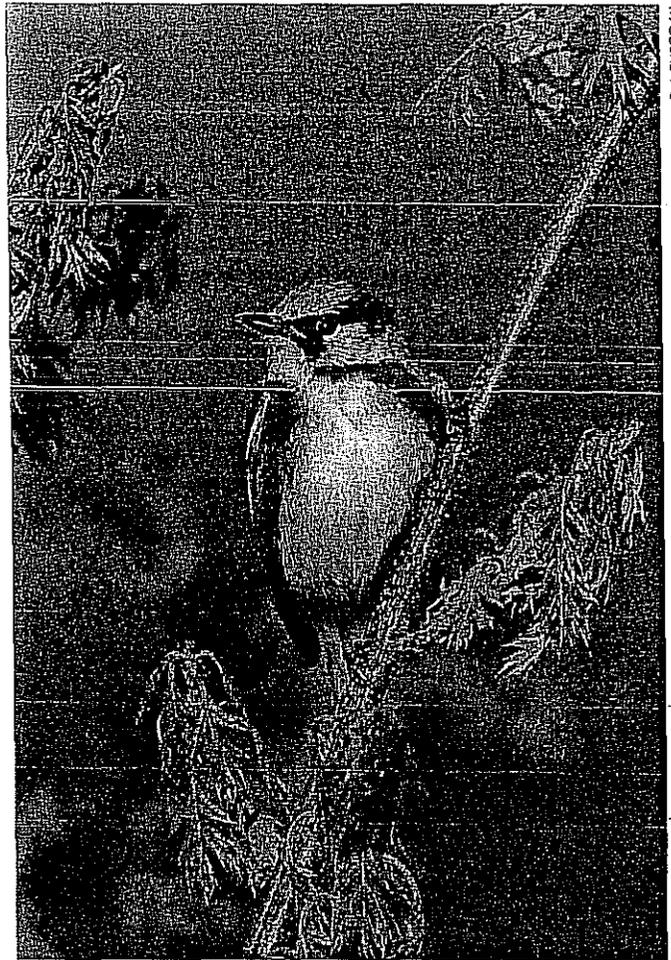
Why Is Oak So Important?

Most of Connecticut is dominated by native oak forests. Connecticut has long been a source of high quality, locally-grown and renewable hardwood timber, especially red oak logs that have been sought worldwide.

From a local ecosystem perspective, oaks are important because their acorns provide an essential source of protein for many wildlife species. White-tailed deer, black bear, and turkeys (among other species) depend on acorns as a fall food source to help pack on the pounds and winter fat layers that are necessary to survive our Connecticut winters. Wildlife is so dependent on this hard mast that success of some wildlife species from year to year can be predicted based on the size of fall acorn crops. Oaks also host the most abundant and diverse array of moths and caterpillars, which in turn attracts a great variety of birds.

How Is Oak Regenerated?

The challenge in regenerating and maintaining oak lies in its disturbance-dependent nature. Oak seedlings appreciate a lot of full sunlight. Historically, many of our oak forests were originally established from an active landscape disturbance regime.



P. J. FUSCO (4)

The chestnut-sided warbler is an example of a bird that uses early successional habitat and benefits from shelterwood cuts and clearcuts for oak regeneration.

The American chestnut, a once dominant forest tree in Connecticut, succumbed to a lethal fungus infestation caused by the introduced chestnut blight in the early twentieth century. This widespread mortality created canopy openings in the forest and encouraged salvage logging that provided an opportunity for oak to exploit. Until that point, oak was generally regarded as secondary in importance for both its timber and wildlife benefits compared to the chestnut. After the disappearance of the chestnut, oak immediately began to fill the niche.

Connecticut's Three Most Common Oaks



Black oak



Red oak



White oak

Other disturbances also were working in favor of oak in the latter part of the nineteenth and early twentieth centuries. Charcoal production was common in Connecticut until after World War I. It involved repeated clearcutting of many forests, a practice conducive to oak regeneration. During that time period, forest fires were more common and intense. Although it is not heard of today, a century ago fires could rage out of control for hundreds or even thousands of acres in Connecticut. Fire assists in the regeneration of oak and effectively reduces competition by other tree species. (Before European settlers arrived in this region, Native Americans used fire to manage vegetation, thus benefiting oak for centuries.) As a result of this period of disturbances and land use changes, most of Connecticut's oak forests became established and thrived. Many of our oaks today are between about 90 and 120 years old. Unfortunately, the trend in the current century is toward a continuous loss of oak forest to other types, specifically red maple and black birch. Although those native species naturally have an important place in a diverse ecosystem, they have not been dominant historically, do not provide essential hard mast, and do not support the same level of insect and bird diversity of oak forests.

Why Is Oak Expected to Diminish?

Simply put, the same disturbances that allowed oak to persist no longer prevail. Modern fire control has eliminated landscape level fire disturbances. Clearcutting and other heavy harvesting practices are often viewed as undesirable by private landowners in favor of lighter, more "selective" cutting that favors shade tolerant species such as birch and maple. Also significant is the impact of deer in Connecticut. Oak seedlings are desired browse by deer, whereas birch and maple are not. Browsing of oak seedlings by the state's high deer population is having a strong influence on the composition of our future forests.

What Are Foresters Doing?

Foresters are trying to do their part on state land by managing for oak where natural seed sources and growing site conditions favor oak. Oak management usually involves a two- or three-phase "shelterwood" type harvest system that favors establishment of the shade-intolerant oak seedlings and then provides further periods of disturbance to help nurture a new oak forest and reduce competition (oak seedlings are slow growing for the first few years of life when compared to competitors). Sometimes, a controlled burn (prescribed fire) may be used to increase the success rate from the

DEEP's Fall Foliage Web Page

The Fall Foliage Web page (www.ct.gov/dep/foliage) has all the information you need to make your foliage viewing a success. It features an interactive map of the state where you can select a date, such as October 1-6, and a full display of fall foliage colors will showcase the intensity and vibrancy of colors in our state during that time period.

Also featured on the Web page:

- Where to View Fall Foliage in Connecticut
- The Colors of Fall and Why Leaves Change Color
- Tips for All Leaf Peepers
- Scenic Views and Hiking Locations
- Connecticut's Shoreline
- The Fall Colors of Connecticut's Trees
- Fall Foliage Driving Routes in Connecticut

shelterwood cuts.

Instead of an "obsession" with oak, it may be more appropriate to say that state foresters maintain a "healthy attentiveness" to inevitable changes that lie ahead for our state. DEEP foresters are doing what they can to mitigate some of this change and maneuver the trends so as to continue providing a diversity of important native ecosystems.

Forestry is a fascinating profession that scrutinizes modern trends and needs for wood, wildlife, recreation, watershed protection, and healthy native ecosystems, as well as delves deep into local and regional history, to determine a management strategy. This strategy is not only for a few years ahead but for decades, even a century or more into the future, long after professionals of today are no longer here. The commitment contributes to a better future and a cause that goes beyond our own longevity.

The author would like to credit fellow DEEP Forester Emery Gluck for his inspiration and professional contribution to oak management in Connecticut.



R. J. FUSCO

2011 Year of the Turtle: Turtle Art Contest for Kids

The DEEP Wildlife Division has been participating in the 2011 Year of the Turtle celebration (spearheaded by the Partners in Amphibian and Reptile Conservation) by informing Connecticut residents about the state's native turtles through a Year of the Turtle Web page (www.ct.gov/dep/yearofturtle), a Connecticut Turtles portable display, articles and turtle species profiles in *Connecticut Wildlife* magazine, a children's art contest, monthly press releases, and other related events.

The Turtle Art Contest for Kids was the Division's first attempt at holding an art contest. It was open to children from kindergarten through fifth grade, who were asked to submit original artwork of a turtle species native to Connecticut. We received over 220 entries, mostly from Connecticut residents but also from Florida, California, New York, Illinois, North Carolina, and even Malaysia. The entries were judged in three categories: K-1st grade, 2nd-3rd grade, and 4th-5th grade. The judges (all with art or turtle expertise) did a fantastic job of selecting first, second, third, and honorable mention winners in each category. The winners received ribbons and various prizes, which were graciously donated by the Connecticut Science Center and the Paul Petersen Memorial Fund of the Friends of Sessions Woods.

All of the artwork submitted for the contest was put up for display at the Division's Sessions Woods Conservation Education Center in Burlington during a special Turtle Day, in which the entrants to the art contest and the public were invited. Turtle Day was a huge success! This FREE event was attended by approximately 270 people who listened to informative talks about turtles (Connecticut Turtles, the Eastern Box Turtle, Sea Turtles and the Marine Animal Stranding Program) and had the opportunity to see live turtles and tortoises. Children were able to participate in various turtle crafts, get a turtle face painting, listen to turtle stories, and learn about turtles. Awards and prizes for the art contest were presented to the winners during Turtle Day. This popular event was sponsored by the Friends of Sessions Woods. KidCity Museum in Middletown donated a family pack of passes that was awarded as a door prize to a lucky attendee.

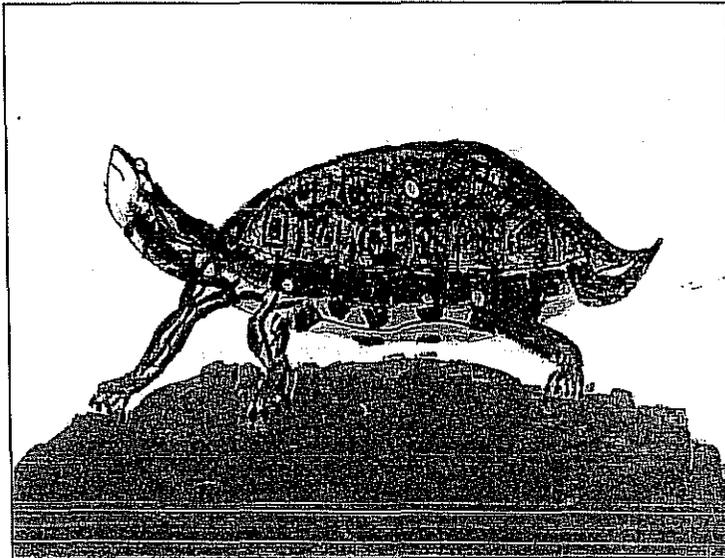
Artwork from the contest remained on display in the Education Center throughout the summer. The winning artwork in all three categories can be viewed as a slideshow on the Year of the Turtle Web page (www.ct.gov/dep/yearofturtle).

Congratulations to all of the winners of the contest. But, most importantly, the Division is pleased that so many kids made the effort to learn about Connecticut's turtles and also create such beautiful artwork. Year of the Turtle has been well received and has also generated a lot of interest in turtles.

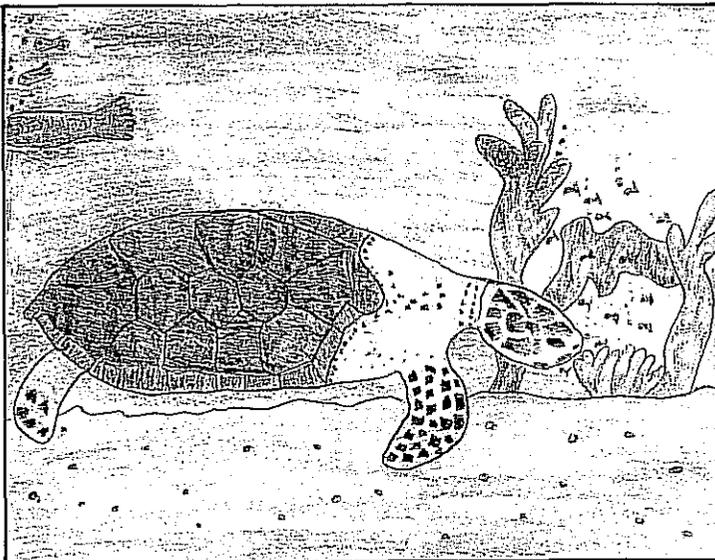
Visit the U.S. Fish and Wildlife Service Northeast Region's Year of the Turtle Web site (www.fws.gov/northeast/ecologicalservices/turtle) that features news, photos, videos, event listings, volunteer opportunities, and information about turtle conservation in the Northeast Region.



First place, K-1st grade: Julia Stampf from Woodbury



First place, 2nd-3rd grade: Cassidy Jones from Guilford



First place, 4th-5th grade: Anagha Gogate from East Lyme

Snapping Turtle

Chelydra s. serpentina

Background and Range

Snapping turtles are widespread in Connecticut. Their ability to adapt to people and the state's changing landscape has made them evolutionarily successful. They can even be found in polluted waters and urban wetlands, although populations in these habitats may not be robust.

Snapping turtles range across the eastern United States to the Rocky Mountains, from southern Canada to the Gulf of Mexico, and into Central America. They also have been introduced in some western states.

Description

The snapping turtle is Connecticut's largest freshwater turtle. It is easily recognized by its dark carapace (upper shell) with a deeply serrated back margin, and a small plastron (bottom shell) that does not completely cover all of the animal's flesh. The carapace measures eight to 12 inches on an average adult, and the turtles can weigh between 10 to 35 pounds. The color of the carapace can vary, from green to black; sometimes the carapace is covered with moss. Snapping turtles have a long tail, often measuring as long or longer than the carapace, that is covered with bony plates. They also have a large head, long neck, and a sharp, hooked upper jaw. This hard beak has a rough cutting edge that is used for tearing food.

Habitat and Diet

Snapping turtles can be found in a wide variety of aquatic habitats, preferably with slow-moving water and a soft muddy or sandy bottom. They inhabit almost any permanent or semi-permanent body of water, including marshes, creeks, swamps, bogs, pools, lakes, streams, rivers, and impoundments. They can tolerate brackish water (mixture of seawater and fresh water).

As omnivores, snapping turtles feed on plants, insects, spiders, worms, fish, frogs, small turtles, snakes, birds, crayfish, small mammals, and carrion. Plants account for about a third of the diet. Snapping turtles usually feed underwater to aid with swallowing. Young turtles will forage for food, but older turtles often hang motionless in the water and ambush their prey by lunging forward at high speed and seizing prey with their powerful jaws.

Life History

Sexual maturity in snapping turtles has more to do with size than age. Turtles are ready to mate when their carapace measures about eight inches. The nesting season is from April through November, with the majority of nesting in southern New England occurring in late May through June. Snapping turtles rarely leave their aquatic habitat except during the breeding season, at which time females travel great distances in search of a place to dig a nest and lay eggs. Some turtles have been found as far as a mile from the nearest water source. Selected nest sites include banks, lawns, gardens, and road embankments.

One clutch of eggs is laid in May or June. With powerful hind legs, the female digs a shallow bowl-shaped nest in a well-drained, sunny location. Over a period of several hours, she lays



P. J. FUSCO

approximately 20 to 40 creamy white, ping-pong ball-sized eggs. After covering the eggs, the female returns to the water, leaving the eggs and hatchlings to fend for themselves. Nests are often preyed upon by raccoons, skunks, and crows. As many as 90% or more of the nests are destroyed by predators annually.

Hatching takes approximately 80 to 90 days, depending on temperature and other environmental conditions. Generally, hatchlings emerge from their leathery egg in August through October by using a small egg tooth to break open the shell. (Northern snapping turtles sometimes overwinter in this egg stage). When the young hatch, they dig out of the nest and instinctively head to water. Young at hatching are about an inch long with soft shells and they must make it to water without being preyed upon by raccoons, skunks, foxes, dogs, birds, and snakes. When they reach water, the young turtles may be taken by fish and other snapping turtles. Once the turtles have grown some and their shells harden, they are virtually predator free.

Interesting Facts

Snapping turtles are nocturnal and spend most of the time underwater, lying on the bottom of the waterbody. Their dark-colored skin and moss-covered shell enables the turtles to lie in wait and ambush their prey. Usually docile in water, snapping turtles can be aggressive during the breeding season when they are found traveling across land. This is usually when most people encounter snapping turtles. If you find a snapping turtle in your yard, treat it with the respect it deserves. Snapping turtles have powerful, sharp jaws. Keep children and pets away from the turtle to allow it to finish laying its eggs and leave the area.

Countless turtles are killed or injured on roads during their terrestrial treks. The presence of a large turtle on a busy road can be a safety hazard. By driving defensively and keeping alert to conditions on the road, motorists should be able to avoid hitting a turtle.

Snapping turtles should never be picked up by their tails as this can damage the animal's vertebral column and tail, not to mention the human who is in danger of being bitten. Because snapping turtles can be slimy and heavy, the Wildlife Division does not recommend that anyone manually pick them up.

Northern Diamondback Terrapin

Malaclemys t. terrapin

Background

The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water). Terrapins are most abundant in tidal estuaries west of the Connecticut River. They are tolerant of some pollution and are known to congregate at warm water discharge outputs of power stations along the Connecticut shoreline.

In the early 1900s, terrapins were a popular gourmet food. Their numbers declined due to unregulated harvesting and habitat loss through coastal development. Motorboat propellers have been responsible for inflicting serious wounds to terrapins, usually causing death. Terrapins also become trapped and then drown in submerged crab and lobster pots. During the nesting season, many females are killed as they attempt to cross coastal roads in search of nesting areas.

The diamondback terrapin is protected by Connecticut Regulation 26-66-14a which states that there is no open season for taking terrapins in any developmental stage. Therefore, terrapins can no longer be collected or possessed in Connecticut.

Description

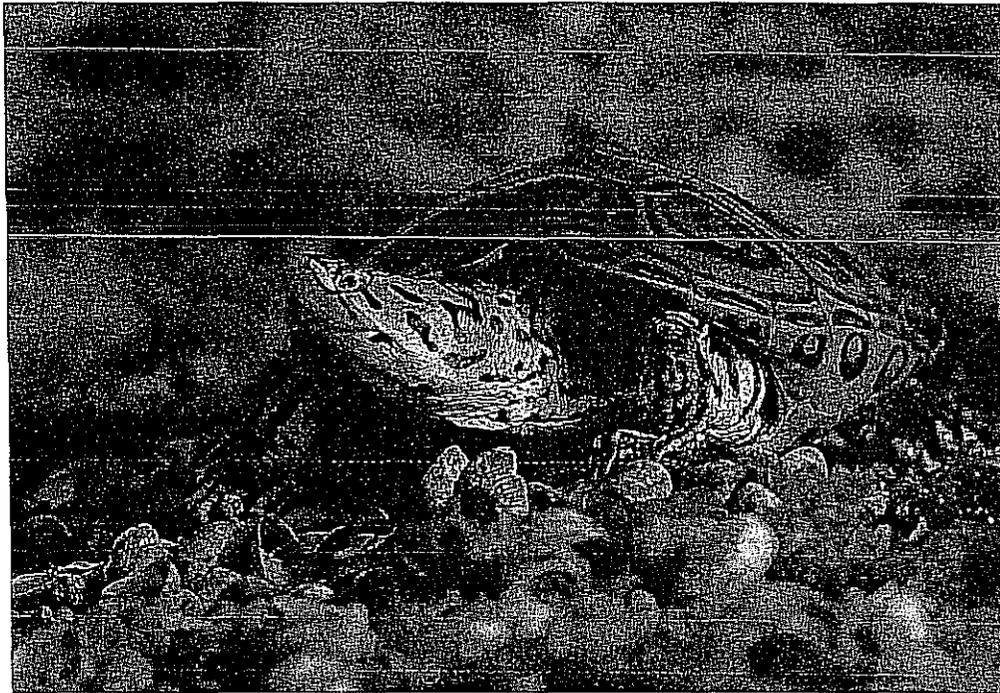
Diamondback terrapins have a gray, light brown, or black top shell (carapace) that is broad and patterned with concentric rings or ridges. The carapace also is wedge-shaped, and when viewed from above, the widest part is in the rear. The bottom shell (plastron) can range from yellowish to greenish gray, with or without bold, dark markings. The large feet are webbed, and the head and limbs may be spotted. Male terrapins are smaller than the female, weighing an average of 0.5 pounds and measuring four to 5.5 inches in length. Females weigh an average of 1.5 pounds and measure six to nine inches long.

Habitat and Diet

Diamondback terrapins live in the brackish water of salt marshes, estuaries, and tidal creeks. Adults are often seen basking on mud flats. Terrapins feed on fish, marine snails, crabs, marine and tidal mollusks, carrion, clams, and worms.

Life History

Adult terrapins nest on sandy borders of coastal salt marshes or in dunes from June to July. Maximum egg-laying activity usually occurs at high tide, ensuring that the eggs will be laid above the high water level. Females dig cavities four to eight inches deep, depositing four to 18 pinkish white eggs (average 9), which are about 1.5 inches long, leather-like, and



P. J. FUSCO

The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water).

thin-shelled, with a blunt end. The eggs hatch in nine to 15 weeks. The one to 1.25-inch hatchlings are patterned similar to the adults, but brighter. Occasionally after hatching, the young may remain in the nest for the first winter, emerging in April and May to head for brackish waters. Females reach sexual maturity in about 7 years; males mature earlier. Terrapins have a long lifespan of about 25 to 40 years.

Interesting Facts

The diamondback terrapin is the only marine species of turtle that regularly occurs in Connecticut. The turtles brumate during winter submerged in the mud of tidal creeks (see page 9 to learn more about brumation). The excess salt that terrapins consume in their diet is excreted through special glands at the eye.

During the early 1930s, when terrapin numbers decreased, the popularity of this turtle as a food item faded. Terrapin populations have since rebounded with the lack of harvesting pressure.

Terrapin nests are depredated by skunks, raccoons, and foxes. Upon emerging from the nest, young hatchlings are often eaten by gulls, crows, and black-crowned night-herons, and predatory fish when in water.

How You Can Help

You can help conserve Connecticut's diamondback terrapin population by supporting the protection, conservation, and restoration of Connecticut's salt marsh habitats. If you are a boater, navigate carefully in tidal creeks and estuaries where large numbers of terrapins may gather in late spring to mate at the water's surface. Boaters also are reminded that it is a violation of the Federal Pollution Control Act to pump or discharge any kind of oil into navigable waters. Oil spills have the potential to devastate many coastal wildlife populations, including terrapins.

Conservation Discovery Corps Removes Invasive Plants to Benefit Saw-whet Owl Habitat

Written by Peter Picone, DEEP Wildlife Division

A hot, muggy, summer day in Connecticut didn't stop Jackie Westlein, of the Beardsley Zoo staff, and her team of Conservation Discovery Corps from chopping down invasive, non-native plants at Quinnipiac River State Park in North Haven. The Conservation Discovery Corps is comprised of bright, young adults that are working on habitat projects throughout the state. This particular week they assisted the Wildlife Division with a project along the Quinnipiac River floodplain where wintering habitat for the Northern saw-whet owl, a Connecticut species of special concern, is being enhanced. Saw-whets use the

evergreen habitat at Quinnipiac River State Park during winter. These smallest of Connecticut's owls have been documented in this area since the 1960s.

The young team of habitat managers learned quickly how to identify the top three non-native woody plants found on the property, namely oriental bittersweet, Japanese wisteria, and privet. Team members cut the stems of the non-native plants and DEEP Wildlife Division staff strategically painted an herbicide (Triclopyr) on the stems to prevent re-sprouting. Triclopyr is the key ingredient in over-the-counter herbicides, such as Brush-B-Gone®.

Invasive non-native plants have become the second biggest threat to wildlife, second only to habitat destruction. Introduced non-native plants that have escaped cultivation are displacing native plants and causing reduced ecological diversity. To learn more about invasive plants in Connecticut and to obtain a list of invasives found in the state, visit the Connecticut Invasive Plant Working Group's Web site at www.hort.uconn.edu/cpiwg.

The Wildlife Division extends its appreciation to the habitat management team from Beardsley Zoo for helping to make a difference for wildlife and habitat.

The Wildlife Observer

Kevin Doyle from New Milford started monitoring a pair of ospreys nesting at Sherwood Island State Park in Westport on a weekly basis starting in late March 2011. This photograph of the female returning to the platform with a meal for her three chicks was taken on June 25. Kevin wrote:

"I had been following the Westport ospreys since late March or early April on a biweekly basis, tracking their progress and the rebuilding of the nest/platform through mating and eventually egg laying. At first I was photographing from the observation deck, where I gradually made my way out into the fields . . . getting as close as I could without spooking the female off her eggs. Sensing I was being tolerated, I moved to an area within 50 feet of the nest and, as long as I didn't make any sudden movements or move closer, I was a witness to an up-close and personal experience.

The interaction between the adults was something few rarely see, at least at these distances, and as time went on, one by one, the eggs hatched. I remember vividly the day I saw the first little head of chick one, then chick two, and thinking that was it. To my surprise one week later, chick three was observed. Three successful hatchlings and, despite chick three being nearly a week behind the others, all were doing fine on my last visit sometime in mid-July. Also during that last visit, two of the three chicks made their solo flights, with the third inching to the edge of the nest but not quite ready to fly."



Do you have an interesting wildlife observation to report?

Please send your story with photos to: Wildlife Observations, Wildlife Division, P.O. Box 1550, Burlington, CT 06013, or E-mail: dep.ctwildlife@ct.gov



DEP is now DEEP

You may have noticed we are now referring to DEP as DEEP. The agency has been renamed the Connecticut Department of Energy and Environmental Protection (DEEP) — which is charged with the dual responsibilities of creating a new energy future for the state and protecting Connecticut's environment and natural resources. To accomplish this, the new agency brings together the Department of Environmental Protection (DEP), the Department of Public Utility Control (DPUC), and an energy policy group that had been based at the Office of Policy and Management. To find out more, go to www.ct.gov/deep.



11th Master Wildlife Conservationist Training Offered

The Master Wildlife Conservationist Program is a free, adult volunteer training series sponsored by the Wildlife Division and offered annually during spring at the Sessions Woods Conservation Education Center in Burlington. The intent of the program series is to provide wildlife-related training to candidates willing to conduct volunteer activities for the Wildlife Division and other environmental organizations.

The program consists of 40 hours of classroom and field training. Topics include wildlife management, Connecticut specific wildlife issues, ecology, forestry, and interpretation. The classes are presented primarily by Wildlife Division staff.

Upon completion of the classes and passing the examination, volunteers are required to provide 40 hours of service the next year and 20 hours each subsequent year to remain in the program. Volunteer service can include leading wildlife-focused public walks, presenting programs, habitat enhancement at wildlife management areas, and assisting biologists with research projects. Other wildlife conservation projects initiated by candidates in their own communities, such as wildlife programming or conservation commission-related work, are also considered valid volunteer service.

The program series is free but class size is limited to 20. Individuals interested in attending need to complete an application form. Application packets are scheduled to be mailed at the end of November, and applications must be returned by January 1, 2012. The program series will begin in March. If you would like to receive an application packet, please contact Laura Rogers-Castro at 860-675-8130 (Monday-Friday from 8:30 AM-4:00 PM) or laura.rogers-castro@ct.gov.

Little River Marsh Restoration

The Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program recently completed a project that resulted in the restoration and conservation of 100 acres of wetlands along the Little River in New Haven and North Haven. The site has a history of degraded tidal wetlands. Intensive agricultural and mosquito control practices, including wetland ditching, draining, and conversion, have severely deteriorated the ecological functions of the floodplain wetlands. The area also is dominated by the invasive plant, Phragmites (also known as common reed).

Phragmites control and wetland restoration efforts, such as creek cleaning and berm removal of the wetland habitat, were necessary to help return a natural tidal flow regime to the Little River Marsh. The WHAMM Program used specialized, low ground pressure equipment to breach two dikes and remove a small culvert from a tidal creek, replacing it with six culverts. These improvements increase tidal flows and fish passages in the marsh habitat. The reintroduction of saltwater into the marsh also results in a gradual replacement of Phragmites by native vegetation. Phragmites is intolerant of salinities greater than 18 parts per thousand. Control of this invasive plant also involved the use of specialized herbicides and mowing.

This newly-restored 100-acre site will provide habitat for breeding and migrating waterfowl and marsh birds, wetland furbearers, a diversity of migratory songbirds, fish, and other wetland dependent wildlife. Funding for this project was provided by the WHAMM Program, National Fish and Wildlife Foundation, Ducks Unlimited,



The WHAMM Program's excavator breaches a dike to restore tidal flow at the Little River marsh restoration site in New Haven/North Haven.

and the Connecticut Corporate Wetlands Restoration Partnership. The WHAMM Program plans to monitor the site over time to assess wildlife use of the restored area.

Paul Capotosto, DEEP Wildlife Division

New Exhibits at Sessions Woods Education Center

The next time you are in the Burlington area, stop by the Wildlife Division's Sessions Woods Wildlife Management Area and Education Center to check out two new exhibits in the Center's exhibit room. A bird viewing window with feeders and educational panels was recently completed, along with a diorama featuring black bears in Connecticut.

Several other wildlife-related exhibits are featured in the Center, which is open to the public on weekdays from 8:30 AM-4:00 PM (and on select Saturdays during summer). The hiking/demonstration trails are open seven days a week from sunrise to sunset. Sessions Woods is located at 341 Milford Street (Route 69) in Burlington. For more information, call 860-675-8130 or check the DEEP Web site at www.ct.gov/dep/wildlife.

Calendar of Events

Programs at the Sessions Woods Conservation Education Center

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

- Oct. 12 **Sessions Woods Fall Hike**, starting at 10:00 AM. Join Wildlife Division Natural Resource Educator Laura Rogers-Castro on a fall hike to visit the special features of the Sessions Woods Wildlife Management Area. This hike will include stops at the beaver marsh, fire tower, and Sessions' family Summer House. Laura will provide information on the fauna and flora during this approximately three-mile hike. Participants should wear appropriate footwear, bring water, and dress for the weather. Meet in the exhibit area of the Education Center for a pre-hike introduction.
- Nov. 5 **Maple Syrup Producers Meeting**, starting at 9:00 AM. The Maple Syrup Producers Association of Connecticut, Inc., invites the public each year to its meeting at Sessions Woods. Guest speakers present practical, how-to-do-it topics covering all aspects of sugaring. Free literature and lively discussions are always available during the meeting. Various sugaring materials also will be on display. For more information, visit www.ctmaple.org/calendar.htm.
- Nov. 6 **12 Practical Tips for Successful Wildlife Photography with Master Wildlife Conservationist Gary Melnysyn**, starting at 2:00 PM. Gary is back at Sessions Woods to present this popular program. He will use his beautiful images to support a discussion on each practical tip he has embraced for successful wildlife photography. The program will be an open forum that encourages questions about photo techniques or the wildlife itself. Gary is an avid outdoor enthusiast and has traveled throughout North and Central America, concentrating on digitally documenting a variety of wildlife species.

Hunting and Fishing Season Dates

Sept. 15-Nov. 15 First portion of the deer and turkey bowhunting season on state land.

Sept. 15-Dec.31 Deer and turkey bowhunting season on private land (private land bowhunters in deer management zones 11 & 12 may hunt deer until January 31, 2012) and on state land bowhunting only areas.

Oct. 1 & Nov. 5 Junior Waterfowl Hunter Training Days

Oct. 8 Junior Pheasant Hunter Training Day

Oct. 15 Opening day for the small game hunting season.

Nov. 5 & Nov. 12 Junior Deer Hunter Training Days.

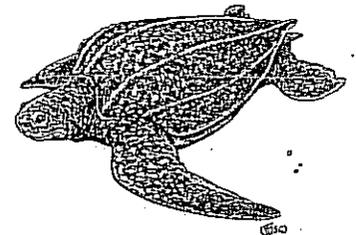
Nov. 16-Dec. 6 Private land shotgun/rifle deer hunting season.

..... Consult the 2011 Connecticut Hunting and Trapping Guide and 2011-2012 Migratory Bird Hunting Guide for specific season dates and details. Printed guides are available at town halls, bait and tackle shops, DEEP facilities, and commercial marinas and campgrounds. The guides also are available on the DEEP Web site (www.ct.gov/dep/hunting). Go to www.ct.gov/dep/sportsmenlicensing to purchase Connecticut hunting, trapping, and fishing licenses. The system accepts payment by VISA or MasterCard.

Daily Hawk Watch at Lighthouse Point Park in New Haven, from September 1 through November 30, starting at 7:00 AM and continuing as long as the hawks keep flying.

The 2010 Deer Program Summary is now available on the wildlife section of the DEEP Web site (www.ct.gov/dep/wildlife).

Connecticut Wildlife



Subscription Order

Please make checks payable to:

Connecticut Wildlife, P.O. Box 1550, Burlington, CT 06013

Check one:

- 1 Year (\$8.00) 2 Years (\$15.00) 3 Years (\$20.00)

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Address: _____

City: _____ State: _____

Zip: _____ Tel.: _____

Check one:

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\$ _____

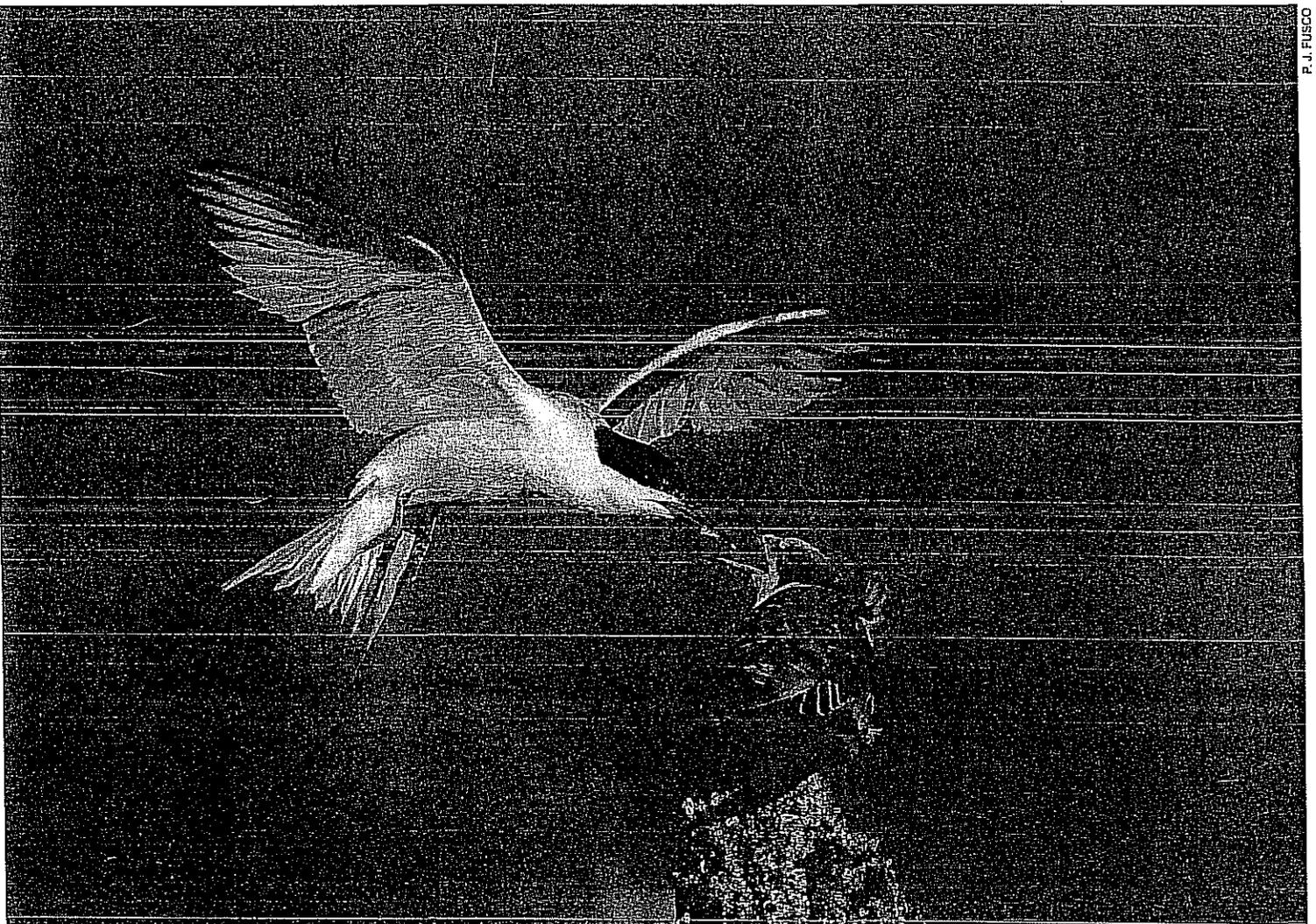
Help fund projects that benefit songbirds, threatened and endangered species, reptiles, amphibians, bats, and other wildlife species.

Connecticut Wildlife

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

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P. J. FUSCO

A young common tern eagerly accepts a meal from its parent. Common terns mainly feed on small fish, as well as insects, crustaceans, and other aquatic creatures.



Willimantic River Review

Fall 2011

Water Plans are Flowing

To promote a regional approach to multiple water issues, the Alliance sponsored a Water Supply Forum in May. This was an opportunity for representatives of Tolland, Mansfield, the University of Connecticut (UConn) and the Connecticut Water Company to share information with the public about their water supply issues and potential solutions. Tolland reported on the town's need for more water from their wells on the Willimantic River; CWC on their proposed regional pipeline through Tolland to Storrs; Mansfield on the need for water to supply the Four Corners area of Storrs; and UConn on their newly updated five-year water supply plan indicating the need for an additional source of water.

Since then, Mansfield and UConn have made renewed efforts to work together. Because the need for water has stalled both town and university projects, they are cooperating in the search for new sources of water. UConn estimates that it will need an additional 340,000 gallons per day by 2030. Mansfield sees a need for 170,000 gallons per day for the Four Corners area alone.

The Town and UConn are cosponsoring an Environmental Impact Evaluation (EIE) of several potential water sources, including wells along the Willimantic River and in Mansfield Hollow, as well as possible reservoir supply from the Willimantic Reservoir in Mansfield or Shenipsit Lake in Tolland. The EIE is due early next year. Meanwhile, state bonding is now available for a new University technology park. This bonding will also provide funding for a water supply infrastructure once a source has been selected.

Riverwatch

WATER QUALITY REPORT CARD

Every two years Ct. DEEP submits a statewide water quality report to Congress. In this 2010 document, sections of the Willimantic River and some of its tributaries have a new classification as "not supported" for recreation because of excess indicator

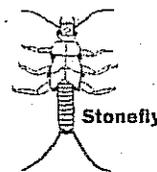
bacteria in the water. This does NOT mean that there are more bacteria. Rather, EPA has raised bacteria standards for supporting recreation. A waterbody must now be safe for swimming to be supported for boating and fishing.

The river is classified as "not supported" for recreation from the Route 32 bridge in Tolland downstream to the junction with the Hop River in Columbia. All of the Hop and Skungamaug Rivers and some smaller tributaries, are also listed as "not supported." For a complete list of impaired waterbodies in the river's watershed and a summary of water quality standards and classifications, visit the Conservation page on the WRA website.

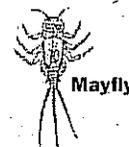
Many other rivers and streams in the state are listed as "not supported" for recreation in this report. The sources of bacteria are unknown at this time, but Ct. DEEP is sampling rivers across the state to determine bacteria sources and remedies. Stormwater runoff is often a major culprit in this pollution problem.

WATER QUALITY TESTING

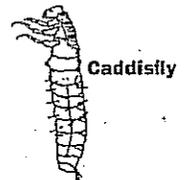
Faculty and students at E.O. Smith High School's Depot Campus are planning a water quality testing project in the Willimantic River's watershed this fall. If you would like to participate in a Rapid Bioassessment team, contact Shannon Rose at 860-487-2260 or srose@eosmith.org and search for these



Stonefly



Mayfly



Caddisfly

critters that can live only in healthy streams. For more information: www.epa.gov/waterscience/biocriteria.

Riverwatch (continued)

TOLLAND'S WATER DIVERSION PERMIT

State agencies have reviewed Tolland's Water Diversion Permit application to increase withdrawals from wells next to the Willimantic River. Ct. DEEP made a tentative determination to approve the application in August. The town applied for a maximum daily withdrawal of 511,000 gallons per day (gpd) to allow the wells to serve residents on the west side of I-84. The approved 25-year permit would restrict peak withdrawals to only 332,000 gpd because the increased withdrawals will affect the river, Greens Brook and nearby groundwater and wetlands. The current withdrawal permit allows up to 220,000 gpd for peak use. Current average daily use is 100,000 gpd, with peak withdrawals around 180,000 gpd.

STAFFORD'S WATER POLLUTION CONTROL PLANT

Stafford's Water Pollution Control Plant has been refurbished in a recently completed project. The plant's systems were upgraded and elevated above flood levels. This was just in time for this rainy summer, when the plant remained high and dry through storms that raised the river's level to flood stage.

EAGLEVILLE BROOK WATERSHED PLAN

This tributary to the river (at Eagleville Lake) is an impaired waterbody. It lacks any aquatic life due to streambank modification and stormwater runoff from developed areas upstream on the UConn campus and nearby areas in Storrs. The Eagleville Brook Watershed Plan to reduce stormwater runoff was recently unveiled by UConn's Center for Land Use Education and Research (CLEAR). The plan's analysis and recommendations are available at <http://clear.uconn.edu/projects/tmdl>. A public presentation is planned for this fall.

UCONN WATER SUPPLY PLAN

UConn drafted a Water Supply Plan for the next five years in March. The Alliance submitted comments concerning this plan, which were addressed in the final version of the plan.

NATIONAL RECREATION TRAIL

This fall the Alliance is meeting with officials of several riverside towns and Ct. DEEP to request their assistance with an application for a National Recreation Trail (NRT) designation for the river. The Last Green Valley will submit this application to the National Parks Service along with one for the Quinebaug River. The nation's newest NRT designations will be announced in mid-2012.

Web Updates

Check out the WRA website's Conservation page! New items include the recent water quality report and the latest information on innovative projects to improve water quality in Eagleville Brook. Also a new list of resources for waterway protection.

Spirits of the River

At the annual meeting in April, WRA presented Spirit of the River honors to the following people: Betty Robinson for enthusiastic leadership on land and water trails along the river; to the Willimantic River Yacht Club for their steadfast stewardship of the river; and to Representative Gregg Haddad for his efforts to protect Connecticut rivers. WRA appreciate their contributions to the health and enjoyment of the river!

Calendar

The Alliance is now posting events on its **blog**. You can link to it from our website's Events page and find the latest posting. Explore along the Willimantic River during **Walktober**, a month-long series of walks and other outings sponsored by The Last Green Valley. Walks cosponsored by WRA are listed below. For the other events, visit www.thelastgreenvalley.org.

Saturday, October 1

Wonderful Waters of Wangumbaug Lake

Start on the shore with orientation to the lake's past history and today's community effort to protect its water quality. Then paddle 3.5 miles to several points of interest. Participants must be able to safely operate a kayak or canoe. Heavy rain cancels. Meet at 9:30 a.m. at the Community Center (from Rts. 31/275 junction in Coventry, go west on Lake St for 0.2 miles. Turn right at Community Center and follow signs to parking space). Information: 860-930-7515. Register at www.coventryrec.com. Sponsored by Coventry Parks and Rec. and WRA.

Saturday, October 1

Merrow Mill's 200th Anniversary Discover this 19th-century mill with mill historian Bill Jobbagy. Tour the small village and walk along Riverview Trail to see remains of the Merrow gunpowder and knitting mill. An easy 1-mile walk followed by a visit to the Mansfield Historical Society for the Merrow Mill Exhibit and anniversary cake. Meet at 1 p.m. (from Rts. 195/32 junction in Mansfield, go south on Rt. 32 for 0.8 miles. Turn right on Merrow Road, cross the bridge and turn right on Riverview Drive). Information: 860-742-9401. Sponsored by Mansfield Historical Society and WRA.

Sunday, October 16

Down by the Riverside Walk along a scenic stretch of the Willimantic River in Tolland's King Riverside Conservation Area to see Peck's Mill and other historical sites, then climb to a wonderful view of the river valley. Meet at trailhead at 1 p.m. (from Rts. 195/32 junction in Mansfield, go west on Rt. 195 toward Tolland. Cross the bridge over the railroad, then over the river. Immediately turn right on Dimock Lane. Parking lot is on the right just past the church). Information: 860-871-3601. Sponsored by Tolland Conservation Commission and Conserving Tolland.

Many Thanks to...

Ken Hankinson and Robin Rouelle for their help at the Water Supply Forum, and to Cynthia MacDonald for creating a wonderful power point show for our annual meeting. Her photos of last year's WRA paddling and hiking events are inspiring!

Contributors: Vicky Wetherell, Meg Reich

Design and Layout: Dagmar S. Noll

Inquiries or submissions for the Spring 2012 Edition may be submitted to:

WRA, P.O. Box 9193
Bolton, CT 06043-9193
or info@willimanticriver.org

View previous newsletters at:
www.willimanticriver.org

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 Town Planner
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 Storrs Mansfield CT 06268-2574

Willimantic River Alliance

Founded in 1996, the Alliance has a mission "to protect and preserve the Willimantic River through cooperative and educational activities that promote regional awareness; stewardship, and enjoyment of the river and its watershed." As a coalition of citizens, officials and local agencies, the Alliance sponsors events such as regional forums and outings and publications, including a newsletter and website www.willimanticriver.org. Our email address is info@willimanticriver.org.

Willimantic River Alliance, Inc. is a nonprofit 501 (c) (3) tax-exempt corporation. The Alliance promotes development of the Willimantic River Greenway, an official state greenway along the river's 25 miles from Stafford Springs to Willimantic. This regional project aims to connect recreational, historical and natural resource features along the river. These connections are being created by the nine riverside towns through natural resource preservation and recreation projects, such as linking trails and improving access to the river.

The river's watershed includes seventeen towns: (in Ct.) Andover, Ashford, Bolton, Columbia, Coventry, Ellington, Hebron, Lebanon, Mansfield, Stafford, Union, Tolland, Vernon, Willington, Windham, and (in Mass.) Monson, Wales.

Fall 2011

Willimantic River Alliance – Membership Form

Name _____
 Address _____
 Town _____ State _____ Zip _____
 E-Mail _____ Phone _____

Contact me about volunteer opportunities for the WRA

Mail completed form and check to:

WRA at P. O. Box 9193, Bolton CT 06043-9193

Memberships	Annual Dues
Senior/Student	\$ 5.00
Individual	\$10.00
Family	\$15.00
River Steward	\$ 50.00
Patron	\$ 250.00
	(Lifetime Member)

Thank you for joining the Alliance! Your membership dues may be tax deductible.



Connecticut Association of Conservation and Inland Wetlands Commissions, Inc.

deKoven House Community Center
27 Washington Street
Middletown, CT 06457
860 344-8321
www.caciwc.org

October 1, 2011

Greetings to our Connecticut Conservation and Inland Wetlands Commissions

The CACIWC Board of Directors is very pleased to invite you to our **34th Annual Meeting and Environmental Conference, Celebrating Five Decades of Environmental Conservation and Habitat Protection**, scheduled for Saturday, November 12, 2011 at MountainRidge in Wallingford, CT. This year we will be hosting *Daniel C. Esty*, Commissioner of the Connecticut Department of Energy and Environmental Protection (*DEEP*), as our keynote speaker. Commissioner Esty will help us celebrate the 50th anniversary of the law establishing conservation commissions in Connecticut and the many decades of efforts made by conservation and inland wetlands commissioners and their staff toward the preservation of Connecticut's important habitats.

The CACIWC Annual Meeting Committee has scheduled a series of informative speakers and workshops on a host of relevant topics for both experienced and new conservation and inland wetlands commissioners and staff. This year's workshops are arranged within four reconfigured tracks: Open Space & Conservation Biology, Land Use Law & Legal Updates, Best Management Practices & Procedures, and Low Impact Development & Sustainability. Additional details can be found at www.caciwc.org and in the fall issue of *The Habitat* that will be arriving in your mailbox shortly.

While we have raised our basic registration fee, we are offering a \$10 discount to commissioners and staff of commissions who have paid their 2011-12 membership dues. The savings from sending just five members to the meeting will cover your annual membership dues! Please complete a copy of the attached registration form for each attendee and return it to us before the Monday, October 31, 2011 deadline to save an additional \$10! Please direct any questions to us at: AnnualMtg@caciwc.org

We are also asking you to consider making an additional individual contribution to CACIWC this year to help defray the increasing expenses of operating our annual conference. (See additional categories on the bottom of the form.) Your prompt return of the completed registration form and check to CACIWC at the above address will help us fund our annual meeting, future issues of *The Habitat*, and proposed mid-year education and training sessions that we are planning.

The CACIWC Board and I thank you and hope to see you at the conference!
Alan J. Siniscalchi, President

PAGE
BREAK

Connecticut Association of Conservation & Inland Wetlands Commissions
34th Annual Meeting & Environmental Conference
Saturday, November 12, 2011
MountainRidge High Hill Road, Wallingford, CT

Registration Form

Name: _____
Town: _____
Commission name: _____
Phone: _____ Email: _____

Workshop cost includes continental breakfast, hot buffet lunch, workshops, and gratuities.

Enclosed is my \$40 check (members & staff of CACIWC member commissions in good standing, registration postmarked by October 31, 2011)

Enclosed is my \$50 check (members, postmarked after October 31, 2011)

Enclosed is my \$50 check (non-members, postmarked by October 31, 2011)

Enclosed is my \$60 check (non-members, postmarked after October 31, 2011)

My town will submit payment prior to event.

No refunds after November 5, 2011 Questions? Please contact us at: AnnualMtg@caciwc.org

Please make checks payable to CACIWC. Return to CACIWC deKoven House Community Center, 27 Washington Street, Middletown, CT 06457; Also see: www.caciwc.org

I will attend the following workshops: (Please check one workshop per session)

Session 1 9:30-10:30 AM

A1. "Invasive Species: Diatoms: The Good the Bad and the Ugly!"

B1. "Emergency Authorization Procedures for Wetlands Agencies"

C1. "The Importance of Maintaining Your Best Management Practices"

D1. "Low Impact Development in Planning & Permitting"

Session 2 10:45-11:45 AM

A2. "Land Trust & Conservation Commission Collaboration: Partnerships for Land Preservation & Stewardship"

B2. "Wetlands Law Update and Questions & Answers for 2011"

C2. "BMP in Stormwater Management: Rain Gardens & Other Advanced Techniques"

D2. "Low Impact Development, A More Sustainable Approach to Creating Workplaces & Homes"

Session 3 2:00-3:15 PM

A3. "Stalking Foxes and Wandering Cats: Current Trends among Connecticut Mammalian Predator Populations"

B3. "Development of Low Impact Development Regulations with Your Local P&Z"

C3. "Sustainable Site Design, Landscape Architects Panel"

D3. "Sustainability in Town Planning: Long-term vs. Short-term Thinking"

Yes, I will be a Sponsor for CACIWC's 2011 Environmental Conference.

\$ _____ Tax Deductible Contribution (as allowed by law), see categories, below:

Great Horned Owl: \$500 and up,

Barred Owl: \$250-\$499,

Screech Owl: \$100-\$249,

Saw-whet Owl: \$10-\$99

CACIWC 34th Annual Meeting & Environmental Conference

(Saturday, November 12, 2011) MountainRidge in Wallingford, CT

A. Open Space. & Conservation Biology Track	B. Land Use Law & Legal Updates Track	C. Best Management Practices & Procedures Track	D. Low Impact Development & Sustainability Track
Session 1 Workshops (9:30-10:30 AM)			
<p>1. <u>“Invasive Species: Diatoms: The Good the Bad and the Ugly!”</u> Professor Diba Khan-Bureau, Three Rivers Community College (TRCC)</p>	<p>1. <u>“Emergency Authorization Procedures for Wetlands Agencies”</u> Janet Brooks, Attorney at Law, LLC</p>	<p>1. <u>“The Importance of Maintaining Your Best Management Practices”</u> Lawrence H. Galkowski, PE; Rinker Materials</p>	<p>1. <u>“Low Impact Development in Planning & Permitting”</u> Christopher P. Malik, CT DEEP</p>
Session 2 Workshops (10:45-11:45 AM)			
<p>2. <u>“Land Trust & Conservation Commission Collaboration: Partnerships for Land Preservation & Stewardship”</u> Amy Paterson, Esq. Executive Director, Connecticut Land Conservation Council (CLCC)</p>	<p>2. <u>“Wetlands Law Update and Q&A for 2011”</u> Janet Brooks, Attorney at Law, LLC; David Wrinn, CT Attorney General’s Office; Mark Branse, Branse, Willis & Knapp, LLC</p>	<p>2. <u>“BMP in Stormwater Management: Rain Gardens & Other Advanced Techniques”</u> Michael Dietz, CT NEMO Program Director, UConn CLEAR</p>	<p>2. <u>“Low Impact Development, A More Sustainable Approach to Creating Workplaces and Homes”</u> Scott W. Horsley, President, Horsley Witten Group, Inc.</p>
Session 3 Workshops (2:00-3:15 PM)			
<p>3. <u>“Stalking Foxes and Wandering Cats: Current Trends among Connecticut Mammalian Predator Populations”</u> Andrew LaBonte CT DEEP Wildlife Division</p>	<p>3. <u>“Development of Low Impact Development Regulations with Your Local P&Z”</u> Mark Branse, Branse, Willis & Knapp, LLC</p>	<p>3. <u>“Sustainable Site Design”</u> Jane Didona, Didona Associates; Stuart Sachs, PRE/view Landscape Architects; & Thomas Tavella, Fuss & O’Neill, Inc.</p>	<p>3. <u>“Sustainability in Town Planning: Long-term vs. Short-term Thinking”</u> John D. Calandrelli, CT Chapter Sierra Club Program Director</p>