

MEETING NOTICE AND AGENDA
MANSFIELD INLAND WETLANDS AGENCY

Monday, June 1, 2015 ■ 7:00 PM

Audrey P. Beck Municipal Building ■ 4 South Eagleville Road ■ Council Chambers

1. Call to Order

2. Roll Call

3. Review of Minutes

- a. 5-4-15 – Meeting Minutes
- b. 5-13-15 – Field Trip Minutes

4. Communications

- a. Conservation Commission Minutes
- b. Monthly Business Memorandum

5. Public Hearing

7:05 p.m.

W1548 - C. & L. Niarhakos, 101 East Rd, Re-Subdivision Application

Memo from Inland Wetlands Agent

6. Old Business

- a. **W1548 - C. & L. Niarhakos, 101 East Rd, Re-Subdivision Application**
- b. **W1549 – Jensen’s Rolling Hills Mobile Park, Middle Turnpike-Site Restoration**
Memo from Inland Wetlands Agent
- c. **Other**

7. New Business

- a. **W1378 – Storrs Center, Phase 3, Storm Water Improvements**
Memo from Inland Wetlands Agent
- b. **W1550 – W. St. Martin, 601 Storrs Road-Pond Clean Out**
Memo from Inland Wetlands Agent
- c. **W1551 – M. McDonald, 93 Candide Lane-Above Ground Pool**
Memo from Inland Wetlands Agent
- d. **W1552 – L. and L. Wasiele, 357 Gurleyville Road-Addition**
Memo from Inland Wetlands Agent
- e. **Other**

8. Reports from Officers and Committees

9. Other Communications and Bills

- a. DEEP Workshop: Legal and Administrative Updates
- b. D.O.T.-UConn Sewer Line Replacement
- c. CT Wildlife March/April 2015
- d. CACIWC: The Habitat Spring 2015

10. Adjournment

Binu Chandy ■ JoAnn Goodwin ■ Roswell Hall III ■ Gregory Lewis ■ Peter Plante

Barry Pociask ■ Kenneth Rawn ■ Bonnie Ryan ■ Vera Stearns Ward ■ Paul Aho (A) ■ Katherine Holt (A) ■ Susan Westa (A)

DRAFT MINUTES
MANSFIELD INLAND WETLANDS AGENCY
Regular Meeting
Monday May 4, 2015
Council Chamber, Audrey P. Beck Municipal Building

Members present: J. Goodwin, G. Lewis, B. Pociask, P. Plante, K. Rawn, B. Ryan,
Members absent: B. Chandy, R. Hall, K. Holt,
Alternates present: P. Aho, V. Ward, S. Westa
Staff present: Jennifer Kaufman, Inland Wetlands Agent

Chairman Goodwin called the meeting to order at 7:00 p.m. and appointed Aho, Ward and Westa to act. Bonnie Ryan was appointed to act as Secretary.

Ward MOVED, Ryan seconded, to add under New Business item C, a request for a ruling on the installation of a portable shed on property located at 4 Hillyndale Road. MOTION TO ADD PASSED UNANIMOUSLY.

Review of Minutes

4-6-2015 Meeting Minutes- Ward MOVED, Rawn seconded, to approve the minutes of the 4-6-15 meeting as presented. MOTION PASSED with all in favor except Pociask and Westa who disqualified themselves.

Communications:

The Conservation Commission draft minutes and Wetland Agent's Monthly Business memorandum were noted.

Old Business:

- a. Re-subdivision Application, 101 East Road, C. & L. Niarhakos, IWA File #W1548 –
Tabled pending 6/1/15 Public Hearing

New Business:

- a. Kay Holt's request to a waiver of attendance requirements
Pociask MOVED, Ward seconded, to waive the attendance requirements for Katherine Holt due to extenuating circumstances. Bonnie Ryan is hereby appointed to serve as Secretary during her absence and for the month following her return. MOTION PASSED UNANIMOUSLY.

Plante questioned the validity of the bylaw provision requiring excused absences and requested a legal opinion. By consensus, the Agency agreed that Kaufman may request a legal opinion from the Town Attorney on the validity of this bylaw provision.

- b. W1549 – Jensen's Rolling Hills Mobile Park, Middle Turnpike-Site Restoration
Ryan MOVED, Pociask, seconded, to receive the application submitted by Jensen's, Inc. (IWA File #W1549) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for Site Restoration on property located at Jensen's Rolling Hills Mobile Home Park, Middle Turnpike as shown on a map dated 4/14/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments. MOTION PASSED UNANIMOUSLY.

c. **J-4 - Jurisdictional Ruling, 4 Hillyndale Road, K. Smithwick**

Lewis MOVED, Rawn seconded, to approve a Jurisdictional Ruling finding that the installation of a portable 12 x 8 foot shed on land owned by Kevin Smithwick (IWA File # J-4) as shown on a map dated 4/30/2015 and as described in the associated attachments is permitted as a non-regulated activity pursuant to Section 4 of the Inland Watercourses and Wetlands Regulations of the Town of Mansfield. MOTION PASSED UNANIMOUSLY.

Reports from Officers and Committees

No reports were offered.

Other Communications and Bills

Noted.

Adjournment:

Chairman Goodwin set a Field Trip for 5/13/15 at 2:30 p.m. and declared the meeting adjourned at 7:23 p.m.

Respectfully submitted,

Bonnie Ryan, Acting Secretary

DRAFT MINUTES

MANSFIELD PLANNING & ZONING COMMISSION
INLAND WETLANDS AGENCY
SPECIAL MEETING – FIELD TRIP
May 13, 2015

Members present: J. Goodwin (items 1 & 2 only), B. Ryan, Paul Aho
Conservation Comm.: S. Lehman
Staff present: C. Hirsch, Zoning Agent (items 1 & 2)
J. Kaufman, Wetlands Agent, (items 2 & 3)

The field trip began at 2:35 p.m.

1. PZC 1332, Efficiency Unit, 5 Hillside Cir, S. Sorrels owner/applicant. Members were met on site by Sorrels. The location of the proposed house addition/efficiency unit were observed as well as the site and neighborhood characteristics. No decisions were made.
2. IWA 1549, Site restoration - Jensen's Mobile Park, Middle Turnpike. Members were met on site by K. Jensen and M. Jones, of Jensen's Park. Members reviewed the area of recent grading work adjacent to the wetlands. No decisions were made.
3. IWA 1548, Re-Subdivision, 101 East Road, C & L Niarhakos owner/applicant. Members were met on site by C. Niarhakos, E. Pelletier, D. Aubrey, M. Brogy and R. & Q. Harper. Members walked the site to observe the locations for development of two new lots with respect to the location of wetlands. No decisions were made.

The field trip ended at 3:50 p.m.

Bonnie Ryan, Secretary, pro tem

PAGE
BREAK



Town of Mansfield

Inland Wetlands Agency

Date: May 28, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: Monthly Business Report

Mansfield Auto Parts - Route 32

On May 28, 2015, I monitored the site. Items identified during my site inspection in April have been removed and there were no cars or automobile parts that could possibly contain oil or other fluids located within 25 feet of the wetlands.

Storage of Potentially Hazardous Materials in Sheds within the Upland Review Area

At the last meeting, the Agency asked me to investigate whether or not a town Inland Wetlands Agency can regulate the type of materials stored in a shed located within the upland review area. I have contacted Darcy Winther of CT DEEP and I am waiting for her response. I will update the Agency regarding this issue at the July meeting.

Agent Approvals

- None

PAGE
BREAK

Town of Mansfield
CONSERVATION COMMISSION
Meeting of 20 May 2015
Conference B, Audrey P. Beck Building
(draft) MINUTES

Members present: Aline Booth (Alt.), Neil Facchinetti, Quentin Kessel, Scott Lehmann, Grant Meitzler, John Silander, Michael Soares. *Members absent:* Joan Buck (Alt.), Robert Dahn. *Others present:* Jennifer Kaufman (Wetlands Agent); Chris & Lindsey Niarhakos, Edward Pelletier (Datum Engineering), Gerald Hardisty (Ces Engineering); Mary & Ross Harper, Matt Willis, Esq., Donald Aubrey (Towne Engineering).

1. The meeting was **called to order** at 7:30p by Chair Quentin Kessel. Alternate Booth was designated a voting member for this meeting.

2. **Public comment.** All of the public comment period was devoted to wetlands application W1548 (Niarhakos, 101 East Rd). This application, a modification of W1545, concerns a proposed 3-lot subdivision of a 14.6 acre parcel of land on East Rd: the existing house at 101 East Rd would be on Lot 1, while new homes could be built on Lots 2 and 3 downhill from it along the road. The parcel, formerly owned by Frank Trainor, was acquired from his estate by Chris and Lindsey Niarhakos. Lot 3 abuts property owned by Mary and Ross Harper.

Ed Pelletier of Datum Engineering displayed a large map of (& site plan for) the parcel and reviewed the application. A large wetland straddles the boundary between Lots 2 and 3, extending to the rear boundary of the parcel and beyond. No activity is proposed in wetlands, but nearly all development would be within the 150 ft regulated area. A conservation easement would cover 24% of the parcel: a strip about 150 ft deep along the rear boundary of the parcel, plus smaller 50 ft deep strips along the road. The major changes from W1545 are: (1) House sites on Lots 2 and 3 are closer to East Rd; (2) Lot 3's septic system is located closer to the house to minimize potential impact on the Harpers' well and property; (3) Runoff from impervious surfaces on Lots 2 and 3 would be directed away via shallow swales to shallow 30 x 80 ft depressions toward the rear of these lots for ground-water recharge.

Matt Willis, attorney for the Harpers, explained that their property has been damaged by surface water runoff in the past and that they fear development of Lots 2 and 3 will make things worse. Consequent to logging on the parcel 15 years ago, their driveway washed out three times. They have had to move their septic system and to deal with water in the basement.

Don Aubrey (former Mansfield Town Engineer, now of Towne Engineering), who has been retained by the Harpers, displayed a map of the parcel showing surface water flows and a chart with water-table data. He noted that the parcel has a history of water problems, recalling that the Town put in drains on East Rd after Trainor complained to him about runoff from UConn cornfields uphill. Mr. Aubrey reported that groundwater in standpipes on the parcel was within 5-8 inches of the surface for long periods of time this spring, raising doubts that septic systems on Lots 2 and 3 would function properly during similar periods of high groundwater. Failure of Lot 3's septic system would threaten the Harpers' well. He also doubted that the proposed swales and detention basins would do much good, noting that a swale along the top boundary of the parcel (probably constructed by Trainor to divert runoff from UConn land) had been overtopped by heavy rain. Collecting water in Lot 3's detention basin could even make matters worse, as it lies directly upslope from the Harpers' house. Even if the swales and basins are not overtopped by storm-water, we don't know where runoff that seeps from them into the ground will go and where it might emerge.

Silander asked if Lot 3's basin could be moved farther back beyond the Harpers' house.

Pelletier replied that that could be done.

Pelletier and Gerald Hardisty emphasized that the proposed swales and detention basins are designed to mitigate the impact of developing Lots 2 and 3 (by capturing and retaining runoff from impervious surfaces), not to rectify pre-existing water problems on the Harpers' property. Aubrey's position is that the hydrology of the parcel is not well enough understood to be reasonably sure that this development would in fact be neutral and not exacerbate these problems for the Harpers.

The discussion ended at 8:30p and the assembled members of the public left the meeting.

3. The draft **minutes** of the 15 April meeting were approved as written.

4. **IWA referrals.** {Lehmann visited these sites on the 5/13/15 IWA Field Trip. His report is attached}

a. **W1548 (Niarhakos, 101 East Rd).** See item 2. above for description and discussion, much of which is not clearly related to impact on wetlands. Lehmann remarked that seeing skunk cabbages growing on Lot 2 outside the delineated wetland didn't increase his confidence in the accuracy of wetlands mapping on this parcel. After some discussion, the Commission unanimously agreed (**motion:** Lehmann, Silander) to comment as follows:

The Commission is uneasy about the potential wetlands impact of the proposed development. Nearly all of the proposed work on Lots 2 and 3, including engineered septic systems and swales to divert surface water to settling basins, is within the regulated area. Moreover, development of Lot 3 may worsen surface and groundwater problems for abutters Mary & Ross Harper. Don Aubrey of Towne Engineering, whose experience with the parcel dates from his tenure as Mansfield's Town Engineer, has described the hydrology of the area as unusual and not amenable to standard modeling. Wetland plants (observed on the IWA Field Trip) growing outside the mapped wetland testify to inaccurate mapping or unusual hydrology. The length of the watershed yields significant surface and ground water flows, especially after heavy rain, that are a challenge to the Harpers' septic system, basement and yard. The Commission is concerned that the swale and recharge areas proposed for Lots 2 and 3 may concentrate such flows, to the further detriment of the Harpers' property.

b. **W1549 (Jensen Mobile Home Park, Rte. 44).** The applicants tidied up a portion of their property by pushing an estimated 9 yards of earth, stones, stumps, broken pavement, and trash off the edge of a terrace into a wetland. Pursuant to a complaint from a neighbor, Kaufman investigated. At her request, stumps and trash were removed and the applicants have requested a wetlands permit for remediation. They propose seed the slope of fill (about 6 ft high by 100 ft long) with grass covered with straw. There was general agreement that this would not suffice to prevent further damage to the wetland: the slope is steep, shaded, unconsolidated, and vulnerable to erosion. Lehmann asked whether the applicants would be fined for filling a wetland without a permit, but was told that the Town has no ordinance authorizing such fines. After some discussion, the Commission unanimously agreed (**motion:** Soares, Silander) to comment that:

The applicant's unauthorized movement of earth and stones into the wetland has significantly impacted it, and the remediation proposed is not adequate to prevent further damage from erosion. The applicant should consult a professional landscaper about how to stabilize the slope and submit a proposal for doing so, perhaps with shade-tolerant shrubs and netting, that will work. A Jersey barrier or berm should be placed on top to protect the wetland from similar assaults in the future. Finally, the Commission is troubled that the Town apparently

lacks an ordinance authorizing fines to deter violations of wetlands regulations. Had the applicant applied for a permit to dump 9 yards of fill into the wetland, stabilizing it afterward, the permit would (we trust) have been denied. Yet in asking only that the applicant stabilize the slope after the deed is done, the Town is in effect granting such a permit. This is bizarre, and unfair to those who play by the rules.

5. UConn Agronomy Farm. Rep. Greg Haddad has sent Facchinetti the final report on monitoring ground- and well-water in the Storrs Heights area for pesticides used in turf management research at the Agronomy Farm. The report indicates that none of the pesticides disclosed by UConn had been found in wells monitored. Haddad's accompanying e-mail {attached} was cautiously hopeful that the legislature would act to require that integrated pest management be used to the greatest possible extent on state lands.

6. Plan of Conservation and Development. Kessel reported that Town Planner Linda Painter has endorsed nearly all of the Commission's comments the draft PoCD.

7. Adjourned at 9:30p. Next meeting: 7:30p, Wednesday, 17 June 2015.

Scott Lehmann, Secretary, 21 May 2015.

Attachment 1: IWA Field Trip, 13 May 2015

W1549 (Jensen Mobile Home Park, Rte 44). A pile of earth and rocks on a terrace above a wetland was leveled by bulldozing the material over the edge of the terrace into the wetland. Unconsolidated fill now sits at its angle of repose, sloping about 6 ft (vertically) down to the wetland. It's hard to say how much fill was shoved over the edge; one of Jensen's people estimated it to be 7 or 8 yards. There is now a silt fence in the wetland around the sloping material, installed after the deed was done. Wetland plants are visible between the fence and the sloped fill (others are doubtless now buried under the fill). I don't know what W1549 proposes. Jensen's certainly couldn't have gotten approval for dumping fill into the wetland in the first place.

W1548 (Niarhakos, 101 East Rd). This is a revised application for a 3-lot subdivision of property on East Rd formerly owned by Frank Trainor. Here is what the Commission said about the initial application (W1545) from the 17 Dec 14 minutes:

"1) The proposed development strikes the Commission as overuse of a very wet area, requiring engineered septic systems which may have a significant impact on wetlands and on the Harpers' well. 2) Development is likely to impact the Harper property by increasing runoff. 3) The Town should learn the location of wetlands on the Harper property and assess surface water flow onto it. 4) On the developer's map, wetland appears to occupy more of the open space dedication than the 28% allowed."

The Harper property is downhill on East Rd, adjacent to Lot 3.

The revised application W1548 goes some way toward addressing concerns 1) & 2). It moves house sites on Lots 2 and 3 slightly closer to the road, places the reserve leaching field on Lot 3 between the house and the leaching field, and proposes to direct some surface runoff on Lots 2

and 3 via shallow swales into ponds toward the rear of the lots.

On the field trip, we walked in to see the location of the proposed ponds on Lots 2 and 3. There's been no rain to speak of this spring, and we did not encounter any areas with standing water. I did notice wetlands plants outside the marked wetlands boundary at the site of the proposed pond on Lot 2, so I suspect that a more detailed mapping of soils would alter the delineation of wetlands.

Scott Lehmann, 14 May 2015

Attachment 2: Haddad e-mail of 19 May 2015

Neil,

Here is the final report on the testing that occurred as a result of the legislation. As was previously reported, no pesticides were detected.

You might also report that several bills that would regulate pesticide use on state property are currently being considered by the legislature. Sen. Kennedy has taken the lead in negotiating with Sen. Chapin, the Ranking Member on the committee and is fighting to pass the strongest bill possible. It looks like that will mandate that integrated pest management be used to the greatest extent possible on state land. Some versions of the bill that I have seen would have exempted the research farm. I have vigorously and successfully argued against the exemption.

I'm monitoring the bills carefully to ensure that the exemption doesn't make its way into any bill.

UConn hasn't opposed me on this and were actually helpful in working with Sen. Chapin who wanted the exemption in the legislation.

Thanks,

Gregory Haddad
State Representative



Town of Mansfield

Department of Planning and Development

Date: May 28, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: 101 East Road (File #W1548)
C. and L. Niarhakos
Description of work: 3 Lot Subdivision
Map Date: March 30, 2015

Notifications

- The applicant has paid the required application fee
- The applicant has submitted certified mail receipts for notices mailed to abutters
- The applicant has submitted certified mail receipts for notice mailed to Windham Water Works and proof of notice to the Connecticut DPH

Project Overview

The applicants propose to subdivide a 14.56-acre parcel into 3 lots. There is an existing single family dwelling located on the property and the applicants are proposing 2 new lots for single family dwellings east of the existing house. There are two major forested wetlands on the site, which, according to the field survey completed by John Ianni, compose 24.5% of the property. The wetland located on the southwest portion of the property is associated with the existing house lot, and no new activities are proposed here. The wetland that extends from the UConn property south onto the existing property divides lots two and three. The abutting property owners to the east have expressed concern that the proposed subdivision will cause increased runoff onto their property. Mary and Ross Harper of 129 East Road submitted a report dated February 12, 2015 to the Agency detailing these concerns was submitted to the Inland Wetland Agency on February 17, 2015.

Because the majority of the potential impact to wetlands is related to the potential increase in storm water resulting from site disturbance and increase of impervious surfaces, staff referred the application to Derek Dilaj, P.E., Assistant Town Engineer. He has suggested that the applicant consider changes to the site plan and has requested clarification on some portions of the plan. His memo is attached and has been forwarded to the applicant. After the applicants consider the suggested changes and clarifies the site plan, I will request an opinion from the Mansfield Assistant Town Engineer as to whether or not the storm water management proposed as part of the site development is sufficient to manage the potential increased runoff from the proposed development.

The Conservation Commission reviewed the application at its May 20, 2015 meeting and had the following comments:

The Commission is uneasy about the potential wetlands impact of the proposed development. Nearly all of the proposed work on Lots 2 and 3, including engineered septic systems and swales to divert surface water to settling basins, is within the regulated area. Moreover, development of Lot 3 may worsen surface and groundwater problems for abutters Mary & Ross Harper. Don Aubrey of Towne Engineering, whose experience with the parcel dates from his tenure as Mansfield's Town Engineer, has described the hydrology of the area as unusual and not amenable to standard modeling. Wetland plants (observed on the IWA Field Trip) growing outside the mapped wetland testify to inaccurate mapping or unusual hydrology. The length of the watershed yields significant surface and ground water flows, especially after heavy rain, that are a challenge to the Harpers' septic system, basement and yard. The Commission is concerned that the swale and recharge areas proposed for Lots 2 and 3 may concentrate such flows, to the further detriment of the Harpers' property.

On May 27, 2015, I walked the property to with John Ianni, the client's wetland scientist, to review the wetland boundary. We walked the perimeter of the wetland boundary that separates lots 2 and 3. Core samples were taken outside of the delineated wetland in areas where there was evidence of surface drainage and wetland plants. There was no evidence of wetland soils beyond the delineated edge of wetlands. Eastern Highlands Health District was consulted regarding the site's suitability for development. Chief Sanitarian, Jeffrey Polhemus, stated that development would only be approved if the site met the requirements outlined in the CT Public Health Code.

The applicants propose to install a storm water drainage structure at an existing culvert on East Road at the edge of lot 3. This will disturb 82 square feet of wetlands but will improve a damaged headwall at an existing drainage structure which currently poses a safety hazard along East Road. The wetlands in this location are a result of surface drainage. Also, on lot 3, the applicant should consider moving the detention pond further north so that surface drainage is directed as far away as possible from the abutting property to the east. The storm water recharge area proposed for lot 2 is located 10 feet from the edge of wetlands. Consideration should be given to moving this further away from the edge of wetlands if sufficient storm water management can be achieved by doing so.

Recommendation

I recommend that the Agency start the hearing as scheduled on June 1st to obtain public comment and keep the hearing open until July 6, 2015 to allow the applicant to address comments made by staff and the public.



TOWN OF MANSFIELD
DEPARTMENT OF PUBLIC WORKS

Engineering Division

AUDREY P. BECK BUILDING
FOUR SOUTH EAGLEVILLE ROAD
MANSFIELD, CT 06268-2599

From: Derek M. Dilaj, P.E., Assistant Town Engineer
To: Linda Painter, AICP, Town Planner
Copy: John Carrington, P.E., Town Engineer
Date: May 21, 2015
Date Received: May 21, 2015
Date Reviewed: May 21, 2015
Engineering Project #: E-141510
Re: Williams Heights Parcel "A" Resubdivision
Primary Designer: Edward Pelletier, LS
Datum Engineering and Surveying, LLC
132 Conantville Road
Mansfield, CT 06250
Plans: "Boundary Plan for Resubdivision entitled Williams Heights Parcel 'A',
East Road, Storrs, CT, Owner and Subdivider Christopher W. &
Lindsey L. Niarhakos, 68 Brookside Lane, Mansfield Center, CT
06250" 4 Sheets (Unstamped),
Dated: March 30, 2015

The Town of Mansfield Engineering division reviewed the provided plan set on the basis for impacts to the Inland Wetlands and consistency with the regulations from the Town of Mansfield Inland Wetlands Regulations, as referenced below. Upon application to the Planning and Zoning Commission further review shall be conducted based upon those regulations.

Sheet 2 of 4

1. In accordance with Regulation 7.4(G), the Applicant should consider alternatives including; moving the stormwater pond up gradient on Lot #2 to increase the distance from the inland wetlands boundary and moving the stormwater pond towards the northeast to increase distance from the down-gradient home.
2. In accordance with Regulation 7.4(F), the Applicant should extend silt fencing towards East Road on Lot #2 and Lot #3 due to grading for driveway.
3. In accordance with Regulation 7.4(F), the Applicant should extend proposed silt fencing to ensure the loam stockpile on Lot #3 maintains Erosion and Sedimentation Controls.

Sheet 3 of 4

4. In accordance with Regulation 7.4(F), the Applicant shall prepared hydraulic computations for the inlet structure demonstrating the capacity of the cross culvert is maintained.

5. In accordance with Regulation 7.4(F), the Applicant shall install a straw bale check dam in front the proposed inlet structure to minimize sedimentation due to disturbed area following installation.
6. The Applicant should provide clarification on Note 17 on Sheet 2 regarding Stormwater Pond request for Determination from CTDEEP.

Sheet 4 of 4

7. The Applicant shall utilize straw bales in lieu of hay bales as referenced in Note 4 of House Site Development.
8. In accordance with Regulation 7.4(F), the second general note shall be amended to require that flow from dewatering activities will be directed into a sedimentation basin separate from the storm water / ground water recharge area to prevent siltation of the recharge area prior to use.
9. In accordance with Regulation 7.5(B), the Applicant shall prepare an operation and maintenance plan for drainage structures to ensure intended function of the proposed swales and recharge area is maintained. The individual responsible for the plan shall be identified and/or recorded.
10. In accordance with Regulation 7.5(B), the Applicant shall provide a design to minimize potential blockages of the small diameter orifices presently proposed.
11. The Applicant shall clarify the minimum depth versus the grading shown for the Storm Water / Ground Water Recharge Area.

Stormwater Management Plan

12. The Applicant shall include submission of calculations for Time of Concentration.
13. The Applicant should provide a discussion in the event one of the orifices is blocked due to debris and the function of the stormwater management system as a result.
14. The Applicant shall evaluate the 100 year event to confirm capacity of the rip rap overflow if required.
15. The Applicant should confirm capacity of the riprap overflow to confirm capacity if both orifices were to become blocked.



TOWN OF WINDHAM
WATER WORKS

174 Storrs Road
Mansfield Center, CT 06250
Tel. 860-465-3075 • FAX 860-465-3085

- Inland Wetlands Commission
- Zoning Commission
- Planning & Zoning Commission
- Zoning Boards of Appeals

- TOWN:
- | | | |
|------------------------------------|---|-----------------------------------|
| <input type="checkbox"/> Ashford | <input type="checkbox"/> Chaplin | <input type="checkbox"/> Eastford |
| <input type="checkbox"/> Hampton | <input checked="" type="checkbox"/> Mansfield | <input type="checkbox"/> Pomfret |
| <input type="checkbox"/> Union | <input type="checkbox"/> Willington | <input type="checkbox"/> Windham |
| <input type="checkbox"/> Woodstock | | |

INSPECTED BY:



Troy Quick W.W.W. Watershed Inspector

DATE: April 20, 2015 WW file #M0315

The Windham Water Works has received notification of a proposed project per the requirements of Public Act 89-301.

PROJECT DESCRIPTION:

3-lot subdivision with existing dwelling and 2 proposed lots for single family dwellings with on-site septic systems & wells.

Applicant: Christopher & Lindsey Niarhakos

COMMENTS:

The Windham Water Works has reviewed the proposed project and with best management practices and with proper soil and erosion control measures throughout the duration, we would have no objections, we will monitor accordingly.

PAGE
BREAK



Department of Planning and Development

Date: May 28, 2015

To: Mansfield Inland Wetlands Agency

From: Jennifer Kaufman, Inland Wetlands Agent

Subject: Receipt of New Application for Wetlands License
Jensen's Rolling Hills Mobile Home Park, Middle Turnpike (IWA File #W1549)
Jensen's Inc.
Description of work: Site Restoration

Notifications

- The applicant has paid the required application fee
- The applicant has submitted certified mail receipts for notices mailed to abutters

Project Description

In early April 2015, facility staff at Jensen's Rolling Hills Mobile Home Park pushed approximately 9 cubic yards of soil, stones, and logs into wetlands located at the southern end of the property. The wetlands drain into the Cedar Swamp Brook. To restore the disturbed area, the applicant proposes to stabilize the slope by seeding and mulching. The slope is steep and shaded and it is my opinion that seeding and mulching will not sufficiently stabilize the disturbed area. I have recommended that the applicant submit a more complete plan for restoration and slope stabilization.

The Conservation Commission raised a concern that there is no mechanism to fine for wetlands violations. According to CGS Chapter 440 Sec. 22a-42g (a) Any municipality may establish, by ordinance, a fine for violations of regulations adopted pursuant to section 22a-42. The Agency should consider recommending that the Town Council consider such an ordinance.

Recommended Motion

_____ MOVES, and _____ seconds, to postpone action on the application submitted by Jensen's Inc. (IWA File #W1549) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for wetland restoration on property owned by the applicant, located at Jensen's Rolling Hills Mobile Home Park, Middle Turnpike as shown on a map dated 4/14/2015 to allow the applicant to submit a more detailed restoration plan.

PAGE
BREAK



Town of Mansfield

Department of Planning and Development

Date: May 27, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: Storrs Center Phase 3 (File # W1378)
Lou Marquet, Leyland Alliance
Storm Water Improvements (Map Date: 5/14/2015)

Background

On October 1, 2007, the Mansfield Inland Wetlands Agency approved an inland wetlands license for Storrs Center (File # W1378). Condition 3 in the license states "Any revisions to the Storm Water Management Plan shall be reviewed and approved by the Inland Wetlands Agency prior to installation." The plans dated 5/14/2015 submitted as part of the zoning application for Phase 3, depict minor changes to the original design for the storm water management system. While it is both the Assistant Town Engineer's and my opinion that these proposed changes are consistent with the Master Storm Water Drainage Study for Storrs Center prepared by BL Companies in 2006, I want to bring the design changes to your attention, per the condition of the approval cited above.

The original plan, dated 6/25/2007 and submitted as part of the approved wetlands permit application, showed three terraced wet meadows at the eastern edge of the property. Since the development of this Preliminary Master Plan, the layout of the residential units has changed and the residential units extend further east within the enclosed urban footprint. To accommodate this revised layout and roadway configuration, the applicant shifted the storm water basins to the south and lengthened them to cover more of the development perimeter. Both the Assistant Town Engineer and I believe that this design offers an improvement to the terraced wet meadows shown in the shown on the plan dated 6/25/2007.

While the basins have been shifted, the storm water will be managed in a manner consistent with the Master Storm Water Drainage Study for Storrs Center prepared by BL Companies in 2006. This modification will improve the basins ability to dissipate storm water flows to the watercourse on the southern end of the property through a leaky stone berm. Further, the proposed Phase 3 adjustment slightly increases the volume of the storm water basin, even though the amount of impervious coverage will decrease as compared to the original plan. Overall, Phase 1, 2 and 3, include a one-acre reduction in impervious surface due to the construction of a surface parking lot that uses 0.65 acres of impervious pavement in lieu of the

originally proposed parking garage and as a result of lower residential unit density, 0.35 acres of additional green space is replacing hardscape.

I also want to bring your attention to a minor change in the enclosed urban footprint. The urban footprint represents the limits of development for the project. To accommodate a required fire access lane, the proposed Phase 3 plan adjusts the enclosed urban footprint line to the north of the clubhouse and to the east of Storrs Building #4, bringing the boundary of the urban footprint (limit of development) between 5 and 14' feet closer but still a minimum of 282 feet away from the vernal pool. This area is outside of the watershed that drains to the vernal pool, as this area is located west of the "knob" that forms the hilltop. Water from this area drains to the west/north/south eventually ending up in the wetland areas after located to the north and south of the development area. It is my opinion that the minor change to the urban footprint poses no significant impact to the wetlands. To offset the adjustment to the urban footprint line and ensure a net zero square-foot change, the applicant proposes to move the boundary on the north side of Eagleville/Mansfield building #8 further away from the vernal pool.

Recommendation

While there have been minor adjustments to the plans submitted as part of the IWA's approval (File # W1378), it is the opinion of staff that these changes pose no significant impact to the wetlands and storm water will be managed on the site in a manner that is consistent with the Master Storm Water Drainage Study for Storrs Center prepared by BL Companies in 2006. In addition, while the enclosed urban footprint has been modified, there is no increase to the enclosed urban footprint area and this modification poses no significant impact to wetlands.

Motion for Consideration by the Agency

If the IWA concurs with my conclusion that the proposed modifications to Storrs Center Phase 3 as shown on a map dated 5/14/2015 are consistent with the original wetland permit (File # W1378) approved on October 1, 2007, the following motion is in order:

_____ MOVES, _____ seconds that the proposed adjustments to Storrs Center Phase 3 noted on a map dated 5/14/2015 is consistent with the original wetland permit (File # W1378) approved on October 1, 2007.

STORM STRUCTURE TABLE			
NAME	DETAILS	NAME	DETAILS
PCS 100	FF = 816.0 INV = 816.0	PCS 200	FF = 816.0 INV = 816.0
CS 101	FF = 812.0 INV = 808.0	CS 201	FF = 808.0 INV = 804.0
CS 102	FF = 813.0 INV = 810.0	CS 202	FF = 809.0 INV = 805.0
MS 103	FF = 814.0 INV = 810.0	CS 203	FF = 808.0 INV = 804.0
CS 104	FF = 813.0 INV = 809.0	CS 204	FF = 810.0 INV = 806.0
CS 105	FF = 813.5 INV = 809.5	MS 205	FF = 810.5 INV = 806.5
CS 106	FF = 813.5 INV = 809.5	CS 206	FF = 811.0 INV = 807.0
MS 107	FF = 813.0 INV = 809.0	PCS 207	FF = 810.0 INV = 806.0
CS 108	FF = 811.0 INV = 807.0	CS 208	FF = 808.0 INV = 804.0
CS 109	FF = 812.0 INV = 808.0	CS 209	FF = 809.0 INV = 805.0
CS 110	FF = 812.0 INV = 808.0	CS 210	FF = 809.0 INV = 805.0

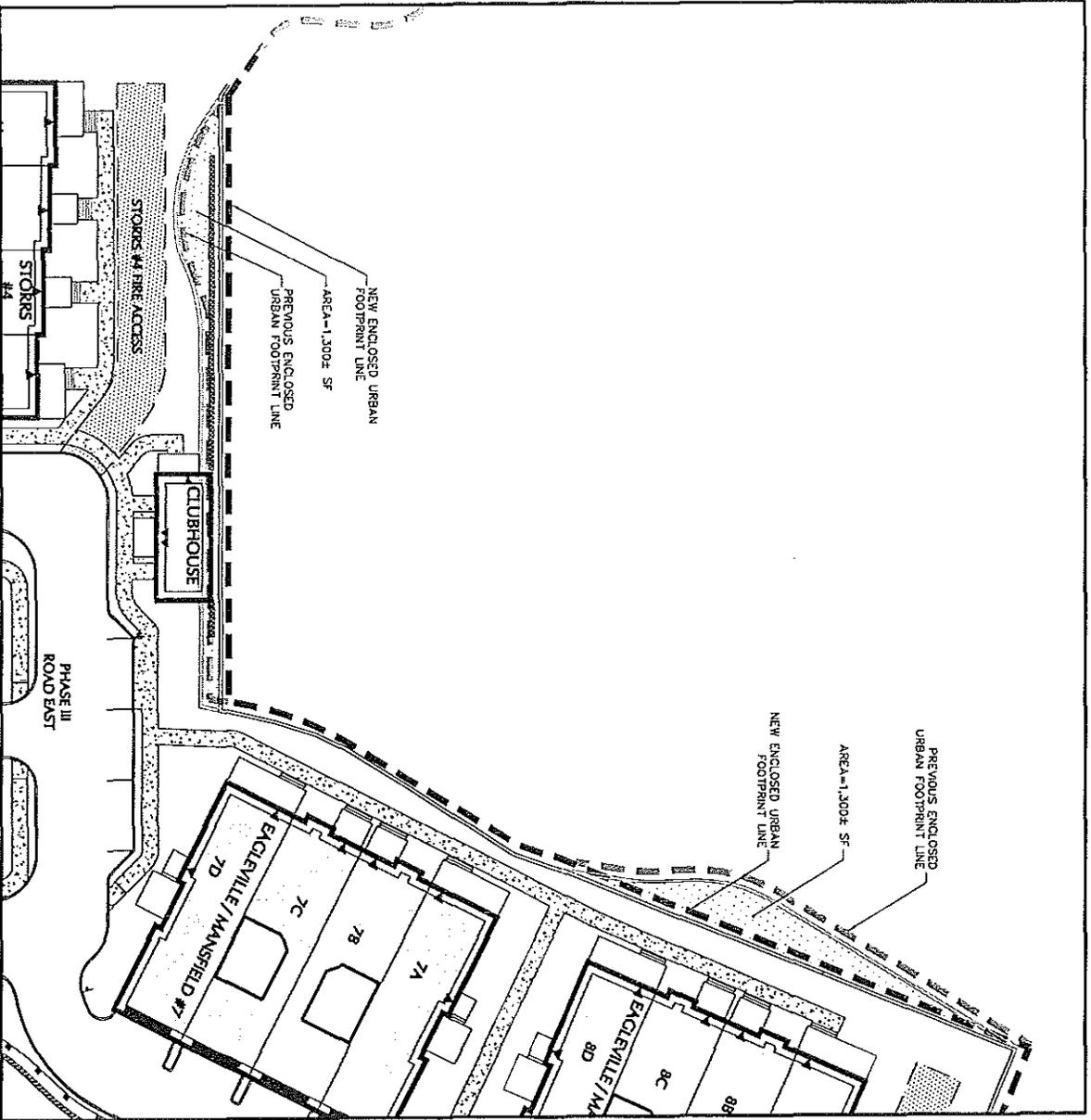


NOT FOR CONSTRUCTION

Date	Description	No.
REVISIONS		
Project STORRS CENTER PHASE III		
Drawing Title STORMWATER BASIN EXHIBIT		
Project No. 140200001	Drawing No. EX.1	
Date MAY 14, 2018	Scale 1"=30'	
Drawn By CSZ	Checked By [Signature]	



PROJECT NO. 140200001



ENCLOSED URBAN FOOTPRINT LINE REVISION



Via Hand Delivery

May 26, 2015

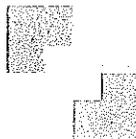
Linda Painter
Director of Planning & Development
Audrey P. Beck Municipal Building
4 South Eagleville Road
Mansfield, CT 06268

**Re: Main Street Homes – Storrs, LLC
Application for Zoning Permit
Storrs Center Special Design District
Phase 3 Main Street Homes**

Dear Linda:

We recently submitted an application for zoning permit approval for the Phase 3 Main Street Homes at Storrs Center. The plan for Phase 3 Homes includes a few *very minor* changes to the original design for the stormwater management system. This letter is for the purpose of requesting that the Inland Wetland Agency review the application, confirm that it does not propose a significant alteration to the original inland wetland permit for Storrs Center that was approved in October, 2007 (IWA File #W1378), and approve the minor stormwater management plan modifications.

Enclosed is a memorandum prepared by Langan Engineering that summarizes Langan's review of the proposed minor changes to the stormwater management system. In short, this application is an improvement over the stormwater management design contained in the original inland wetland approval. This plan includes fewer dwelling units, less impervious coverage, more detention basin capacity, and better layout of the basins for stormwater quality enhancement.



STORRS
RETHINK MAIN STREET
CENTER

It is our sincere hope that the Inland Wetland Agency will review and decide this at its June 1, 2015 meeting. Please let me know if you have any questions or require anything further.

Sincerely,

Louis G. Marquet
Storrs Center Alliance, LLC
Main Street Homes – Storrs, LLC

Enclosure

Langan CT, Inc.

555 Long Wharf Drive New Haven, CT 06511 T: 203.562.5771 F: 203.789.6142

To: Jennifer Kaufman

From: Timothy Onderko, PE
Christopher Van Zanten, P.E.

Info: Lou Marquet, Leyland Alliance

Date: 14 May 2015

Re: Zoning Permit Application, Storrs Center Phase 3
Stormwater Management Improvements
Mansfield, Connecticut
Langan Project No.: 140105801

As requested during our May 12, 2015 meeting Langan has reviewed the proposed Storrs Center Phase 3 development plans as well as the Preliminary Master Plan and Master Stormwater Drainage Study previously approved for the Storrs Center Special Design District. The following memorandum summarizes our findings.

Overview of Findings

Following is a brief summary of our findings regarding the proposed plan for Phase 3 Homes:

1. The proposed plan includes fewer residential units than was approved in the original Preliminary Master Plan.
2. The proposed plan includes less impervious coverage than was approved in the original Preliminary Master Plan.
3. The proposed plan includes no net change in the area located within the Enclosed Urban Footprint Line. A slight modification of the line increases the distance between the vernal pool to the east and the limits of disturbance of the project.
4. The proposed plan slightly increases the volume of the stormwater management basins in this phase, even though the amount of impervious coverage will decrease as compared to the original approved plan.
5. By shifting the stormwater basin locations to cover more of the development perimeter, the proposed plan increases the length of the stormwater management basins that are closest to the watercourse to the south. This modification will improve the basins' ability to dissipate stormwater flows through the "leaky stone berm" features of the basins.

6. The proposed plan is an improvement over the approved Preliminary Master Plan in its protection of the nearby wetlands and watercourses.

Enclosed Urban Footprint

The Preliminary Master Plan for Storrs Center, prepared by BL Companies, established an enclosed urban footprint line that created a physical boundary outlining the limit of development around the perimeter of the Phase 3 area of Storrs Center. The purpose of the enclosed urban footprint line was to limit the amount of development located within 750 feet of the vernal pool located to the east, and to identify the location for a concrete amphibian barrier.

The proposed plan for the Phase 3 Homes includes a small revision to the enclosed urban footprint line. This revision includes an adjustment of the line to the north of the clubhouse and to the east of Storrs Building #4 to provide additional room to grade for a fire access lane as requested by Fran Raiola of the Mansfield Fire Department. This area is located west of the existing rock outcrop (which is the limit of the drainage area to the existing vernal pool) and drains to the west and north. This will have no impact on watershed limits or drainage patterns.

To offset the adjustment to the urban footprint line described above (and to ensure a net zero square-foot change in the urban footprint area), the proposed design includes revision of the enclosed urban footprint line on the north side of the Eagleville/Mansfield #8 building. As shown on the Legend and General Notes Sheet CS002, the proposed exchange includes a one-to-one exchange of area totaling approximately 1,300 square-feet. This exchange will actually increase the development's separation distance from the vernal pool to the north of Eagleville/Mansfield building #8. As included in previous phases of Storrs Center, a concrete amphibian barrier is proposed adjacent to the enclosed urban footprint.

Master Stormwater Drainage Study

The proposed stormwater management features for Storrs Center, Phase 3 have been designed to be consistent with the Master Stormwater Drainage Study for Storrs Center, prepared by BL Companies in 2006. The proposed stormwater management design and layout has been modified from the Preliminary Master Plan to accommodate the specific Phase 3 building layout, roadway configuration, and to distribute the stormwater filter basin along the north edge of the southern wetlands. This included locating the proposed buildings further to the east in the eastern portion of the site. The overall amount of impervious surface east of the Phase 2 East Side Access Road has been decreased from that approved as part of the Preliminary Master Plan. The current plans provide for a reduction of 1.0 acres of impervious area through the incorporation of a surface parking lot that uses pervious pavement (0.65 acres) and additional green space (0.35 acres). The additional green space is a function of the lower unit density and a reduction in associated hardscape.

The proposed design includes the construction of three Filter Basins FB-B1, FB-B5, and FB-B6. Each of these filter basins will be installed with "leaky" stone walls and will discharge, via an outlet control structure, to the same outlet points proposed in the Preliminary Master Plan. Filter Basin FB-B1's location is unchanged from that proposed in the Preliminary Master Plan.

MEMO

WM-1, WM-2 and WM-3 from the Preliminary Master Plan have been shifted to the southern perimeter of the development to form FB-B5 and FB-B6. We believe this change provides a net benefit to the stormwater management system as the new configuration allows for an increased use of the "leaky" stone walls, which dissipate stormwater flows over a greater linear footage thereby reducing the point discharge that was part of the Preliminary Master Plan. The length of "leaky" stone walls will increase from the 65 linear feet proposed as part of the Preliminary Master Plan in wet meadow WM-B3 to approximately 450 linear feet with the current design.

Additionally, the current design provides a slightly greater storage volume than that of the Preliminary Master Plan, and peak discharge rates are maintained or lowered. The current design increases the opportunity for flows to be dissipated through the "leaky" stone walls thereby limiting the reliance on the outlet control structure.

We believe that the current design is consistent with the design intent of the Preliminary Master Plan and Master Stormwater Drainage Study. Several minor changes have been proposed which improve the overall functioning of the stormwater management system and the protection of nearby wetlands and watercourses. The calculations submitted for Storrs Center Phase 3 demonstrate that the proposed filter basins have been designed to attenuate the peak stormwater flow rates and volumes identified in the Master Stormwater Management Plan. The proposed design includes less impervious surface east of the East Side Access Road than was approved as part of the Preliminary Master Plan. Additionally, the proposed filter basins are designed to promote stormwater quality and the overall design provides additional storage as compared to the design provided in the Master Stormwater Drainage Study. The reduced impervious surface associated with the current design is also expected to generate less runoff and lower runoff rates than the original Master Plan design.





Department of Planning and Development

Date: May 28, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: Receipt of New Application for Wetlands License
601 Storrs Road (IWA File #W1550)
William St. Martin
Description of work: dredging an existing pond

Project Description

The applicant proposes to dredge an existing 4000 square foot pond and remove approximately 580 cubic yards of material. The excavated material will be stockpiled and distributed on site. The property is located within the Schoolhouse Brook Watershed and is within an area indicated on the CT DEEP Natural Diversity Database Map. Because the proposed activity is in the wetland, the applicant has been directed to send a copy of the application to the CT DEEP for review.

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.
- The project is located in a Public Water Supply Watershed.

Application Fees and Notifications

- The applicant has paid the required application fee
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.
- The applicant has submitted copies of notices provided to the Connecticut DPH and Windham Water Works. Certified mail receipts must be submitted prior to action on the application.
- Natural Diversity Database has been checked and state and/or federal listed species or significant natural communities may be located on the property.

Receipt Motion

_____ MOVES, _____ seconds to receive the application submitted by William St. Martin (IWA File #W1550) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for dredging an existing pond on property located at 601 Storrs Road



Department of Planning and Development

as shown on a map dated 5/24/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

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

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

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

A) Clear cut an existing 4000 sq ft Pond with excavator

B) Stockpile material from pond with excavator

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

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

a) 4000 sq ft

b) ~~12800~~ 3000 sq ft at Stock Pile Area

3) Describe the type of materials you are using for the project: Sand, Stone, Silt fence, Hay bales

- a) include **type** of material used as fill or to be excavated Pond material, Sand
- b) include **volume** of material to be filled or excavated 580 yd of Pond material excavated

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

use of silt fence

Part D - Site Description

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

Hilly

Part E - Alternatives

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

There is none

Part F - Map/Site Plan (all applications)

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

- 2) Applicant's map date and date of last revision 5/24/2015
- 3) Zone Classification RAR-90
- 4) Is your property in a flood zone? Yes No Don't Know

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

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

- 1) Attach list of abutters, name, and address
- 2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

Part I - Additional Notices, if necessary

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

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

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

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes No ___ Don't Know

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

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

Part K - Additional Information from the Applicant

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

Part L - Filing Fee

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

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

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

William H. Martin
Signature

5-20-15
Date

Authorization to Enter Property

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

William H. Martin
Signature

5-20-15
Date

EROSION CONTROL NOTES

GENERAL REQUIREMENTS FOR EROSION CONTROL:

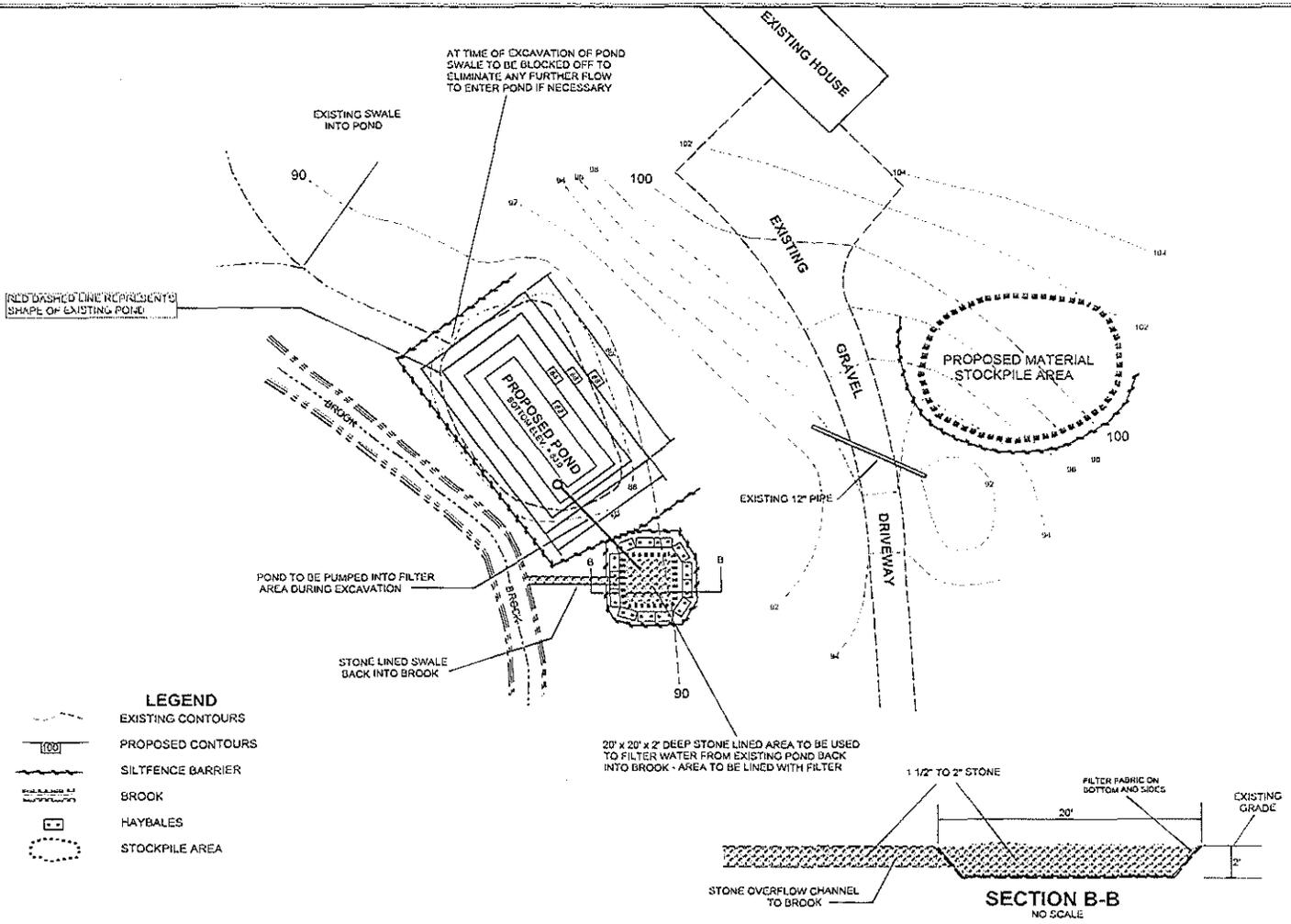
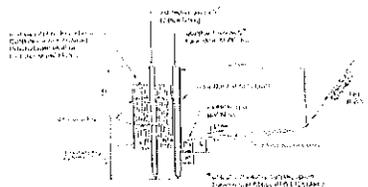
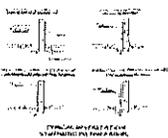
1. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD TO PREVENT SOIL EROSION AND TO CONTROL THE RATE OF EROSION. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF THE SOIL SURFACE AND TO CONTROL THE RATE OF EROSION. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF THE SOIL SURFACE AND TO CONTROL THE RATE OF EROSION.

EXCAVATIONS, FILLS AND GRADING:

1. ALL EXCAVATIONS SHALL BE PROTECTED BY EROSION CONTROL MEASURES. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF THE SOIL SURFACE AND TO CONTROL THE RATE OF EROSION. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF THE SOIL SURFACE AND TO CONTROL THE RATE OF EROSION.

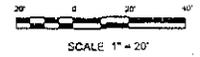
IMPLEMENTATION PROCEDURES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD TO PREVENT SOIL EROSION AND TO CONTROL THE RATE OF EROSION. EROSION CONTROL MEASURES SHALL BE DESIGNED TO PREVENT EROSION OF THE SOIL SURFACE AND TO CONTROL THE RATE OF EROSION.



- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - SILTFENCE BARRIER
 - BROOK
 - HAYBALES
 - STOCKPILE AREA

PROPOSED POND IMPROVEMENTS
 PLAN PREPARED FOR
WILLIAM & JOY ST. MARTIN
 601 STORRS ROAD - MANSFIELD, CONNECTICUT



DATE - MAY 24, 2015

PAGE
BREAK



Department of Planning and Development

Date: May 28, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: Receipt of New Application for Wetlands License
93 Candide Lane (IWA File #1551)
Mark McDonald
Description of work: Installation of above-ground pool

Project Description

The applicant proposes to install a 25-foot above-ground pool approximately 36 feet from the edge of wetlands. The west side of the property will be graded using approximately 30 cubic yards of fill.

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.
- The project is located in a Public Water Supply Watershed.

Application Fees and Notifications

- The applicant has paid the required application fee
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.

Receipt Motion

_____ MOVES, _____ seconds to receive the application submitted by Mark McDonald (IWA File #1551) under the Wetlands and Watercourses Regulations of the Town of Mansfield for Installation of above-ground pool on property located at 93 Candide Lane as shown on a map dated 5/14/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

PAGE
BREAK

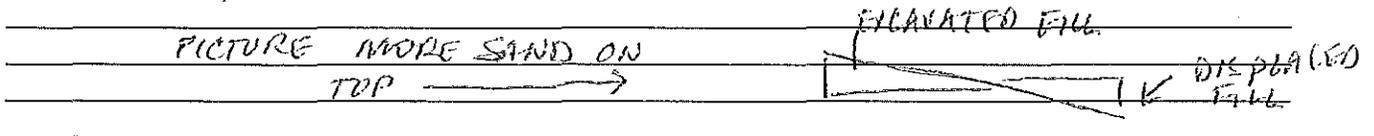
Part C - Project Description (attach extra pages, if necessary)

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

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

I WILL BE LEVELING A PAD FOR A 25' ABOVE GROUND POOL. ON THE WEST SIDE OF THE POOL, I WILL BE DIGGING APPROXIMATELY 18", MOVING THE FILL TO THE EAST EDGE OF THE PAD. I WILL BE ADDING CLEAN FILL TO BRING THE ENTIRE AREA LEVEL IN THE FORM OF SAND. I APPROXIMATE LESS THAN 30 CUBIC YARDS TO COMPLETE THIS. THIS IS A ROUGH ILLUSTRATION OF THE SIDE VIEW:



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

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

MY LAND IS ADJACENT TO THE WATERCOURSE. THE POOL AREA IS APPROXIMATELY 450 SQ FEET. THERE WILL BE NO DISTURBANCE TO THE WATERCOURSE.

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

SAND

- a) include **type** of material used as fill or to be excavated SAND
- b) include **volume** of material to be filled or excavated LESS THAN 30 CU YARDS

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

I PLAN ON BUILDING A RETAINING WALL AND EVENTUALLY DECKING AROUND THE WEST/NORTH SIDES OF THE POOL.

Part D - Site Description

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

HILLY. LOTS OF ROCKS. HOPEFULLY, NOT SHELF. WELL DRAINED

Part E - Alternatives

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

THESE WILL BE MINIMAL IMPACT

Part F - Map/Site Plan (all applications)

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

2) Applicant's map date and date of last revision 5/14/2015 ?

3) Zone Classification WETLANDS

4) Is your property in a flood zone? Yes No Don't Know DON'T BELIEVE IT IS...

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

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters.** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. **Postal receipts of your notice to abutters must accompany your application.** To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

Part I - Additional Notices, if necessary

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

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

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

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes ___ No ___ Don't Know

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

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

Part K - Additional Information from the Applicant

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

Part L - Filing Fee

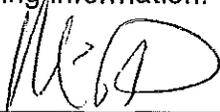
Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

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

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.



Signature

5/26/2015

Date

Authorization to Enter Property

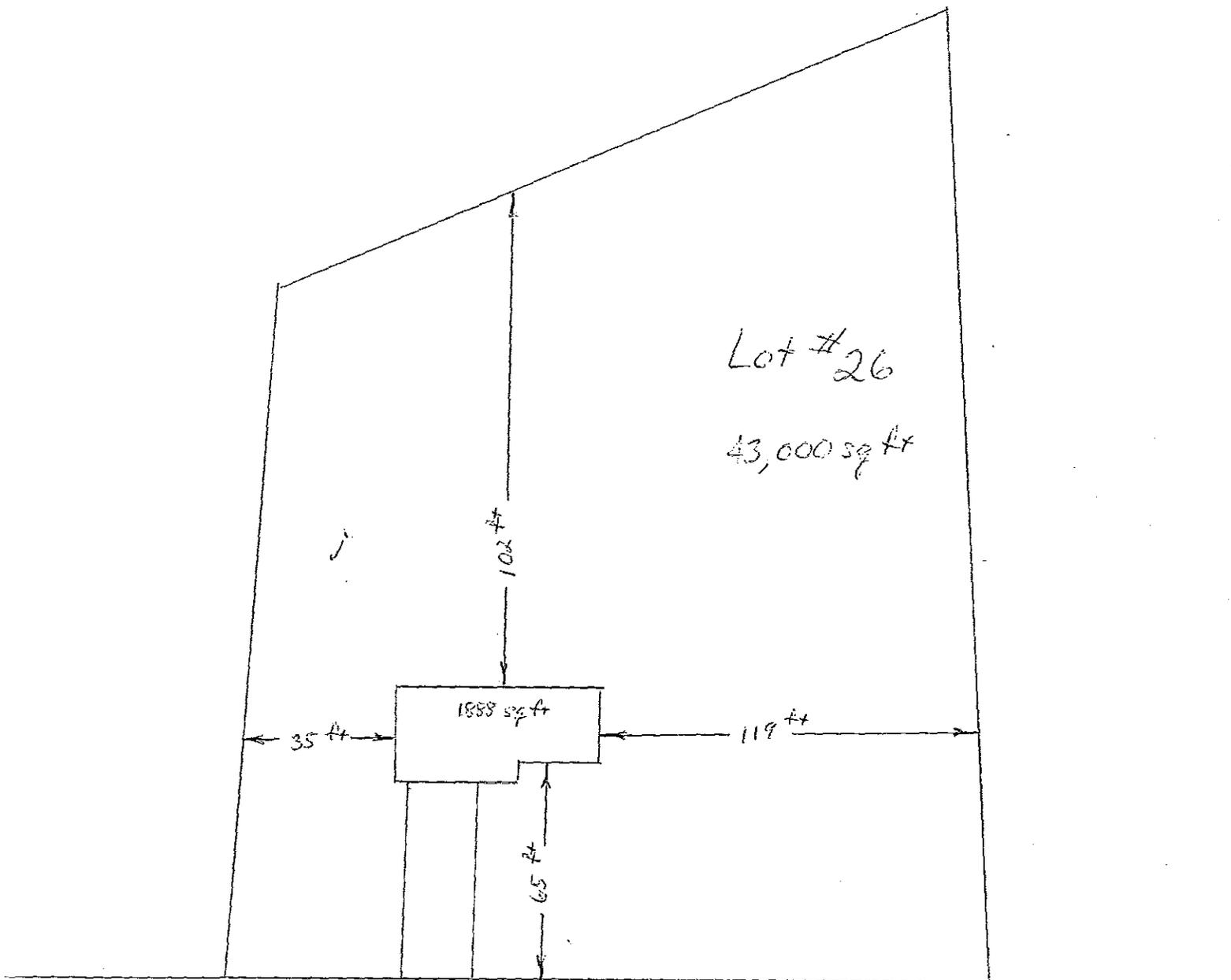
The undersigned hereby consent to necessary and proper inspections of the above-mentioned property by members and agents of the Inland Wetlands Agency at reasonable times, both before and after the permit in question has been issued by the Agency.

Signature

Date

B+B

Home Builders
Inc.



Lot #26

43,000 sq ft

1888 sq ft

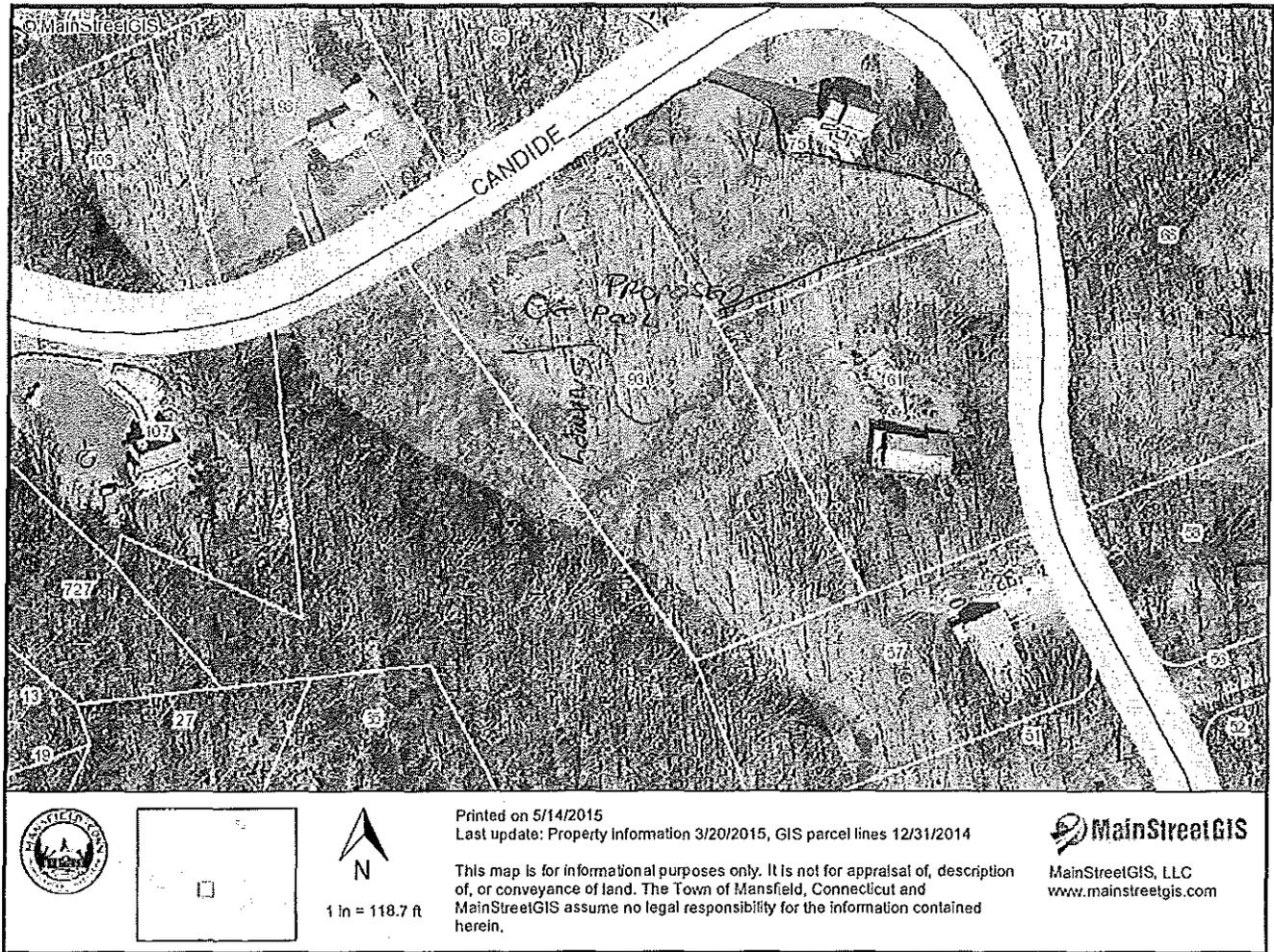
35 ft

102 ft

119 ft

65 ft

Candide Lane



MARK McDONAVO
93 CANDIDE LANE
STARRS CT
06268
860-614-6119

PAGE
BREAK



Department of Planning and Development

Date: May 28, 2015
To: Mansfield Inland Wetlands Agency
From: Jennifer Kaufman, Inland Wetlands Agent
Subject: Receipt of New Application for Wetlands License
357 Gurleyville Road (TWA File #W1552)
Larry and Laurie Wasiele
Description of work: one-bedroom addition

Project Description

The applicants propose to add a one bedroom addition on a 19 foot and seven inch by 20 foot foundation approximately 50 feet from the edge of wetlands. Approximately 147 cubic yards of material will be excavated and removed from the site.

- The project includes work in wetlands.
- The project includes work in the 150 foot upland review area.
- The project is located in a Public Water Supply Watershed.

Application Fees and Notifications

- The applicant has paid the required application fee
- The applicant has submitted copies of the notice mailed to neighbors and a list of abutters to be notified. Certified mail receipts must be submitted prior to action on the application.
- The applicant has submitted copies of notices provided to the Connecticut DPH and Windham Water Works. Certified mail receipts must be submitted prior to action on the application.

Receipt Motion

_____ MOVES, _____ seconds to receive the application submitted by Larry and Laurie Wasiele (TWA File #W1552) under the Inland Wetlands and Watercourses Regulations of the Town of Mansfield for a one-bedroom addition on property located at 357 Gurleyville Road as shown on a map dated 5/28/2015 and as described in application submissions, and to refer said application to staff and the Conservation Commission for review and comments.

PAGE
BREAK

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

1) Describe in detail the proposed activity here or on an attached page. (See guidelines at end of application)

Please include a description of all activity or construction or disturbance:

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

Add a 19'7" x 20' Foundation for a one story bedroom.
Excavated material will be removed and not stored on property. Approx 147 cu.yrds

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

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

Nothing in the watercourse
400 Sq. Ft. Bedroom 60' from center of intermittent brook

3) Describe the type of materials you are using for the project: concrete foundation
wood construction

- a) include type of material used as fill or to be excavated gravel fill
- b) include volume of material to be filled or excavated 147 cu yds taken away
back fill with gravel

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

Silt fence

Part D - Site Description

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

Slight hill

Part E - Alternatives

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

There is no practical alternative

Part F - Map/Site Plan (all applications)

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

2) Applicant's map date and date of last revision _____

3) Zone Classification _____

4) Is your property in a flood zone? Yes No Don't Know Too High up hill

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

See Section 6 of the Mansfield Regulations for additional requirements.

Part H - Notice to Abutting Property Owners

1) Attach list of abutters, name, and address

2) **Proof of Written Notice to Abutters:** You must notify abutting (neighboring) property owners (any property immediately contiguous with the subject property, including those across the street) by certified mail, return receipt requested, stating that a wetland application is in progress, and that abutters may contact the Mansfield Inland Wetlands Agent for more information. Include a brief description of your project. Postal receipts of your notice to abutters must accompany your application. To generate an abutters list go to <http://www.mainstreetmaps.com/CT/Mansfield/>

Part I - Additional Notices, if necessary

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

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

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

Part J - Other Impacts To Adjoining Towns, if applicable

- 1) Will a significant portion of the traffic to the completed project on the site use streets within the adjoining municipality to enter or exit the site? ___ Yes ___ No Don't Know

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

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

Part K - Additional Information from the Applicant

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

Part L - Filing Fee

Application fees shall be in accordance with the current Mansfield Code of Ordinance fee Schedule, pursuant to Section 8-1c of the Connecticut General Statutes. The fee schedule includes provisions for applicant-funded consultant studies and reports. The current fee schedule is available in the Planning and Zoning office.

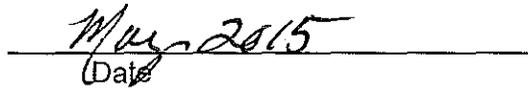
Note: The Agency may require additional information about the upland review area or about wetlands or watercourses affected by the regulated activity. If the Agency, upon review of your application, finds the activity proposed may involve a "significant activity" as defined in the Regulations, additional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

Certification

I hereby certify that:

- I am familiar with the information contained in this form and that such information is true and correct to the best of my knowledge.
- I understand the penalties for obtaining a permit through deception or through inaccurate or misleading information.

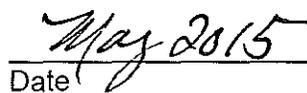

Signature


Date

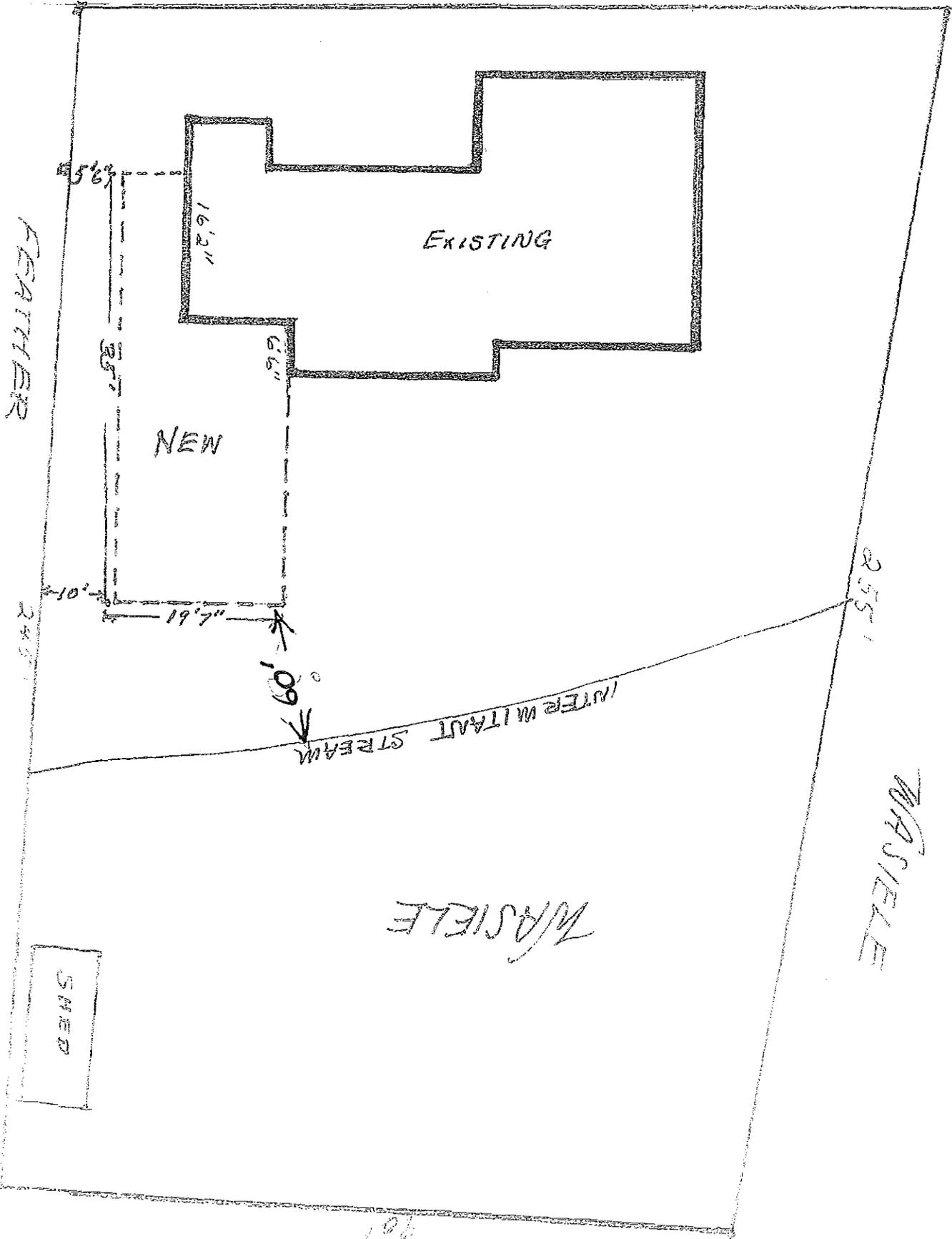
Authorization to Enter Property

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


Signature


Date

1151 GURLEYVILLE ROAD



FEATHER

255'

WASIELE

WASIELE

INTERMITTENT STREAM

NEW

EXISTING

5'6"

85'

16.2'

6'6"

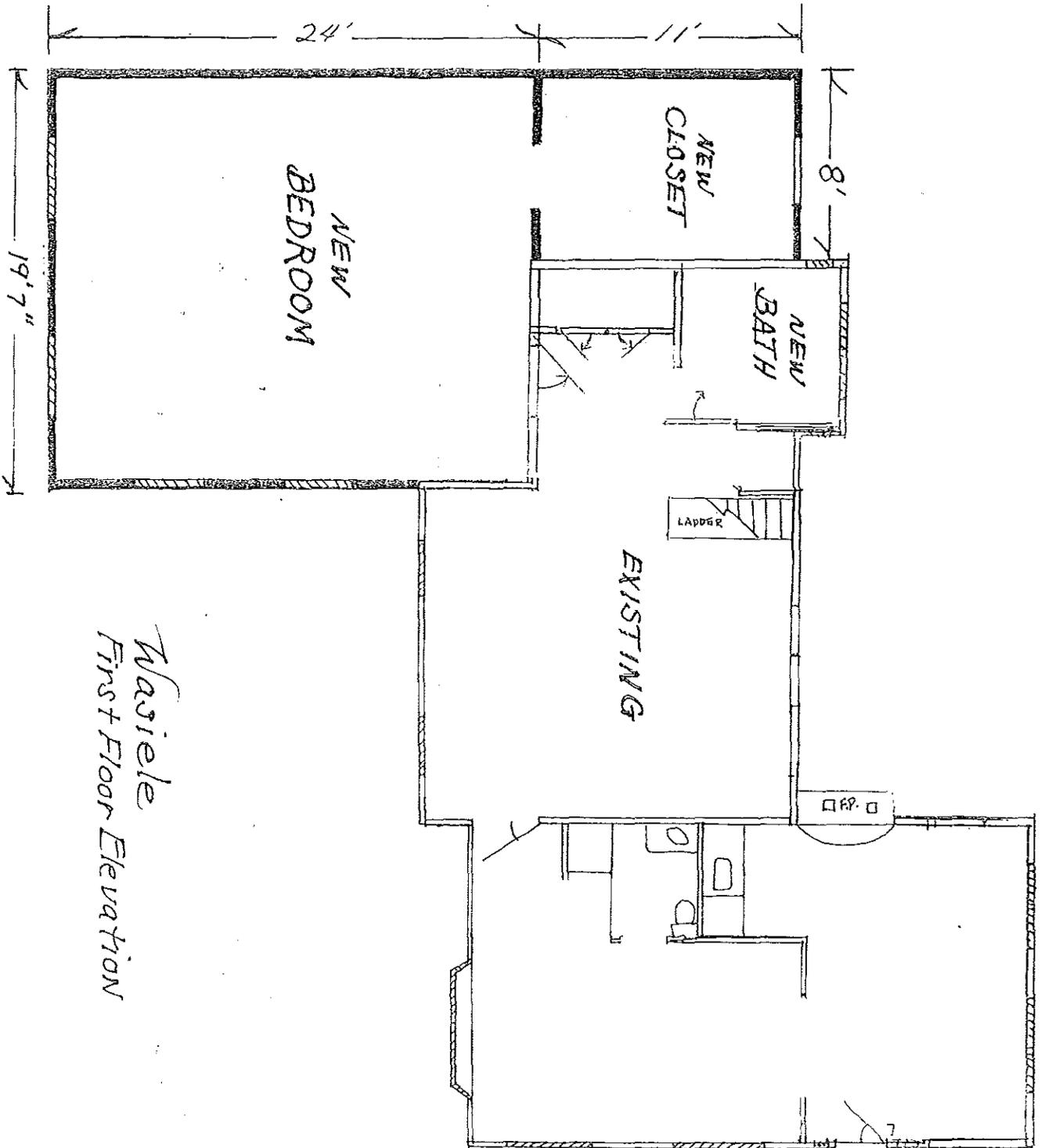
10.0'

16.61'

10.0'

SMED

90'



*Masiela
First Floor Elevation*



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
DISTRICT II
171 Salem Turnpike
Norwich, Connecticut 06360
Phone: (860) 823-3114



May 13, 2015

Mr. Michael J. Joyce, P.E.
Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410

Dear Mr. Joyce:

Subject: UCONN Sewer Line Replacement
Storrs Road (Route 195)
In the Town of Mansfield

We have reviewed your plans for the above-noted subject entitled, "Sewer Line Replacement – Storrs Road – Mansfield, Connecticut" dated March 27, 2015, and have the following comments:

1. Due to a concern of icing conditions, the 6" PVC underdrain for the proposed retaining wall (number 1) will not be allowed to discharge directly on Storrs Road as shown. Please revise.
2. All signal equipment, signage, and pavement markings damaged as a result of the proposed work must be replaced as soon as possible at the conclusion of work within the right of way.
3. Revise plans to show limits of pavement restoration according to current ConnDOT standards. Excavations into a lane will require restoration from the curb to the center line of the roadway or the closest pavement seam. Excavations crossing the center line will require curb to curb restoration.

Please submit two sets of plans, 40 scale or larger, reflecting the above-noted comments. As regulated by Connecticut General Statute 13b-17, no work is to commence within the State right of way prior to the issuance of a D.O.T. Encroachment Permit. If you have any questions in regard to this matter, please contact Mr. Carlos Wimberly at (860) 823-3114.

Sincerely,

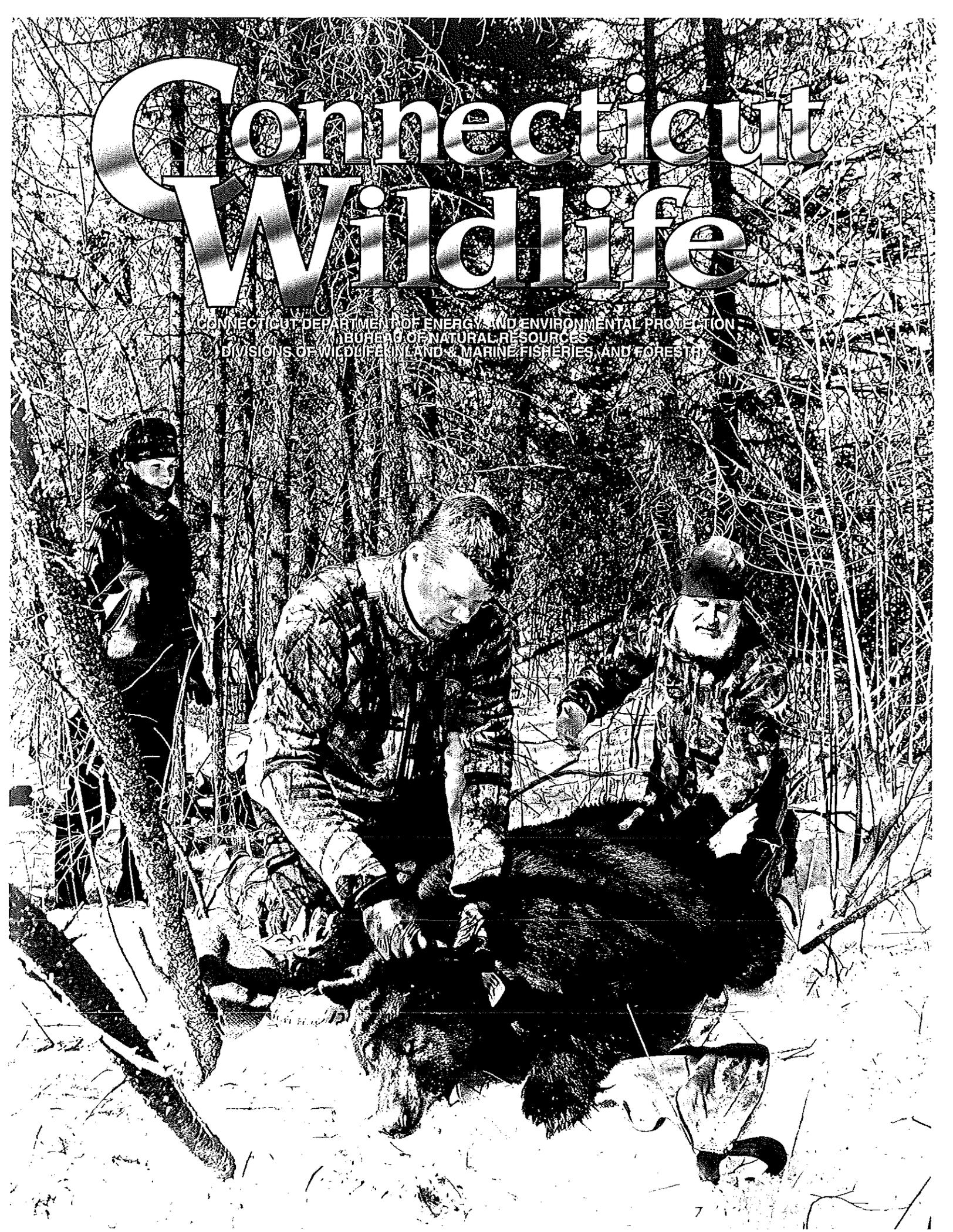
Andrew S. Morrill
Special Services Section Manager
Bureau of Highway Operations

cc: Mansfield Planning and Zoning ✓

PAGE
BREAK

Connecticut Wildlife

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



Eye on the Wild

Connecticut Wildlife

Published bimonthly by

Connecticut Department of
Energy and Environmental Protection
Bureau of Natural Resources

Wildlife Division
www.ct.gov/deep

Commissioner
Robert Klee

Deputy Commissioner
Susan Whalen

Chief, Bureau of Natural Resources
William Hyatt

Director, Wildlife Division
Rick Jacobson

Magazine Staff

Managing Editor Kathy Herz

Production Editor Paul Fusco

Contributing Editors: Mike Beauchene (Inland Fisheries)

Penny Howell (Marine Fisheries)

Christopher Martin (Forestry)

Circulation Trish Cernik

Wildlife Division

79 Elm Street, Hartford, CT 06106-5127 (860-424-3011)

Office of the Director, Recreation Management, Technical Assistance,
Natural History Survey

Sessions Woods Wildlife Management Area
P.O. Box 1550, Burlington, CT 06013 (860-424-3011)

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

Franklin Wildlife Management Area
391 Route 32, N. Franklin, CT 06254 (860-424-3011)

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

Eastern District Area Headquarters
209 Hebron Road, Marlborough, CT 06447 (860-295-9523)

State Land and Private Land Habitat Management

Connecticut Wildlife magazine (ISSN 1087-7525) is published bimonthly
by the Connecticut Department of Energy & Environmental Protection
Wildlife Division. Send all subscription orders and address changes to
Connecticut Wildlife, Sessions Woods WMA, P.O. Box 1550, Burlington,
CT 06013. Subscription rates are \$8 for one year, \$15 for two years, and
\$20 for three years. No refunds. Periodical postage paid at Bristol, CT.
Postmaster: Please send all address changes to Connecticut Wildlife, P.O.
Box 1550, Burlington, CT 06013.

www.ct.gov/deep/wildlife www.facebook.com/CTFishandWildlife
E-mail: deep.ctwildlife@ct.gov Phone: 860-424-3011



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



The Connecticut Department of Energy and Environmental Protection is
an Affirmative Action/Equal Opportunity Employer that is committed to
complying with the requirements of the Americans with Disabilities Act.
Please contact us at 860-418-5910 or deep.accommodations@ct.gov if you
have a disability and need a communication aid or service; have limited
proficiency in English and may need information in another language; or if
you wish to file an ADA or Title VI discrimination complaint.

Why the Focus on Insects?

As you read through this issue of Connecticut Wildlife, you will probably notice that several of the articles focus on insects, and even mention insects as a source of food for wildlife. Sometimes, insects are the forgotten species. Maybe it's because they are typically so small and not always seen. Or, maybe it's because some insects are considered annoying pests. But, as you read through the articles, you will discover that insects play important roles in our ecosystem.

Two years ago, Connecticut residents were intrigued and excited about the emergence of the 17-year periodical cicada. The DEEP Wildlife Division provided funding for a monitoring effort that was coordinated by the Connecticut Agricultural Experiment Station. Lead researcher (and cicada expert) Chris Maier spent countless hours documenting and monitoring the emergence (with the help of several volunteer monitors). His final report (page 14) describes where these amazing insects were found in our state and how their range has declined.

In the cases of the emerald ash borer (page 6) and southern pine beetle (page 19), these two destructive insects are not native to Connecticut and pose a serious threat to the composition of our state's forest habitats. As native ash trees and now pitch pine succumb to these insect infestations, there will be serious consequences for the wildlife that depend on these trees. Efforts are underway to monitor and hopefully control the spread of these insects, but it is a huge task. Claire Rutledge, of the Connecticut Agricultural Experiment Station, details an interesting biocontrol project for the emerald ash borer that is currently going on in our state.

Two other non-native insects – the Asian bush mosquito and Asian tiger mosquito – are the topic of another article that highlights the importance of properly storing and covering scrap tires to prevent the proliferation of these pests (page 16). Both of these mosquitoes can transmit West Nile virus and other mosquito-borne disease pathogens. We all can play a role in reducing the number of mosquitoes around our homes just by taking a few small actions.

Recent research on chimney swifts (page 3) found that these birds may be declining – not necessarily because of a lack of appropriate chimneys for nesting – but possibly because of dietary shifts in their invertebrate foods due to pesticide use. More research is needed to understand what has changed in the diet of chimney swifts and other aerial insectivores.

You will continue to see more focus on insects in the near future. Scientists are concerned about the decline in native pollinators (like bees) and efforts are underway to figure out what is contributing to these declines and what can be done to help these animals. Monarch butterflies are also in the forefront as the population has suffered a steep decline. Much of the focus will be on providing habitat and encouraging the planting of milkweeds and other native butterfly plants. Look for more to come in future issues of Connecticut Wildlife, on our Facebook page (www.facebook.com/CTFishandWildlife), and on our website (www.ct.gov/deep/wildlife).

Kathy Herz, Editor

Cover:

The DEEP Wildlife Division has been conducting a research project on black bears to determine the growth and movements of Connecticut's bear population. See article on page 22.

Photo by Paul J. Fusco

Copyright 2015 by the Connecticut Wildlife Division. The Wildlife Division grants permission to reprint text, not artwork or photos, provided the Wildlife Division is credited. Artwork and photographs printed in this publication are copyrighted by the CT DEEP Wildlife Division. Any unauthorized use of artwork and photos is prohibited. Please contact the managing editor to obtain permission for reprinting articles (deep.ctwildlife@ct.gov or 860-424-3011).

Printed on recycled paper

A Decade of Swift Conservation with the Wildlife Action Plan

Written by Shannon Kearney-McGee, DEEP Wildlife Division

Chimney swifts, also known as “flying cigars,” are a common sight in the skies of the Northeast throughout spring and summer. However, populations have declined steadily over the last several decades across their entire range.

In 2005, DEEP issued Connecticut’s Comprehensive Wildlife Conservation Strategy (now called Wildlife Action Plan) aimed at guiding the state’s conservation efforts over a decade. A main tenet of this document is to “keep common species common,” encouraging a proactive approach to managing wildlife species that may become threatened in the future. The chimney swift was a particularly interesting and accessible species to focus on in Connecticut because the state is in the core of this bird’s range with plenty of towns full of chimneys.

At the start of Wildlife Division investigations, it was assumed that chimneys were limiting swift populations. Initial efforts focused on this problem through a coordinated regional monitoring effort called “Chimney Watch.” This effort included a standardized inventory to assess local areas for their capacity to support chimney swift populations, as well as quantify the occupancy rates of each area. Essentially, we counted chimneys and then determined just how many chimneys were being used by swifts. Surprisingly, it was discovered that there are more than enough available chimneys for chimney swifts in the Northeast. What we clearly thought would be a simple conservation action – creating more chimneys for nesting – turned into a mystery. It was discovered that we need to look more closely at these birds’ whole life cycle to understand and stop their decline.

The biggest breakthrough came when the Wildlife Division coordinated with colleagues in Canada to confirm dietary shifts in response to pesticide use. This was discovered through identification of invertebrate remains in over 30 years of accumulated guano from a roost in Willimantic, Connecticut. Guano remains exhibited the same decrease in relative proportions of remains for *Coleoptera* (beetles) to *Hemiptera* (true bugs) species as was observed in Ontario, and this change coincided with the use of the pesticide DDT and the documented decline of swifts in the U.S. Geological Survey Breeding Bird Survey. With the research,

there now was indirect evidence that food may be part of the driving cause of the swift decline. Still far from a direct link, researchers are in need of good monitoring protocols to track the birds and their invertebrate food source, with the goal of prescribing measures to stop the swifts’ decline.

Through various trial and error efforts, researchers and citizen scientists have been refining protocols to monitor biological rates, like productivity and survival, with the ultimate plan of linking these metrics with information about invertebrate abundance and availability:

- Citizen scientists piloted nest monitoring efforts, but results were unreliable. It is clear that camera systems are required for accurate monitoring of nests.
- Roost monitoring has also proven to be an ineffective index of productivity, but counts of chimney swifts in June at consistent summer roosts will serve as a useful population index to detect trends over time.
- Preliminary efforts to mark-recapture birds have laid the framework for a process that could quantify survival rates and movement of swifts, but are hampered by difficult trapping conditions, trap savvy birds, and low sample size.

We still have not definitively solved or put a stop to the chimney swift decline, but we know more and can set some conservation actions. Chimneys are not limited in Connecticut, but if the capping of chimneys continues at the current rate, nesting chimneys may become scarce. We can use our knowledge of preferred chimney structural characteristics to focus conservation on these chimneys to keep swift roosts and nests common!

Chimney Swift Roost Watching events and public outreach at key roosting



Chimney swift roost watching events and public outreach at key roosting locations have increased awareness and appreciation for swifts.

locations have increased awareness and appreciation for swifts. These efforts have resulted in conservation of multiple roost chimneys that were slated for demolition.

With the knowledge that the chimney swift decline is echoed by other aerial insectivore declines in the Northeast, a more comprehensive effort is warranted to understand what has changed in these birds’ diet and what can be done to keep all of these declining species common. Activities in the next decade should focus on the lack of knowledge about the aerial invertebrate/bird interface and, if warranted, what is causing the aerial invertebrate food shortage.

The Wildlife Action Plan is currently under revision and will best serve Connecticut’s wildlife with input from the public. You are encouraged to provide input via email at deep.wildlifeactionplan@ct.gov. Visit the DEEP website at www.ct.gov/deep/wildlifeactionplan to learn more and also get involved.



JUDY GRUND, MASTER WILDLIFE CONSERVATIONIST

Nest Boxes Making a Difference for American Kestrels

Article and Photography by Min Huang, DEEP Wildlife Division

Due to the diligent and tireless work of several people throughout Connecticut, the American kestrel is making a comeback in our state. This bird's status will soon be downgraded from "threatened" to "species of special concern" on Connecticut's List of Endangered, Threatened and Special Concern Species List. There is hope that in five years, when the mandatory status update of the List is again upon us, that the kestrel can be removed from the list entirely.

Although kestrel habitat (open grassy or shrubby areas with short vegetation and natural tree cavities or nest boxes) is relatively limited in the state, the Northeast Kestrel Project, headed by Tom Sayers and John Stake, demonstrated that kestrels will occupy nest boxes in much closer proximity to one another than previously thought. In fact, in many instances, territory size for successful pairs is more than 70% less than that reported in the literature. This, in effect, greatly increases the amount of available habitat in the state for these pretty little falcons.

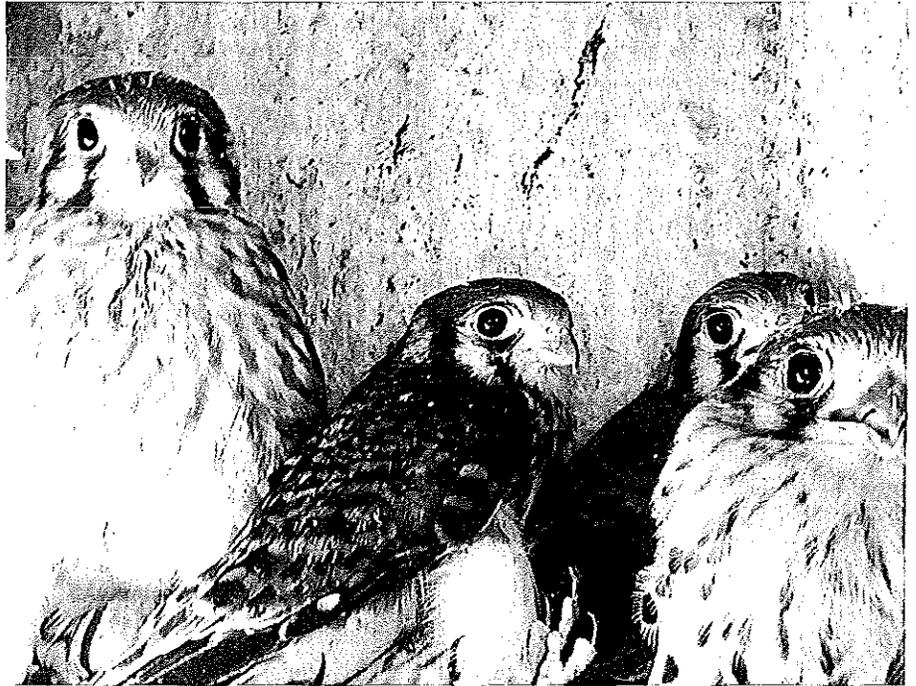
Another valuable nugget of information learned is that once kestrels become established in a locale and are successful, increasingly less European starling management is needed. In essence, once kestrels reach a critical mass or threshold, they seem to be able to fend off starlings on their own. This can greatly increase occupancy rates and, in turn, increase productivity.

2014 Breeding and Nesting Season

The 2014 kestrel breeding season in eastern Connecticut was another banner year. Within the Northeast Kestrel Project study area (Tolland County and eastern

Conservation Concerns

According to Hawk Mountain Sanctuary, data from raptor migration counts, Breeding Bird Surveys, and Christmas Bird Counts indicate that American kestrel populations have declined in much of northeastern North America (including Connecticut) since 1974. Loss of habitat is the most likely cause of the kestrel decline in Connecticut. The number of farms in the state has been decreasing, many old agricultural fields are returning to forest, and suburban development has replaced suitable habitat.



This clutch of young kestrels is close to fledging from their nest box.

Hartford County), 71 nest boxes were available to breeding kestrels. A total of 31 pairs nested, resulting in a 42% occupancy rate. Of these, 25 successfully fledged young (81%). The 31 occupied boxes is an all-time high for the study area and the third consecutive increase from a low of 18 in 2011. A total of 97 young were banded out of the 25 successful boxes.

Andy Rezeznikiewicz of Connecticut Audubon in Pomfret monitors 25 boxes in Windham County and had four occupied boxes with a 75% fledgling success rate and 13 young produced. Several of the boxes were over-run by squirrels and starlings, reducing the occupancy rate.

Art Gingert and Mike Dudek manage and monitor a large number of nest boxes, predominantly in Litchfield and Hartford Counties. In 2014, 88 boxes were available for kestrels to use. Of those, 28 boxes were occupied by kestrel pairs, for an occupancy rate of 32%. Fledgling success was 61%. A total of 64 fledglings was produced, with all but two of the fledglings banded by bird banders.

All together, the three main contributors to kestrel production in the state had a total of 184 available nest boxes in the spring of 2014. Of these, 63 boxes were occupied by kestrel pairs (34% occupan-

cy rate). A total of 45 pairs successfully raised young, for a fledgling success rate of 71% and 174 fledglings produced. A minimum mean 30% fledgling survival rate translates to a minimum of 52 kestrels added to the population in 2014.

The 2014 nesting season results are, once again, testament to the tireless efforts of the three main kestrel projects and the fledgling (excuse the pun) stewardship program. The efforts of these volunteers are a shining example of how great conservation results can be realized with a concerted effort.

Plans are already in motion by the main contributors to expand the number of available nest boxes for the 2015 breeding season. There will likely be a 10% or more increase in availability throughout the scope of the three main project areas in the 2015 breeding season.

Research

Within the Northeast Kestrel Project area, 2014 marked the final year of a radio telemetry project to assess fledgling survival rates, dispersal behavior, and habitat use. Fledgling survival rates over three years were in the range of about 30%, which is similar to most raptors. Most chick mortality occurs within two weeks of leaving the nest box, although

predation events occur throughout the period before migration.

In addition, 15 geo-locators were attached to adult females to obtain an understanding of migration timing, stopover hotspots, and wintering affiliations. The hope is to recapture these birds in spring 2015 to download the data from the geo-locators.

As part of the banding program, 53 adults and 97 fledglings were banded in 2014. Bird banders also had 13 recaptures of previously banded birds. As the number of recaptures increases over the years, researchers will get a better estimate of adult survival rates. The banding program also is providing critical information on occupancy of boxes – where certain kestrels nest and whether or not they return year after year to the same box. So far, the answer to the latter question seems to be no.

Stewardship Program

An article in the January/February 2014 issue of *Connecticut Wildlife* requested the help of citizens who might be interested in becoming American kestrel nest box stewards. Steward responsibilities include identification of possible kestrel habitat and routine monitoring of any nest boxes that might be put up in those areas. This effort requires dedication and intensive, regular monitoring to ensure the survival of young kestrels year after year.

Six citizens in eastern Connecticut, under the supervision of the Northeast Connecticut Kestrel Project, actively participated in the stewardship program during the 2014 breeding season: Ray Hardy, Dave Stevens, Randy Dill, Lance Magnuson, Scott McCall, and Gary Crump. Efforts by the dedicated stewards resulted in the installation of 10 new kestrel nest boxes. Of those new boxes, two boxes were successful, resulting in the fledging of eight young kestrels.

The results of this initial year of the stewardship program are promising. As volunteers learn more about the rigors of being a kestrel steward, success rates will increase and new kestrel hotspots will be created. In western Connecticut, at least two or three potential sites will receive stewardship nest boxes in 2015. In addition, Art Gingert will be installing a number of new nest boxes in that part of the state.

Collaborators continue to seek willing participants in the stewardship program. The more sites that can be “saturated” with kestrels, the more optimistic the long-term outlook will be!

Become a Kestrel Nest Box Steward

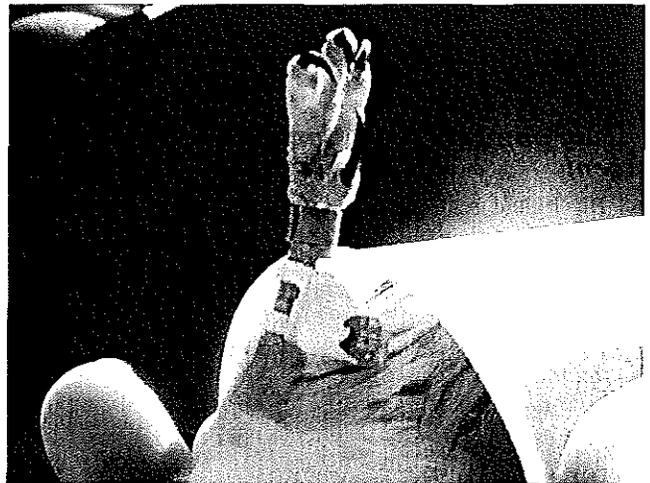
Citizen scientists are needed to identify potential areas of good kestrel habitat, as well as “adopt” and monitor kestrel nest boxes. Those ready to take on the commitment of being a Nest Box Steward should contact Art Gingert (for locations west of the Connecticut River; artgingert@optonline.net) or Tom Sayers (for locations east of the Connecticut River; sayers.tom@gmail.com).

What is involved with being a Nest Box Steward?

- Nest boxes must be monitored faithfully one to two times a week during late March to mid-May. Monitoring mostly involves visual checks to see if European starlings are using the boxes. You may need to use a stepladder or short extension ladder to check the inside of boxes.
- Any starlings that begin to use a kestrel box must be removed and euthanized. (As an exotic, invasive species, starlings are not protected by law.)
- Once you learn the habitat requirements for kestrels, you should be able to identify potential areas to place nest boxes. Kestrels need a minimum of 20 acres of open, grassland type habitat. Parcels with weedy, overgrown edges, hedgerows, or fencerows, or unmowed grassy sites are best. Ideally, nest boxes should be placed in the open, away from shrubs and small trees.
- Art, Tom, or another experienced kestrel researcher will be available to help you by visiting potential nest box sites you have identified. If the site is suitable and the landowner is willing to have a box or boxes installed on the property, poles and nest boxes will be provided and installed, and you will soon be on your way to assisting in the recovery of Connecticut’s American kestrels.
- Once kestrels become established in your boxes, Art or Tom will be available for advice and mentoring as needed, especially when the time comes to develop a schedule for banding the nestlings.



A fledgling kestrel with a radio transmitter attached. The radio telemetry project assessed fledgling survival rates, dispersal behavior, and habitat use.



Geo-locators were attached to adult female kestrels to obtain an understanding of migration timing, stopover hotspots, and wintering affiliations. The hope is to recapture these birds in spring 2015 to download the data from the geo-locators.

Biological Control of Emerald Ash Borer in Connecticut

Written by Claire Rutledge, Connecticut Agricultural Experiment Station

The emerald ash borer (EAB) is an invasive beetle that kills all species of North American ash trees. First detected in Detroit, Michigan, in 2002, it has since spread widely. It was first detected in Connecticut in 2012.

This beetle has decimated ash tree populations; 99% of trees above two centimeters in diameter die within eight years of EAB infesting an area. Native species dependent on ash trees also are decimated, and the larger toll on the ecosystem is still being discovered. Due to the rapid spread of EAB, eradication is impossible. The impact of EAB on ash trees is likely to be as devastating as the impact of chestnut blight on American chestnut and Dutch-elm disease on American elm.

Identifying Biological Control Agents

Biological control – the introduction of a natural enemy from the native region of the invading organism – is key to the long-term management of EAB. Shortly after EAB was identified, scientists from the U.S. Department of Agriculture Animal and Plant Health Inspection Service/Plant Protection and Quarantine (USDA APHIS/PPQ) went to EAB’s home countries of China and South Korea to identify potential bio-

logical control agents. The primary focus of the search was parasitic wasps, or parasitoids. These small, stingless wasps lay their eggs within a host insect, and the larvae then consume the host from the inside. Parasitoids are often ideal biological control agents due to their fidelity to a single host and a high reproductive rate. Several wasp species were brought into quarantine in the United States for further testing to ensure host specificity and suitability to the various climatic zones of North America.

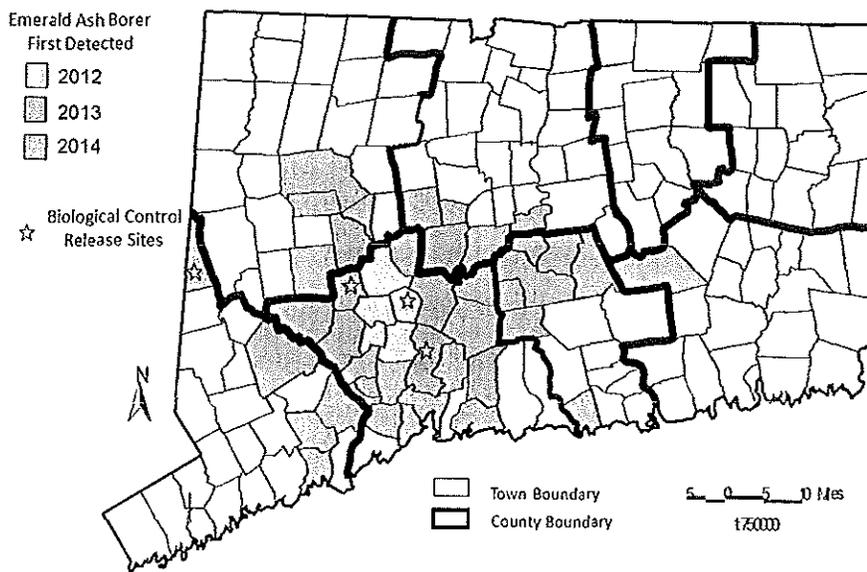
After seven years of testing by the USDA, three species of wasps were approved. The USDA began mass rearing the parasitoids in a custom-built facility in Brighton, Michigan. Two of these species are suited to Connecticut’s chilly climate. The first wasp, *Tetrastichus planipennis*, attacks the larvae of EAB. The female drills through tree bark with her ovipositor (egg-laying tube) to place eggs within EAB larvae. One EAB larva can play host to up to 125 wasp larvae. After depleting the host, the wasp larvae emerge from the tree as adults, flying off to parasitize new EAB victims. *T. planipennis* have up to four generations a year, quickly



Connecticut ash tree showing “blonding” damage from woodpeckers hunting for emerald ash borer larvae to eat.

P. PICONIE, DEEP WILDLIFE DIVISION HABITAT MANAGEMENT PROGRAM

Current known distribution of emerald ash borer, and 2013-2014 parasitoid release sites.

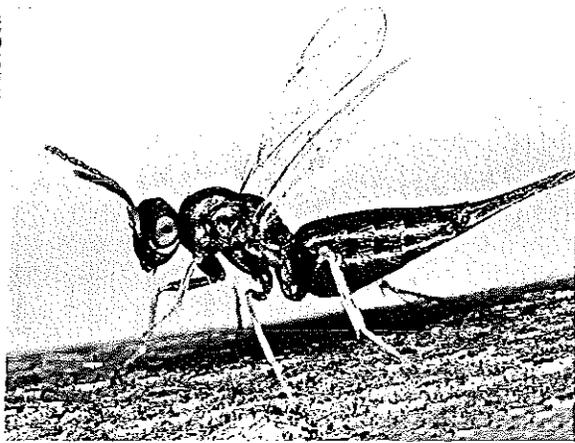


building in population to suppress EAB populations.

The other parasitoid being released in Connecticut is an egg parasitoid, *Oobius agrili*. This minute wasp completes its entire larval development within a single EAB egg, with each EAB egg producing one *O. agrili* adult. These wasps produce two generations a year, less than *T. planipennis*, but twice as many as EAB with its one- to two-year life cycle.

Biological Control in Action

In summer 2013, the Connecticut Agricultural Experiment Station partnered with USDA APHIS to begin parasitoid releases in Connecticut. That year, we released 10,245 *T. planipennis* and 2,878 *O. agrili* over nine release dates in two different locations, Prospect and Middlebury. In 2014, two release sites (Hamden and Sherman) were added and 45,568 *T. planipennis* and 13,650 *O. agrili* were



An adult parasitoid, *Tetrastichus planipennis*.

released over 15 dates at these four sites. Releases will continue in summer 2015 with at least two additional sites.

For each release date, the parasitoids are shipped overnight in a cooler from the rearing facility in Michigan. The

ing wasps that have overwintered. This is a tricky task given the small size of the wasps. Methods, such as setting out sentinel eggs and larvae, peeling trees to look for parasitized larvae, and placing out yellow-pan

Biological control – the introduction of a natural enemy from the native region of the invading organism – is key to the long-term management of the emerald ash borer.

T. planipennis are reared in small ash bolts. The bolts are infested with EAB larvae, and then adult female parasitoids are allowed to parasitize the larvae. The bolts are shipped out and when nailed to ash trees, the parasitoids are in the bolt, ready to emerge and hunt for EAB larvae. The *O. agrilli* arrive in a device nicknamed the “Oobinator,” which consists of two, nested plastic drink cups with a mesh bottom. The cup is filled with parasitized EAB eggs, which are protected from rain and predation until adult parasitoids emerge. The adults are tiny

traps that attract adult wasps, are used. Research conducted in Michigan, where the first releases were done in 2009, showed that the wasps readily established. At those sites, the percentage of trees with parasitized EAB, as well as the percentage of EAB in each tree that was parasitized, has been rising steadily each year. It will be several years until we know how well the wasps are performing in Connecticut.

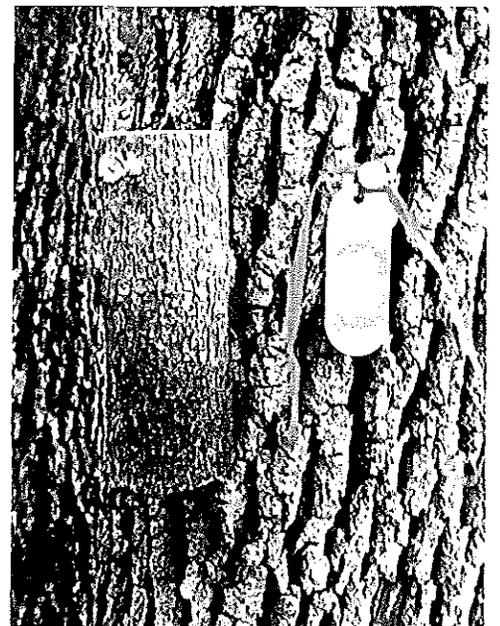
Unfortunately, because EAB populations grow exponentially when they move into a new area, it is not expected that the parasitoids will be able to halt the first wave of ash tree deaths. The timeline is too short for the parasitoid populations to build-up to the levels needed to have an impact. However, once the first wave of destruction is accomplished, EAB populations will drop. They will have eaten themselves out of house and home. The parasitoids, being specialists, will continue to attack the remaining small populations of EAB, hopefully suppressing them to the extent that young ash trees will be able to survive, grow, and eventually



Emerald ash borer eggs. Two contain nearly mature parasitoids *Oobius agrilli*, and two contain EAB larvae ready to hatch.

enough to get through the mesh and head out to seek fresh EAB eggs to parasitize. These release techniques ensure that the parasitoids emerge in a natural habitat, undamaged by their trip through the mail and ready to go.

Determining the impact of the parasitoids on the EAB population will be a long-term process. First, it must be verified that the wasps have become established in their “new home” by recover-



(Top) “Oobinator” for the release of *Oobius agrilli*. Parasitized EAB eggs are in an inner cup protected from rain and predators. *O. agrilli* will emerge in one to two days of deployment. Note that trees are tagged for future reference

(Bottom) Release mechanism for *Tetrastichus planipennis*. Adult parasitoids will soon emerge from parasitized EAB larvae within the bolt.

replace the ash trees that were casualties of the initial EAB invasion.

More information about biological control of emerald ash borer can be found at www.emeraldashborer.info (look for the biological control tab).

Recent Connecticut Deer Program Activities

Written by Andy LaBonte, DEEP Wildlife Division, and Bill Embacher, Wildlife Management Institute

The DEEP Wildlife Division's Deer Program has been busy with a variety of projects and activities.

Chronic Wasting Disease Sampling

Chronic wasting disease (CWD) is a neurological disease found in deer and elk, similar to mad cow disease. However, there is no known relationship between CWD and any other neurological disease.

Currently, CWD has been detected in 22 states and two Canadian Provinces. The disease has not been documented in Connecticut or New England. However, in 2005, CWD was documented in captive and wild white-tailed deer herds in New York, not far from the Connecticut border.

In response to the detection of CWD to the west of Connecticut in New York, a surveillance program approved by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service (USDA-APHIS) was implemented from 2005-2011 to focus sampling efforts in western areas of Connecticut that were considered high and moderate risk. During this seven-year period, 4,384 testable samples were collected from deer harvested during Connecticut's



P. J. FUSCO

Adult male deer have a two to four times higher prevalence rate of CWD than females. It is theorized that male breeding behavior increases risk exposure.

archery, shotgun/rifle, and crop damage seasons and from vehicle-killed deer found throughout the state.

Funding provided by USDA-APHIS was eliminated from the federal budget in 2012, therefore no CWD testing was conducted in 2012 or 2013. However, a joint

partnership between Connecticut DEEP and the Stewart B. McKinney National Wildlife Refuge, with financial assistance from the U.S. Fish and Wildlife Service, National Wildlife Refuge System, allowed for CWD testing to be conducted in 2014.

With the testing of over 32,000 deer in



R. HARDY, WILDLIFE DIVISION DEER MANAGEMENT PROGRAM



J. KILBURN, WILDLIFE DIVISION DEER MANAGEMENT PROGRAM

Adult does typically give birth to one to two fawns each year, and as many as three fawns were recorded in one doe during the fawn study in Northwest Connecticut.

(Above) Seasonal Resource Assistant Danny Marino holds two fawns that were part of the Wildlife Division's fawn study.

New York and no additional CWD cases being documented, the DEEP Wildlife Division no longer considers deer management zones 1, 6, and 11 (western Connecticut) to be high risk. Therefore, sampling during 2014 was stratified across all zones based on deer density. A total of 324 samples were collected during the 2014 hunting season. Samples have been sent out for testing and results should be available by the end of the summer.

Fawn Study

The Wildlife Division's Deer Program continued the third year of the Northwest Connecticut fawn mortality study this past spring.

Researchers captured 22 fawns in Sharon and Salisbury between May 19 and June 15, 2014. Fawns were fitted with expandable radio collars, enabling researchers to track movements and sources of mortality. Nine fawns were killed by predators (4 bobcat, 4 bear, 1 unknown); three were killed by poachers; one fawn was killed by haying activities; and three collars have stopped working. Survival rate was 50% after 90 days, and 26% as of March 2015 (5 surviving fawns), not including the collars no longer transmitting.

Researchers are currently capturing adult does in Cornwall and Canaan and fitting them with radio collars and vaginal implant transmitters in preparation for the final fawning season in deer management zone 1.

Unfavorable Fashion Trends

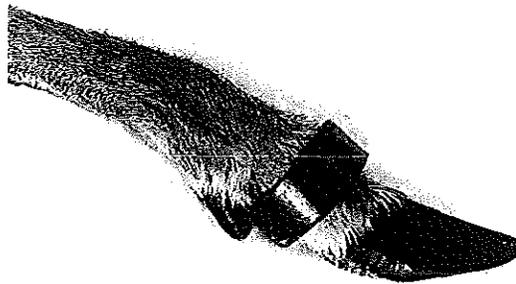
There has been an increasing trend in the white-tailed deer community. Over the past few years, Wildlife Division biologists have observed deer making fashion statements using foreign objects, such as

PVC couplings and discarded weed-whacker spools. It is unclear as to where deer have been acquiring such impeding jewelry, but the consequences have all been quite similar; once a deer steps in one of these foreign objects, there is no way of removing them. In many cases, the objects become tighter, either as the deer grows if it acquired the object at a younger age or as the object simply causes irritation and swelling begins to occur, causing the deer to limp from discomfort.

Recently, the Wildlife Division received reports from a few residents in Branford about a deer with what appeared to be a plastic truck tire from a child's toy stuck on its hoof. In early March, Division biologists coordinated capture efforts at one resident's home where the deer had been observed frequently. The deer was successfully immobilized and the plastic tire was removed.

These unfortunate occurrences likely occur more than one would think and often go undetected, usually resulting in injury and/or death of the affected animals. The best and most effective way to avoid such situations is the proper disposal of man-made items that can be hazardous to wildlife. These items include but are not limited to fishing line and tackle; plastic six pack rings; balloons and attached string; plastic bags, bottles, and containers; and more. It

can take a great deal of effort to coordinate the capture of affected animals and the subsequent removal of harmful items. But, the residents who reach out on the animal's behalf are always appreciative of the efforts, making a successful end to the ordeal and providing a rewarding experience for all who participated.



(Top) A PVC coupling was found on a deer harvested during the 2014 hunting season.

(Bottom) A plastic truck tire that was stuck on this deer's hoof was removed by Wildlife Division biologists during winter 2015.

B. EMBACHER, WILDLIFE DIVISION DEER MANAGEMENT PROGRAM (2)



P. J. FUSCO



Monitoring the Pulse of River and Stream Fish Communities

Article and photography by Mike Beauchene, DEEP Inland Fisheries Division

Metaphorically, the phrase, “a canary in a coal mine” represents an auspicious future, one where the outcome could be troublesome. To the biologist, this phrase represents the foundation of biological monitoring – inferring environmental condition based on living organisms. As the canary was more sensitive to methane and carbon monoxide than the miner, watching the behavior of the bird provided the miner with an early warning system. If the bird perished, then it could be assumed that the surrounding atmosphere was toxic. For the miner, a hasty exit was in order.

Fish community evaluation has been on-going since the late 1800s when Commissioners of the State Board of Fisheries and Game noted that many of Connecticut’s once prolific trout streams were barren, having fallen prey to the negative effects of damming, deforestation, and other anthropogenic stressors.

Connecticut has a long history of monitoring fish populations. Lake and pond surveys conducted in the early to mid-1900s involved using a seine net to capture fish and determine population structure. With the advent of electrofishing – the controlled use of small amounts of electricity to induce



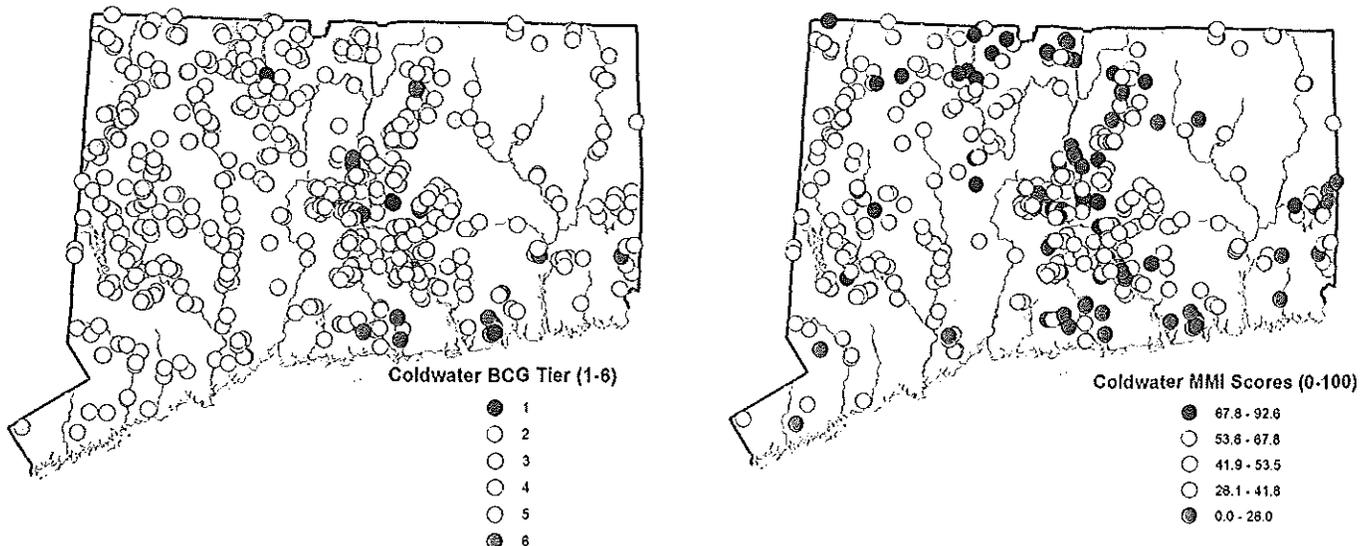
Electrofishing is a widely used method for the non-lethal collection of fish community data.

swimming towards the electric probe – collection of fishes became much more efficient.

The Federal Clean Water Act (1972) requires states to monitor, assess, and report on the condition of life within its

aquatic habitats. Since the early 1970s, DEEP has been evaluating Connecticut’s rivers and streams using the aquatic insect community. Due to their small size, ease of collection, and the fact that Connecticut has several hundred aquatic

Figure 1. Fish community data collected during 2011-2012, evaluated using the Connecticut coldwater biological condition gradient model (left) and the Connecticut coldwater multi-metric index (right). Darker blue colors represent intact fish communities and darker red represents altered fish communities.



Similar to other evaluative indexes used in society, like the Gross Domestic Product Index, Unemployment Index, Dow Jones Index, or personal health related indices, such as body mass index or cholesterol levels, biological indices and calculations enable the fisheries manager to make informed management decisions based on the structure and composition of the fish community.

insect species whose pollution tolerance ranges from intolerant to tolerant, these organisms are the perfect “canary” for water quality.

To improve evaluation of aquatic life in Connecticut rivers and streams, the DEEP’s Inland Fisheries Division and the Water Quality Monitoring Program within the Bureau of Water Protection and Land Reuse worked collaboratively to develop two complementary models: dual multi-metric indices (MMI) and the Biological Condition Gradient (BCG).

Both models are valuable tools for resource assessment and management as they provide information about the fish community sampled at various locations. Each model evaluates resident fish communities of coldwater and cool-water flowing water habitats (brooks, streams, and rivers) by using data generated by the collection, identification, and measurement of all the fish within a pre-determined sample area. The models differ in the type of output provided and how the output can be used for effective natural resource management.

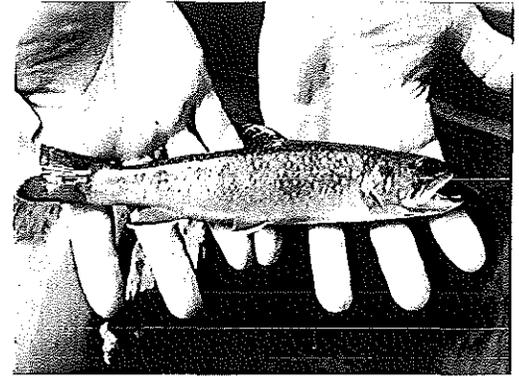
Connecticut’s dual MMIs are a series of independent, non-correlated calculations (metrics). The calculated value for each metric is scored (0-100), with the average of all metrics representing the final community score. MMI scores help determine if the fish community is functionally intact – meaning, having a balance of feeding groups with obligate stream dwellers present.

Connecticut’s BCG model is anchored by Tier 1, the “native” or “natural” condition and, as such, subsequent Tier assignments reflect the degree of deviation from natural. BCG tier assignments identify places where fish communities are relatively “pristine,” as well as those significantly altered.

The MMI and BCG models both assess fish community structure, but differ in how data are evaluated. As an example, BCG and MMI scores were calculated for each fish community sample collected during the summers of 2011 and 2012 (Figure 1). In both graphics, dark blue is the upper end of the scale and red the lower end. Both

show that the northwest corner of the state is represented with predominantly “blue” colors and central Connecticut with predominantly “red” colors. However, the MMI model produces more dark blue dots than the BCG. As each model treats the same fish community data slightly differently, more informed decisions can be made by evaluating the output from both models.

Connecticut’s landscape and, by default, its fish communities have experienced great change over the past 300 years. Restoration efforts in the late 1800s were based on angling success and direct observation, and included re-introduction of native fishes and the stocking of non-native fishes to fill empty habitat. With today’s objective decision-making tools – the MMI and BCG – we are able to evaluate the effectiveness of various restoration and con-

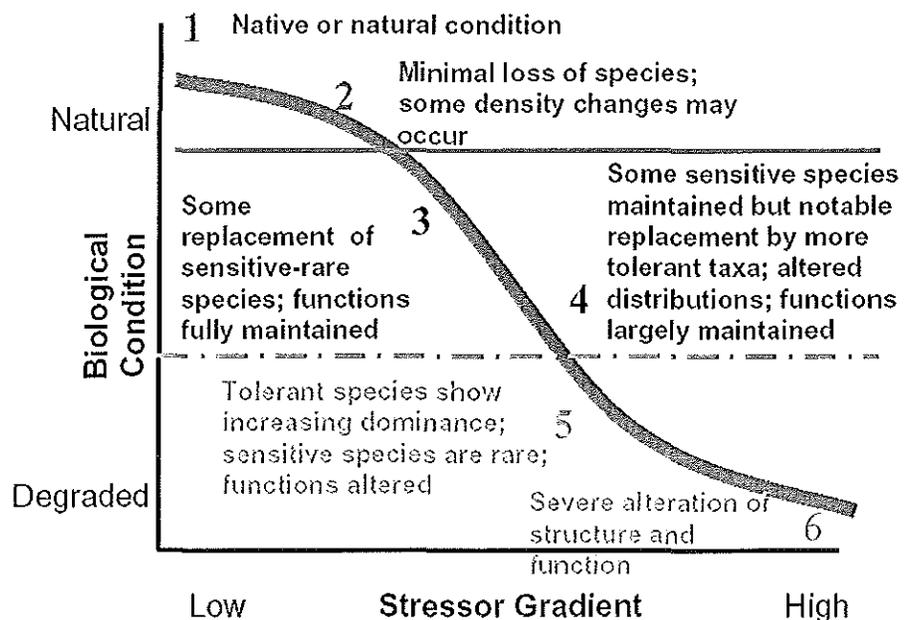


The presence of trout in a body of water is a discrete ecological fact that nevertheless signifies certain things. It signifies a particular complex of biotic and chemical and physical factors, a standard of richness and purity, without which that trout's presence is impossible.

– “Wild Thoughts from Wild Places,” David Quammen.

servation projects, such as water quality improvement, habitat restoration, fish passage via dam removal, stream flow regulation, and water temperature modification. The models also are valuable in prioritizing conservation efforts by providing identification of the “best” of what Connecticut has to offer.

The Biological Condition Gradient Model



The Biological Condition Gradient (BCG) is a conceptual model, based on the premise that biological communities form a continuous gradient from completely natural (Tier 1) to severely dysfunctional (Tier 6). The BCG can be applied to any type of biological community and provides a common framework for regional comparisons of biological communities.

Bringing Dead Wood Back to Life - The Pileated Woodpecker

Article and photography by Paul Fusco, DEEP Wildlife Division

The spectacular pileated woodpecker is Connecticut's largest member of the *Picidae* family. As big as a crow and black with a flaming red crest, the pileated woodpecker is unmistakable. When observed pounding away at a dead tree with wood chips flying, it is a stunning and memorable sight. It becomes easy to see how the pileated woodpecker got the nickname of "woodbutcher."

Pileated woodpeckers are non-migratory and found in Connecticut year-round. Within their large home range, they are able to communicate with one another by vocalizing and drumming on dead trees. Their loud, "jungle-bird" call rings through the forest, providing the landscape with a quality of wildness.

Typical calls include a series of 10 or more "cik, cik" calls. The loud "kek, kek, kek" call is a rapid series of six or more notes at the same pitch, followed by the last note being lower in pitch.

This is long distance call that allows pairs to communicate and also sound an alarm. The pileated's call may be similar to that of the northern flicker, but much deeper and louder.

Description

A long neck, long tail, and long bill give the pileated woodpecker a streamlined appearance. The bill is heavy, thick, and chisel-like. The pileated woodpecker uses strong legs and feet to grip the sides of trees, and stiff tail feathers to brace itself.

At first glance, the plumage is solid black, but when wings are raised the white underwing linings become visible. A white stripe extends up both sides of the neck to the bill, and there is a black stripe through the eyes. A white wing patch flashes at the base of the primaries when the bird is in flight. When the bird is at rest, the white patch is small but visible at the base of the primaries on the folded wings. Both males and females have a bright flame-red crest. Females have a black forehead and lack the red mustache mark of the male.

Pileateds are strong fliers with slow, deep wingbeats. They have an undulating flight pattern similar to other woodpeckers but not as pronounced.

Habitat

Look for pileated woodpeckers in mature deciduous and mixed coniferous forests that have a component of large trees. These large, older trees are a habitat requirement. In Connecticut, pileated woodpeckers also may be found in suburban backyards that have mature trees with nearby woodlands. This woodpecker is most common in northwestern and western parts of the state as these areas have extensive tracts of mature forest. A typical home range or territory may be up to 1,000 acres in size.

Large oval or rectangular tree holes are the distinctive sign of this bird's presence in the forest. Newly-excavated holes will have fresh wood chips at the base of the tree. Some holes in live trees show sap bleeds.

Nest cavities are excavated in large tree limbs or standing snag trees, usually in a shaded location and anywhere from 10 to 80 feet off the ground. The same nest cavity may be used in successive years. A typical nest cavity is approximately 8 inches in diameter and up to 30 inches deep, and the entrance hole is usually 3.5 to 5 inches wide. A normal clutch is 3 to 5 white eggs, which are incubated for about 18 days. Young fledge after 26 to 28 days, and may stay with the adults for up to 3 months.

Behavior

Often foraging low to the ground, pileated woodpeckers may be seen at close range as they chisel into fallen logs looking for carpenter ants, which are their favorite food. They also will consume other ants, wood boring beetles and their larvae, termites, budworms, caterpillars, and other insects. Fruits, including berries, acorns, and beechnuts, also may make up part of their diet. Pileateds will occasionally come to backyard feeders for suet.

When chopping on logs, a pileated woodpecker's long neck is reared back giving maximum power to the heavy bill when it strikes. Hammering is forceful and deliberate, enabling the woodpecker to excavate huge, deep holes in trees, both dead and alive. Pileateds will use their long, barbed tongue to probe deep



With a blazing red crest, the pileated woodpecker is an unmistakable bird in Connecticut's forest habitats.

into crevices and bore tunnels to retrieve food.

Woodpeckers do not have the ability to communicate by singing as songbirds do. Instead, they vocalize with non-musical calls or they drum. Drumming is done to attract a mate and claim a territory. By rapidly pecking on a resonant object, such as a hollow tree limb, woodpeckers create a pattern of sound. Patterns vary by species and may have differences in tempo, rhythm, and length. Drumming is most commonly heard in spring when birds are trying to attract mates and establish territories.

In pileated woodpeckers, drumming is a rapid, rolling, and powerful burst of pecking that accelerates, then trails off at the end. Both sexes will drum, although males drum more frequently and vigorously. Drumming bursts may last for about 3 seconds with 1 or 2 bursts per minute. Bursts may be done up to 7 times in a row.

Conservation

Pileated woodpecker population dynamics show an unmistakable link to the availability of mature forest habitat. Over the years, this large woodpecker has undergone radical changes in population. Historically, populations declined with the clearing of the great Eastern forests and the advent of agriculture through the late 1800s. As farmland was abandoned and forests regrew into the 1930s, the pileated woodpecker rebounded. In more recent years, as forests have matured, there has been a dramatic increase in populations. North American Breeding Bird Survey (BBS) data indicate an increase of 33% in North America between 1966 and 1993. The rate of increase has slowed since that time. In Connecticut, forest habitat maturation continues at a rate of 2-3% per year.

The biggest conservation concern is the potential for habitat loss and conversion away from mature forest ecosystems. While this may be applicable in other parts of the woodpecker's range, the population is stable or slightly increasing in Connecticut due, in large part, to our extensive forests that continue to provide decaying material.

Other possible concerns include forest fragmentation, monoculture/even-aged forestry practices, removal of downed wood, and, to a smaller extent, deliberate killing and irresponsible use of toxic chemicals. Large standing dead trees and fallen logs are important habitat components for these birds. Forest management practices in Connecticut have standards for leaving a certain number of snags per acre in managed forests. Forest fragmentation and removal of downed wood have implications that may impact moisture balance of the forest floor, resulting in a drier environment and making it less suitable for the food organisms that the woodpecker relies on.

By consuming large amounts of wood-boring pests, pileated woodpeckers provide a beneficial service to the health of our forests. They also provide benefits to a wide range of other wildlife species that use their holes. Old nest and roost holes are used by owls, ducks, bluebirds, bats, squirrels, and fisher, just to name a few. This impressive bird that brings a sense of wildness to our forests is one of Connecticut's great avian residents.



A fledgling pileated woodpecker peers out of its nest hole. The red moustache is a field mark that indicates this bird is a male.

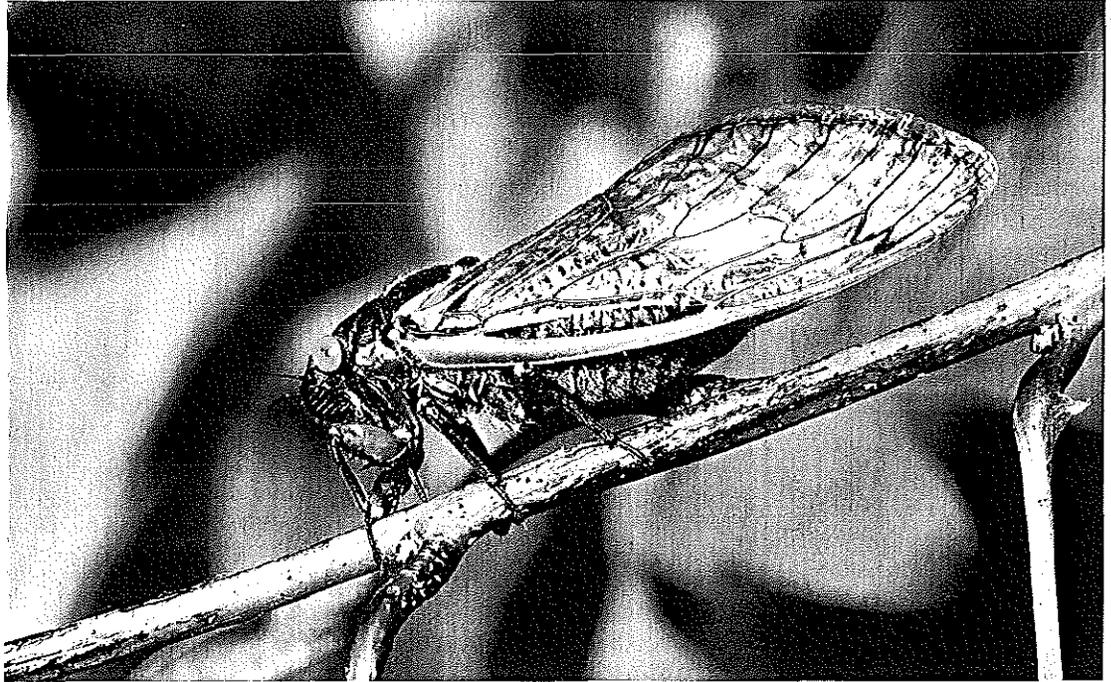


When a pileated woodpecker hammers away at a tree, the wood chips frequently go flying in all directions.

Mapping Populations of 17-Year Periodical Cicadas

Written by Chris Maier, Connecticut Agricultural Experiment Station

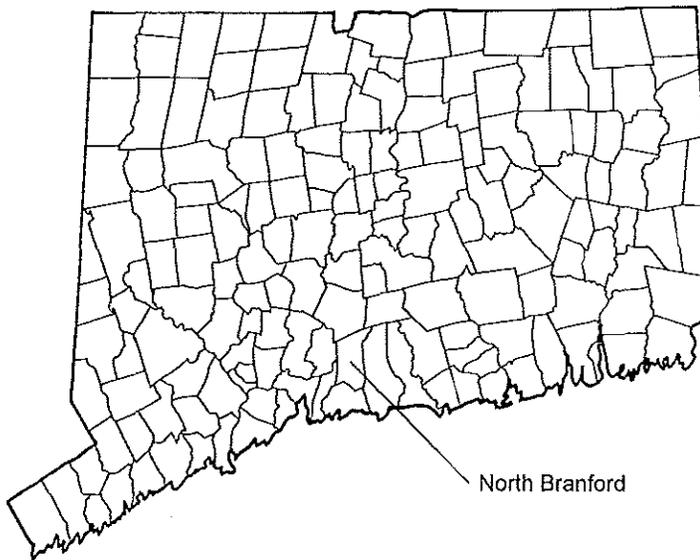
In the eastern United States, the synchronous mass emergence, lengthy life cycle, and large male choruses of 17-year periodical cicadas have intrigued scientists and laypeople for centuries. These unusual insects live underground for most of their life cycle, but every 17 years their nymphs emerge from the soil, climb vegetation, and transform into short-lived adults. The males attract mates by producing sound with special organs, or tymbals, located at the base of the abdomen. Over a few weeks, the adults mate, the females lay eggs in small branches, and then both sexes die. In late July and August, tiny nymphs hatch from the eggs and enter the soil to feed upon xylem fluid in the roots of woody plants. In spring 2013, Connecticut citizens were treated to one of these mass emergences of 17-year periodical cicadas.



P. J. FUSCO

An adult of the 17-year periodical cicada, *Magicada septendecim*. This cicada had a mass emergence in late spring 2013.

Distribution of Periodical Cicadas 2013



Towns (in yellow) in which periodical cicadas emerged in 2013. In all, cicadas appeared in a total of 20 towns, with *Magicada septendecim* in all and with *M. septendecula* (a newly-discovered population) only in North Branford.

Connecticut has the easternmost populations of brood II of the 17-year periodical cicada, *Magicada septendecim*. These populations have been surveyed either informally or formally since 1911. In the 1911 survey, W.E. Britton of the Connecticut Agricultural Experiment Station reported cicadas in 25 towns, but he did not verify records or deposit voucher specimens for every positive town.

In 1945, R. G. Cooper, who also worked at the Experiment Station, made maps of the locations of populations; but, he did not formally publish his results. The first formal attempt to map the one species of periodical cicada known from Connecticut was made by Chris Maier (the author) in 1978 and 1979. He deposited voucher specimens for each recorded population at the Connecticut Agricultural Experiment Station in New Haven. Again, in 1996, Maier repeated the effort, finding that cicadas occurred in 22 towns (2 new ones) but that they had disappeared from 5 others where development was prevalent. This last study and, to a lesser extent, the previous ones were used as guides to assist in finding populations in 2013.

During the last few decades, there has been increasing concern that populations of periodical cicadas are declining or disappearing. Indeed, in 1979 when Maier examined 75 sites that had populations in 1945, he found that 5.3% of the populations had disappeared. With declines suspected and disappearances documented, the DEEP Wildlife Division decided it would be valuable to obtain baseline data on the locations of extant populations in 2013 by recording the coordinates where populations occur with hand-held GPS units and by estimating abundance.

Methods

This project formally began with a workshop for survey

volunteers held at the Wildlife Division's Sessions Woods Conservation Education Center in Burlington on May 13, 2013. The workshop was conducted by the author, with assistance from Wildlife Division biologist Laura Saucier. The workshop covered the biology of periodical cicadas and procedures for documenting cicada populations. Maps, a handout of survey procedures, various collecting supplies, and survey routes were distributed at the workshop. Use of a GPS unit was briefly reviewed and the song of *M. septendecim* was played to assist in accurately recording the whereabouts of cicada populations. In all, 16 people attended the workshop; the number of volunteers that eventually contributed one or more records during the survey was 13.

Whenever possible, surveyors collected voucher specimens of nymphal exuviae ("cast skins"), nymphs, or adults to document a positive site where a GPS reading had been taken. Some distributional records were based on the male calling song alone. Abundance was estimated by using four categories: 1) cicadas absent (no nymphal exuviae, adults, or singing); 2) low (scattered or single exuviae or adults, or isolated singing males); 3) moderate (exuviae or adults easily found, or light chorusing); and 4) high (exuviae and adults very common, or loud chorusing). The principal investigator visited most of the sites where cicadas were reported to ensure accuracy of reporting. Voucher specimens of periodical cicadas are deposited in the insect collection in the Department of Entomology at the Connecticut Agricultural Experiment Station, New Haven, Connecticut.

Results and Discussion

Periodical cicadas of brood II were concentrated in central and south-central Connecticut. Populations, especially large ones, were clustered in three or possibly four regions of the state. The largest northern cluster was closely associated with the trap-rock ridge system that ran approximately from Rattlesnake Mountain in Farmington to the Hanging Hills in Meriden and Southington. The largest southern cluster of populations was mostly on the Totoket Mountain and adjacent ridge systems between Durham and Branford. Minor centers with at least two high populations were near the ridge with Sleeping Giant and in an area near the Killingworth-Madison border.

Based on searches of forested areas north of Farmington and along the eastern border of the 2013 emergence, the range of periodical cicadas has decreased from that recorded in 1911 and in 1996. In all, the survey team recorded periodical cicadas in 20 towns, two less than in 1996. Because survey methods differed between 1996 and 2013, it is not possible to determine if the populations are truly gone from North Haven and Cromwell where they were documented in 1996. Populations in these two towns were extremely small in 1996 (a few exuviae; no male singing).

The principal investigator documented cicadas at 154 locations, and the volunteers at 67 sites. Some of the 221 records, however, may be the same or may simply be ones at the edge of the large populations that were recorded. Notably, several large populations that were not recorded in 1996 or earlier were found in Cheshire, Guilford, Hamden, Madison, Meriden, and Wallingford. Finally, the survey team compiled 134 negative records.

Perhaps, the most significant find in 2013 (although not formally a part of this study) was the discovery of a second species of periodical cicada in Connecticut. This species, known as *Magicicada septendecula*, usually is the least common of the three 17-year species and is smaller than *M. septendecim*. The



A nymph of the 17-year periodical cicada emerging from the ground.

new cicada species was found while the author was servicing traps to capture longhorned beetles near Lake Gaillard in North Branford. At least two chorusing centers of *M. septendecula* occurred on Totoket Mountain on the property of the South Central Connecticut Regional Water Authority. These finds are the northeasternmost ones for this uncommon species. In June, males of this species sang mainly in trees of pignut hickory, *Carya glabra*. This species is currently in the process of being listed as endangered in Connecticut.

The principal problems encountered during this survey were the inclement weather (many days with heavy rain) and inconsistency of volunteers in following the survey protocol. The protocol for evaluating population size, in particular, was not strictly followed by several volunteers; but, it is not surprising due to their inexperience. Follow-up visits by the author to many sites recorded by volunteers helped to improve the accuracy of the survey, not only for distributional records, but also for assessments of population size.

Acknowledgments

The DEEP Wildlife Division provided funding for this project. The author greatly appreciates the efforts of the volunteer surveyors: Kate Abbott, Susan Andrie, Laura Rogers-Castro, Paul Fusco, Katherine Herz, Connor Hilbie, Rachael Hyland, Josh Kelly, Cindy King, Andy Kiszewski, Kate Moran, Laura Saucier, and Karen Zyko.

The author also thanks the South Central Connecticut Regional Water Authority, the New Britain Water Company, and many fruitgrowers for allowing access to their property.

C. MAIER, CONNECTICUT AGRICULTURAL EXPERIMENT STATION

Discarded Tires and Mosquitoes: A Quality of Life and Public Health Perspective

Written by Roger Wolfe, DEEP Wildlife Division

Improperly stored or discarded scrap tires are not only unsightly, but also can be unhealthy when they provide ample habitat for mosquitoes and other pests.

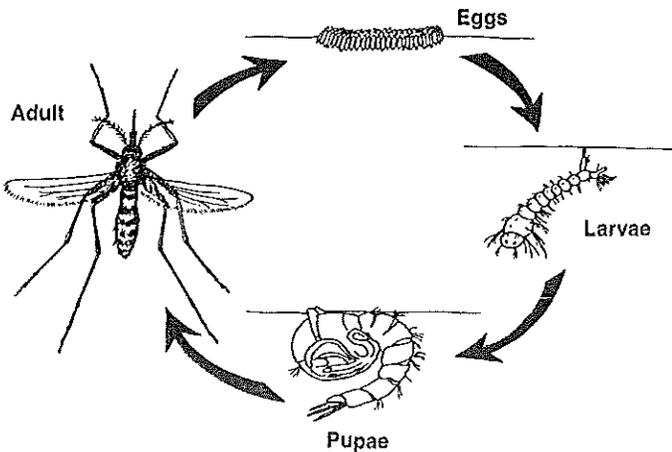
Of the nearly 3,000 species of mosquitoes worldwide, 176 species are known to occur in the United States. Currently, Connecticut has 52 mosquito species; two of these are exotic (non-native) species which allegedly were imported into the United States in shipments of used tires. The good news is that only about half of our mosquito species are of public health importance. However, the sporadic hordes that we encounter or even that one mosquito buzzing in your bedroom at night can affect your quality of life.

Mosquitoes have a life cycle known as "complete metamorphosis." That is, they have a distinct egg, larvae, pupae, and adult stage. They can be broadly categorized into two groups: 1) those which lay eggs, either individually or clustered in an "egg raft," that float on a stagnant water surface, and 2) those that lay individual eggs on a moist surface, such as mud and wet leaf litter, or above the waterline in a tree hole or used tire casings. When the eggs of these "floodwater" mosquitoes are flooded by melting snow, heavy rain, or high lunar tides along the coast, they hatch and grow through their aquatic larval and pupal stages before emerging as adults. This process can take as long



Scrap tires that are not covered and stored properly collect rain water and can produce hordes of mosquitoes.

Mosquito Life Cycle



as a month and a half in early spring or as little as five to seven days during summer.

Mosquitoes can be found in almost any natural and artificial still-water environment. Tire casings readily mimic natural tree cavities, providing an effective incubator for mosquito larvae, free from predators. While both male and female mosquitoes feed on plant nectar for nutrition, only the females feed on us for a blood meal to obtain protein for egg production. A female mosquito that has not had a blood meal can lay about a dozen eggs. However, with a blood meal, that same mosquito can lay up to 250 eggs at one time. Depending on the species, this can occur only once in an adult female's lifetime (called univoltine) or several times per season (called multi-voltine). This latter strategy increases the risk of the mosquito picking up a pathogen and passing it on to a bird, mammal, or other host. Furthermore, some species are particular in their feeding preference (i.e., amphibians or birds), while others are not as selective, feeding on both birds and mammals. This also increases the risk of picking up and transmitting pathogens, such as West Nile virus (WNV) or eastern equine encephalitis (EEE).

Connecticut's two exotic mosquitoes, the Asian bush mosquito (*Ochlerotatus japonicus*) and Asian tiger mosquito (*Aedes albopictus*), were most likely imported into the United States in shipments of tires and quickly expanded their range by means of the used tire trade. Both species are native to Japan, Korea, Taiwan, and parts of Asia. They are aggressive mammal-feeders and have been shown to displace native mosquito species from their natural habitats, including rock pools, tree holes, and artificial containers such as scrap tires. The Asian tiger mosquito

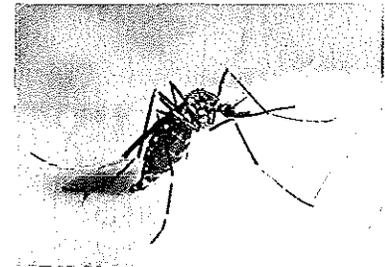


Natural cavities, like tree holes, can provide homes for several species of mosquitoes.

was first discovered in the United States in Texas in 1985 and has spread its range throughout the eastern half of the country as far north as Maine. This mosquito is now considered the number one pest species in several states. It also is an effective vector of WNV, malaria, dengue, and dengue hemorrhagic fever. More recently, Chikungunya virus, another debilitating mosquito-borne disease, was discovered for the first time in the western hemisphere in 2013 on St. Martin in the Caribbean and has since spread throughout the region, resulting in over 738,000 human cases of this disease. Several cases of Chikungunya have been documented in Connecticut from travelers returning from the Caribbean, demonstrating how quickly and easily certain vector-borne diseases can spread. In addition, the long-term effects of climate change will likely increase the northward expansion of some of the more southern mosquito species, some being effective vectors of disease.

Improperly stored or discarded scrap tires provide ample habitat for mosquitoes and other pests.

The Connecticut Mosquito Management Program is a multi-agency collaboration of the Department of Energy and Environmental Protection, Connecticut Agricultural Experiment Station, Department of Public Health, Department of Agriculture, and the University of Connecticut. The Program is founded on surveillance and testing of mosquito populations; monitoring of human and veterinary disease cases; educating the public on source reduction of mosquito-breeding habitats and personal protective measures against mosquito bites; focused wetland restoration and management; and judicious use of registered mosquito pesticides. The Connecti-



Asian bush mosquito (*Ochlerotatus japonicus*)



Asian tiger mosquito (*Aedes albopictus*)

cut General Statutes (Sections 22a-45b and 19a-213) allow for the elimination or prevention of mosquitoes and natural or

man-made mosquito-breeding habitats as is necessary to abate a threat of disease to humans or animals from insect vectors.

In 1999, and again in 2005, a survey was conducted of abandoned tire piles and tire facilities around the state to document the presence and extent of Asian bush and Asian tiger mosquitoes. A number of scrap yards, abandoned tire piles, and collection facilities were found to be producing mosquitoes. Often, the facilities piled uncovered used tires for a period of time before having them hauled to other locations, demonstrating how frequently and easily scrap tires (and the mosquito eggs they may be harboring) can be moved from place to place. Scrap tires should be disposed of promptly and properly through a licensed tire hauler. It is illegal in most states, including Connecticut, to landfill scrap tires or dispose of them improperly. At a minimum, tires should be stored under cover (i.e., roof, awning, trailer, storage container) or stacked and covered with plywood or other flat cover to prevent rainwater from entering (if covered with a tarp, make sure that doesn't collect rainwater as well). If used, for example, on a farm to hold down tarps, only tire sidewalls should be used or the tires should have holes punched or drilled in them to prevent rainwater from accumulating.

Although not readily apparent, discarded tires play a role in public health as a source of mosquitoes, and their importation and interstate movement can have significant impacts on the health, ecology, and economy of our state and country.

More information on mosquitoes and their control:

Connecticut Mosquito Management Program: www.ct.gov/mosquito

American Mosquito Control Association: www.mosquito.org

Northeastern Mosquito Control Association: www.nmca.org

National Centers for Disease Control and Prevention: www.cdc.gov

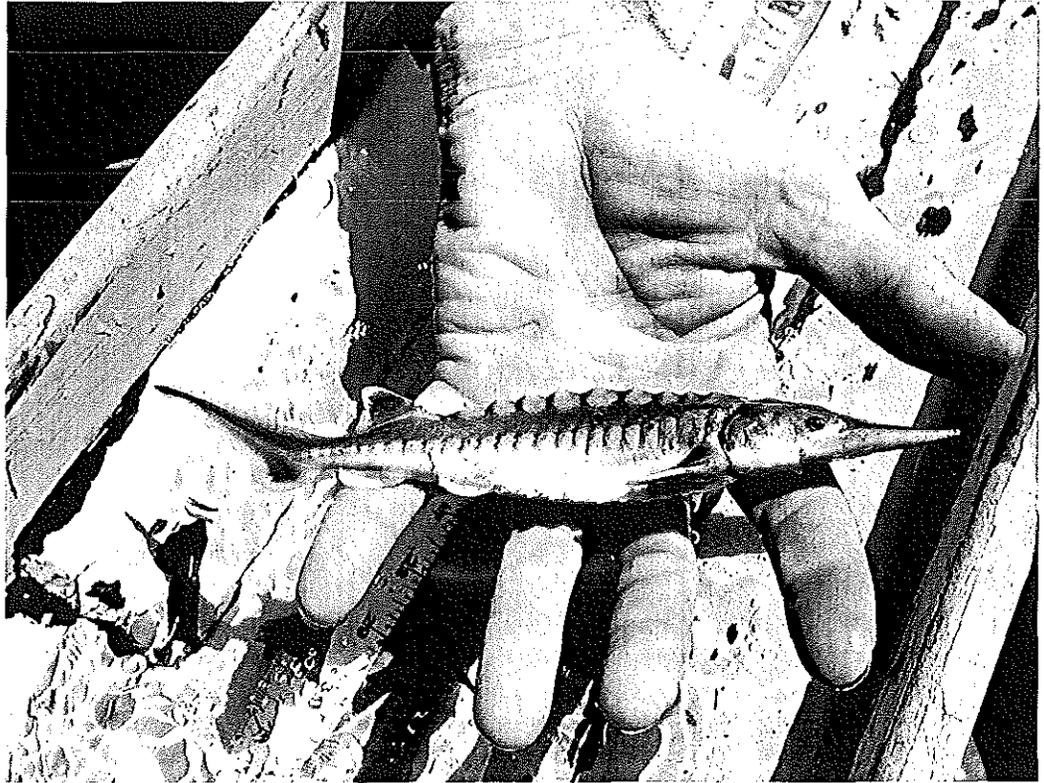
Atlantic Sturgeon of the Connecticut River?

Written by Tom Savoy, DEEP Marine Fisheries Division, photos by DEEP Marine Fisheries Division staff

Connecticut was once host to at least a couple spawning stocks of the now federally endangered Atlantic sturgeon. Speculation remains as to how many stocks (1, 2, or 3) since it is possible that the Connecticut, Housatonic, and Thames River systems each had their own populations. However, it also was long thought that Atlantic sturgeon native to Connecticut waters were completely gone 100 years ago or more, victims of overfishing, dam construction, and water pollution.

In a previous article in *Connecticut Wildlife* (March/April 2014), we had reported on interesting movements of immature Atlantic sturgeon in Connecticut waters based on collections and acoustic detections of fish with implanted ultrasonic transmitters. Genetic materials from some of the sturgeon collected were analyzed and demonstrated presence of Atlantic sturgeon from several states (NY, MD, DE, VA, and GA) in Connecticut waters as these fish migrate long distances along the Atlantic coast. Other information gathered more recently has led to speculation that maybe a few native Atlantic sturgeon remained.

Telemetry studies confirmed a seasonal presence in Connecticut waters but these fish migrated to warmer waters off

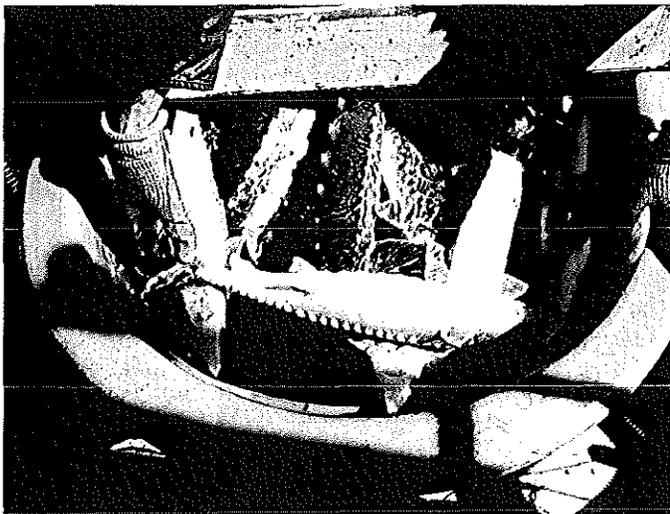


Immature Atlantic sturgeon (size 6 inches fork length) collected in May 2014.

the southern United States in fall and winter. More recent information showed that some Atlantic sturgeon lingered longer in our waters than previously thought, so their seasonal presence formerly described as “May through October” needed to accommodate some fish arriving as early as March and some staying until December. Individual fish have been observed returning to Connecticut waters for three, four, and five consecutive years. Researchers have seen sturgeon moving well up the Connecticut River beyond the salt wedge, some moving far up river to the Hartford area and beyond. Telemetry efforts also documented the first known year round presence of Atlantic sturgeon in Connecticut waters with a couple of fish overwintering within the river.

Some astute television news watchers (or followers of DEEP’s Connecticut Fish and Wildlife Facebook page) may remember the report of a six-foot Atlantic sturgeon washing up on a beach along the Connecticut River in Lyme in late April 2014. While the Department could not make any assumptions about the significance of the one fish given that Atlantic sturgeon make extensive travels along the entire East Coast of the United States, the timing and location of the fish were interesting. Wandering juveniles and adult sturgeon do not confirm presence of a spawning stock. Age zero or one-year-old fish need to be found to know that successful spawning has occurred.

And so the mystery unfolded . . . one immature six-inch sturgeon was collected in October 2010. Genetic testing of a tissue clip confirmed that it was an Atlantic sturgeon. While



Fall 2014 collection of several immature Atlantic sturgeon.

extremely interesting, the collection of a single, age one fish can raise more questions than provide answers. Was it a native fish? Did someone dump it in the water from somewhere else?

Then, in May and June of 2014, a total of eight small Atlantic sturgeon were collected in the lower Connecticut River while Marine Fisheries Division biologists were conducting studies of the smaller shortnose sturgeon. The shortnose sturgeon is also endangered but it has an increasing spawning stock in the Connecticut River. All of the young Atlantic sturgeon were uniquely tagged with PIT tags (similar to the microchips that people place in their pets) and a piece of fin was clipped for future genetic analysis.

Most of the Atlantic sturgeon were collected as single fish each day the Marine Fisheries Division was out sampling with a skiff trawl; one red letter day produced three. Then one day in late September, 21 of 32 sturgeon collected were small Atlantic sturgeon. Over the next five weeks, 31 additional fish were collected for a total of 62 small, immature Atlantic sturgeon collected in 2014. Four of these small fish were recaptures of fish captured and tagged earlier in the year, documenting survival and growth rates.

A final, necessary step before declaring spawning of Atlantic sturgeon in the Connecticut River is an analysis of the genetic material collected and a determination of whether these fish are genetically different from other known river stocks (i.e., the Hudson River to our west and south, and the Kennebunk system to our north). However, prospects are good that the Connecticut River will be put back on the map of spawning grounds for this endangered species.



An Atlantic sturgeon recovered from a beach in the Connecticut River in March 2014 (size 6.2 feet fork length).

Destructive Southern Pine Beetle Found in Connecticut

The southern pine beetle, a destructive insect native to the Southeastern United States, has been confirmed in Connecticut. This beetle is capable of infesting and killing large stands of pine trees. Connecticut's native white pine (a "soft" pine) is potentially not at risk, but pitch pine and other "hard" pines are. The potential loss of pitch pine to an infestation of southern pine beetle is of grave concern. This native tree was once abundant in our state, but due to development of its preferred habitat (the sand-plain ecosystem), it now remains in scattered patches. Unique and highly-valued pitch pine habitat is critical for rare and endangered species dependent on pine-oak sandy barrens.

The southern pine beetle is not a species of federal regulatory concern, which is different from the emerald ash borer and Asian longhorned beetle. The extensive regulatory restrictions associated with these non-native, invasive insects do not apply to the southern pine beetle. The DEEP Division of Forestry and Connecticut Agricultural Experiment Station (CAES) want to limit the spread and discourage any population increase of this detrimental insect.

Currently, CAES is in the process of ascertaining how widespread this insect is in the state by encouraging any reports of infestation, and through trapping and field surveys. Sensitive habitats, such as extensive stands of pitch pine, will

be a high priority for monitoring. As southern pine beetles are found, this information will be shared so that natural resource professionals can be aware of their presence.

The experience of foresters in the Southeastern United States will be of great value in providing guidance relative to forest management for southern pine beetle. Generally speaking, managing a stand for the health of individual trees appears to be the best way to keep this destructive insect in check. Thinning to release pitch pine crowns from competition might best protect stands from outbreak attacks.

Report Suspected Infestations

Infested pine trees attempt to push out attacking beetles with a flow of resin. Attacked trees become covered with small popcorn-like blobs of dried resin. If the attack is successful, beetles lay eggs under the bark and larvae then feed on the circulatory system of the tree, killing it in one to two years.

The CAES is encouraging Connecticut residents to be on the lookout for the popcorn resin on pine trees. Any suspected finds should be reported to the CAES at 203-974-8474 or ctstateentomologist@ct.gov.

More information on the southern pine beetle is available at www.ct.gov/deep/forestry and www.ct.gov/cases.

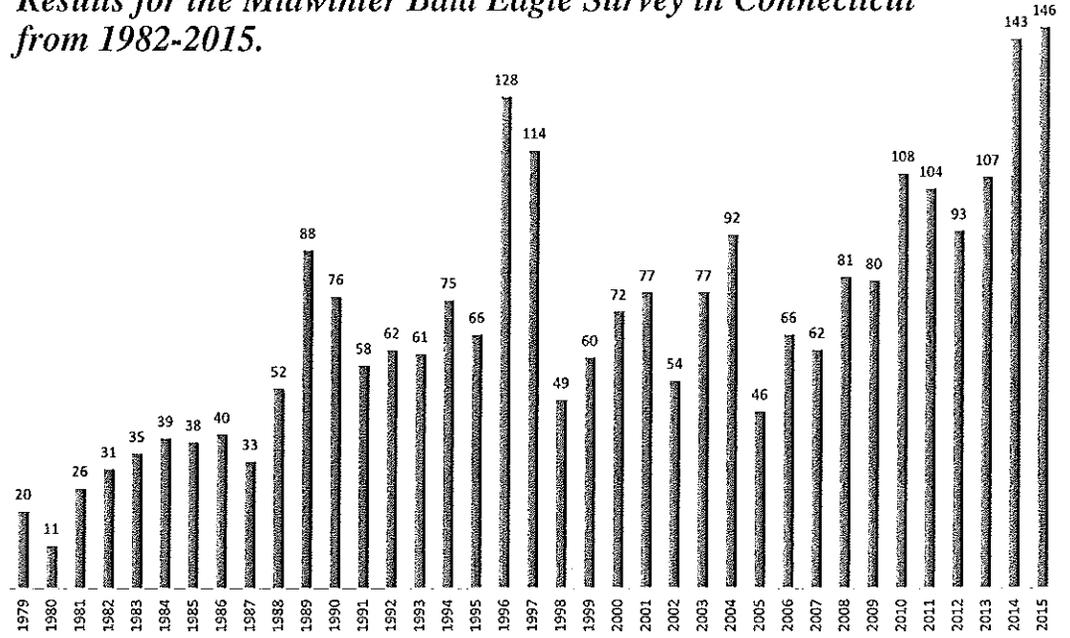
2015 a Banner Year for the Midwinter Bald Eagle Survey

Dozens of volunteer observers headed out into the cold on Saturday, January 10, 2015, to look for eagles during the annual Midwinter Bald Eagle Survey. Volunteers checked various lake and river locations along standard survey routes to record the number of bald eagles observed during a specified period of time.

Temperatures were cold, but the skies were clear and no snow was falling. However, most lakes were almost completely covered with ice. Despite the ice conditions, more eagles were observed in 2015 than in any other Connecticut Midwinter Eagle Survey (surveys began in 1979). A total of 146 eagles were observed, which included 85 adults, 57 immature eagles, and four of unknown age. In 2014, 143 eagles were counted.

The DEEP Wildlife Division would like to thank all of the volunteers who braved the cold to search for eagles dur-

Results for the Midwinter Bald Eagle Survey in Connecticut from 1982-2015.



ing the survey.

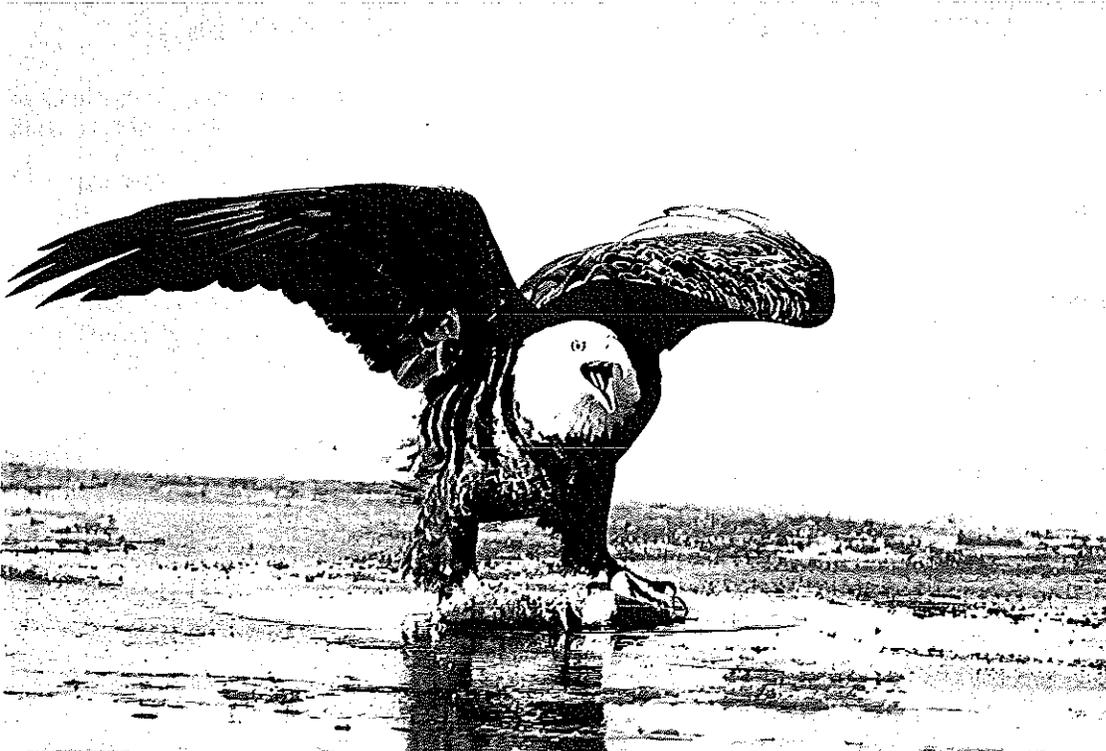
2015 Nesting Season

The adult bald eagles counted in the Midwinter Eagle Survey headed back to their breeding territories in February. While most winter visitors left Connecticut to breed, some stayed behind to nest.

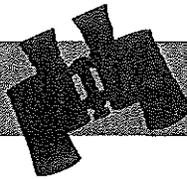
Since 1992, eagles have nested in the state and, as their population continues to rebound, our rivers, lakes, and shorelines host an increasing number of nesting pairs of eagles. Twenty years ago, Connecticut had one active nesting territory. This year, we are monitoring 40 active territories in all corners of the state. DEEP works

with a network of volunteers to monitor progress as the birds mate and lay eggs, and then as the eagle chicks hatch and grow.

Mid- to late spring is a particularly sensitive time for bald eagles. Temperatures are warming, but spring weather can be volatile. Increased human traffic can flush the parents, and time away from the nest can be hazardous for developing eggs and eaglets. If you see nesting eagles, observe them from a distance and enjoy watching a great wildlife success story unfold.



Wintering eagles tend to congregate along Connecticut's major rivers in places where the water remains ice-free.



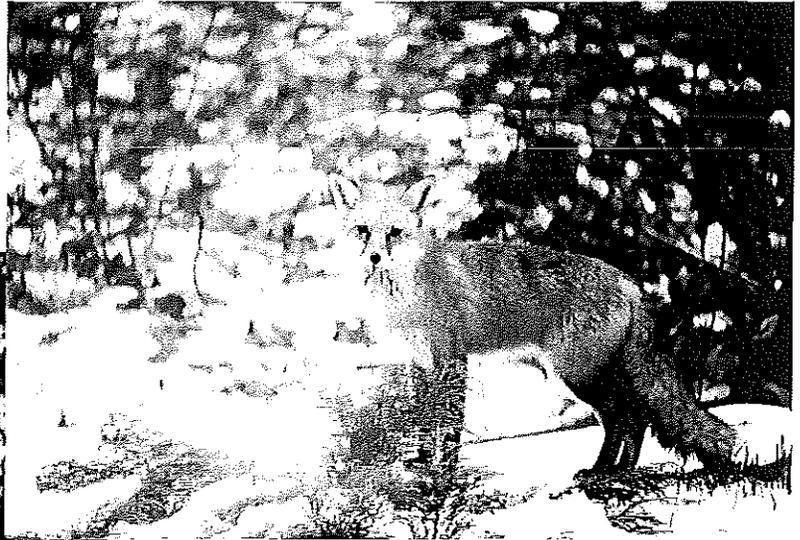
Do you have an interesting wildlife observation to report?

Please send your story with photos to:

Wildlife Observations, Wildlife Division,
P.O. Box 1550, Burlington, CT 06013, or
email: deep.ctwildlife@ct.gov

Foxes on the Patio!

Homeowners Fred and Myrna Blum spotted these red foxes on their patio in January. Fred, an avid amateur photographer, grabbed his camera and started taking pictures through the sliding glass door, so as not to scare them off. "While we have had deer, bobcat, and bear in the backyard, this is the first time we have seen anything larger this close to the house. Normally, we see a lot of chipmunks and squirrels right on the patio, but nothing else has ever come right up to the back door!" The pair stuck around for about 10 or 15 minutes. "They looked at us while we looked



at them, then they seemed to play a little bit before heading off into the woods behind our house." While generally solitary creatures, it is not unusual for foxes to be seen in pairs during winter. They are common in suburban areas, such as this neighborhood, where they feed on small rodents, squirrels, and amphibians, as well as eggs, fruits, nuts, and garbage.



The Backstory: A Lesson from Above

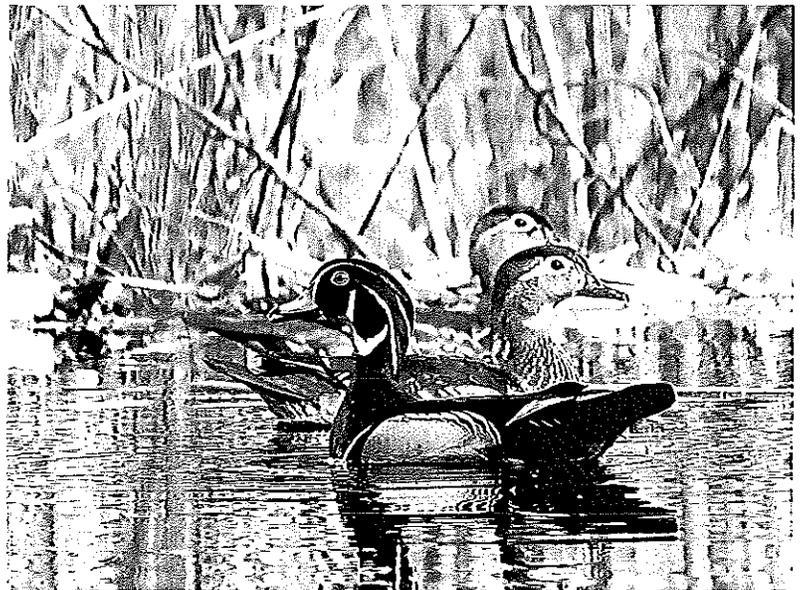
The snow on the ground is long gone and I am carefully working my way toward the far end of the swamp. I am a wildlife photographer that is hoping to get some photographs of a nesting pair of wood ducks. These particular ducks I know well. I had spent quite a bit of time with them last year watching them raise their young. They are shy and elusive. Give them the slightest hint you are around and they will disappear into the reeds. An hour will go by before they chance a return. So, there I sit, waiting, chastising myself for making a careless move. That's all it took.

The wood duck . . . *Aix sponsa*. Your attention is initially drawn to the spectacular colors of the adult male. Green, blue, orange, black, white, the chestnut breast, and those red eyes. The female, although not as colorful as the male, also has unique markings. The beauty of these birds would be enough, but much more sets them apart from other ducks. My first lesson occurred when I was trying to sneak up on this pair. So proud of myself as I quietly moved through the swamp, convinced they would never see me coming. Something caused me to look up. High above, sitting on the branch of a dead tree, was a male wood duck staring down at the foolish human below.

It turns out that, not only do they perch in trees from time to time, but they also nest in tree cavities about five to 15 feet above the ground. When the eggs hatch, the ducklings jump out of the nest and make their way to water. At this point, the common routine of raising ducklings takes over. The young are virtually on their own and the next stage of their life is a dangerous one. When I first saw the female's brood, there were seven ducklings following her around the swamp. Four weeks later I could only find three. Danger can come from any direction, whether it is an owl swooping down, a fox from the shore, or a snapping turtle from below. The survivors will move on and start their own families. Nature's plan I guess.

The next time you are ambling toward a hidden pond or working the edges of a local swamp, take notice. With a little luck, you might just get the chance to witness an inspiring bit of nature. And don't forget . . . look up in those trees.

Article and photography by J. H. Clery, Wildlife Photographer (Check out his blog at jhclerynaturephotography.wordpress.com)





Black Bear Research

The Wildlife Division is currently monitoring 35 radio-collared female black bears, with increased emphasis on “suburban bears” that reside in such towns as Bristol, Plainville, Avon, Torrington, and Canton. With the help of radio telemetry equipment, biologists located the winter dens of these collared females from January through early April. The adult females were given an immobilizing drug so that each bear and any yearlings or cubs could be examined and data collected. Most of the collars on the bears are GPS-equipped, meaning that the collars obtain and



Wildlife Resource Assistant Scott Reinhardt uses telemetry equipment to pinpoint the location of a female black bear outfitted with a radio-transmitting collar.



store thousands of locations where these bears have travelled over the previous year. During this field work, biologists are able to retrieve the collars and download the stored data, as well as replace them with collars that have fresh batteries.

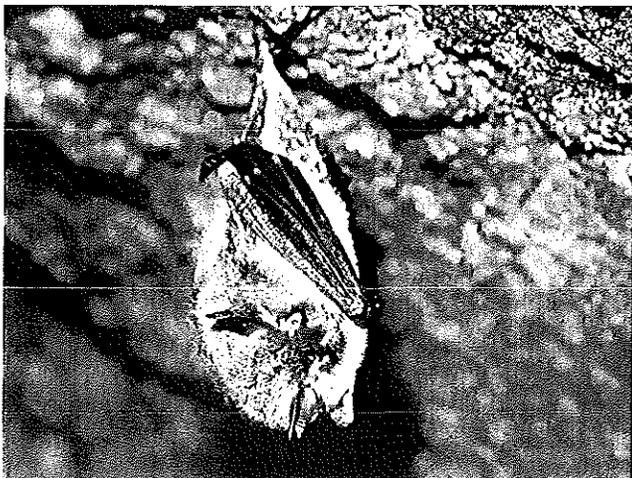
Data from these den visits help biologists predict the growth of Connecticut’s bear population and also determine the expansion of the population. Habitat selection by bears is also being examined.

Northern Long-eared Bat Gets ESA Protection

The U.S. Fish and Wildlife Service (USFWS) is protecting the northern long-eared bat as a threatened species under the federal Endangered Species Act (ESA), primarily due to the threat posed by white-nose syndrome, a fungal disease that has devastated many bat populations.

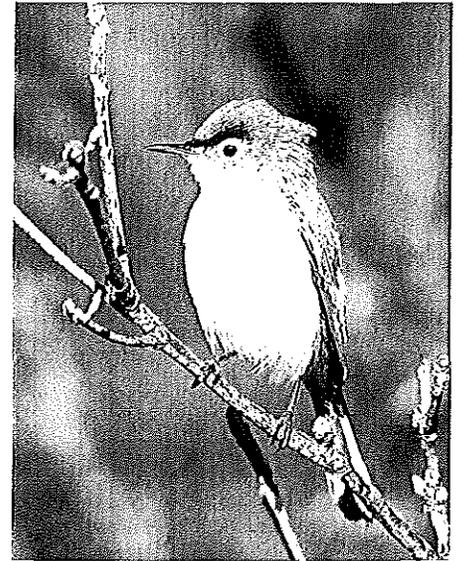
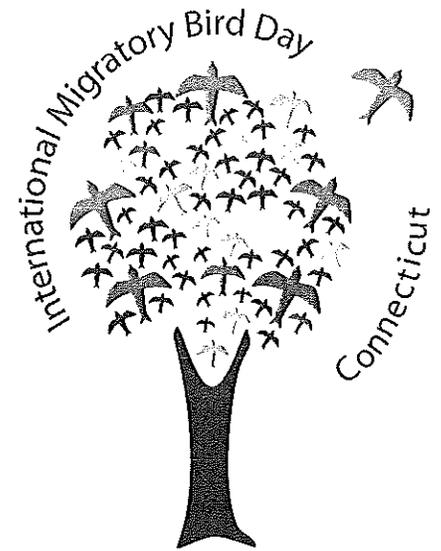
In the United States, the northern long-eared bat is found from Maine to North Carolina (including Connecticut) on the Atlantic Coast, westward to eastern Oklahoma and north through the Dakotas, reaching into eastern Montana and Wyoming. Throughout the bat’s range, states and local stakeholders have been some of the leading partners in both conserving the long-eared bat and addressing the challenge presented by white-nose syndrome.

In making this decision, the USFWS reviewed the best available scientific information on the northern long-eared bat, including information gathered from more than 100,000 public comments. This species is being listed because white-nose syndrome is spreading and decimating its populations. Along with this listing, the USFWS issued an interim special rule that eliminates unnecessary



regulatory requirements for landowners, land managers, government agencies, and others in the range of the northern long-eared bat. The rule provides appropriate protection within the area where the disease occurs for the remaining individuals during their most sensitive life stages, but otherwise eliminates unnecessary regulation.

For more information on the final rule listing the northern long-eared bat as threatened, and the interim rule, go to www.fws.gov/midwest/nlebat.



P. J. FUSCO (8)

Blue-gray gnatcatcher

International Migratory Bird Day 2015

The theme for International Migratory Bird Day (IMBD) 2015, which was celebrated on May 9, is “Restore Habitat, Restore Birds.” Loss and degradation of habitat are primary threats to bird populations. The theme considers threats, such as urbanization and climate change, and suggests ways for people to get involved in habitat restoration projects at home, in communities, and further afield. The IMBD website (www.migratorybirdday.org) contains a variety of resources, such as fact sheets, games, activities, PowerPoint presentations, curriculum, and more.

The 2015 IMBD poster provides a colorful view of a few of the habitats migratory birds seek for nesting, wintering, or as stopover sites during migration. This beautifully illustrated poster can be ordered from the IMBD website for \$8.00 a piece (bulk orders are also available).

Conservation Calendar

- Late April-August.....Respect fenced and posted shorebird and waterbird nesting areas when visiting the Connecticut coastline. Also, keep dogs and cats off shoreline beaches to avoid disturbing nesting birds.
- May 9.....**International Migratory Bird Day** – Celebrate this special day that highlights "Restore Habitat, Restore Birds." See page 22 to learn more.
- May 15.....Endangered Species Day, which was initiated by Congress in 2006, is an opportunity for people of all ages to learn about the importance of protecting endangered species and the everyday actions they can take to protect our nation's disappearing wildlife and last remaining open spaces. Learn more at www.endangeredspecies.org.

Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by emailing laura.rogers-castro@ct.gov or calling 860-424-3011 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.

- May 23.....**Open Center Day**, from 9:00 AM-3:00 PM. The Sessions Woods Conservation Education Center will be open as part of the No Child Left Inside "Open Center Day." There will be a full day of outdoor activities for families and other participants. Check the DEEP website (www.ct.gov/deep/wildlife) or the Connecticut Fish and Wildlife Facebook page (www.Facebook.com/CTFishandWildlife) for a full list of activities.
- June 6.....**Trails Day Hikes**: Since 1993, the first Saturday of every June has been designated "National Trails Day." Sessions Woods will host two hikes designed for participants to learn about the unique habitats at this wildlife management area. The first hike is a 5.5-mile excursion that begins at 9:00 AM and is being led by Jan Gatzura and Jeff O'Donnell. The second hike, beginning at 1:30 PM, is 3 miles roundtrip and will be led by Karen Geitz and Wildlife Division biologist Peter Picone. Meet the hike leaders in front of the Education Center. Bring water, a snack, and wear proper walking shoes.
- July 18.....**Butterfly Walk**, starting at 1:30 PM. Wildlife Division Natural Resource Educator Laura Rogers-Castro will provide participants with a lesson on the basics of butterfly identification, including tips on distinguishing the various butterfly families. Following a brief indoor program, Laura will guide the group on a walk to identify the local butterfly fauna at Sessions Woods. Meet in the classroom located in the exhibit room of the Education Center.

Hunting & Fishing Season Dates

April 29-May 30Spring Turkey Hunting Season

Jun. 21 & Aug. 15....**Free Fishing License Days**: Anyone can fish for free provided they have obtained a one-day free fishing license. These licenses will be available approximately three weeks prior to each date through the DEEP's convenient online licensing system (www.ct.gov/deep/sportsmenlicensing) – now mobile friendly!

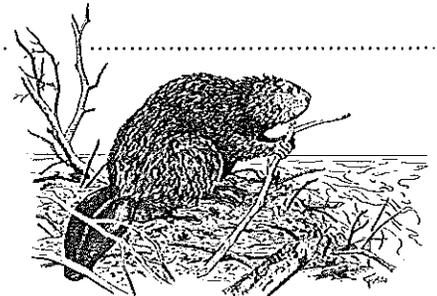
Consult the 2015 Connecticut Hunting & Trapping Guide and 2015 Angler's Guide for specific season dates and details. Printed guides can be found at DEEP facilities, town halls, bait and tackle shops, and outdoor equipment stores. Guides also are available on the DEEP website (www.ct.gov/deep/hunting and www.ct.gov/deep/fishing). Go to www.ct.gov/deep/sportsmenlicensing to purchase Connecticut hunting, trapping, and fishing licenses, as well as required deer, turkey, and migratory bird permits and stamps. The system accepts payment by VISA or MasterCard.



Find us on
Facebook

www.facebook.com/CTFishandWildlife

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)

Name: _____

Address: _____

City: _____ State: _____

Zip: _____ Tel.: _____

Email: _____

Will only be used for subscription purposes

Check one:

Renewal
 New Subscription
 Gift Subscription

Gift card to read: _____

Donation to the Wildlife Fund:

\$ _____

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

Order on-line with a credit card through the DEEP Store at: www.ct.gov/deep/WildlifeMagazine

Connecticut Wildlife

PERIODICALS
POSTAGE PAID AT
BURLINGTON, CT,
AND ADDITIONAL
OFFICES

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

|||||
*****5-DIGIT 06268
S31 P12 EXPIRES COMP.
MANSFIELD CONSV/INLD WETLANDS
TOWN HALL
4 S EAGLEVILLE RD
STORRS CT 06268-2574



Pileated woodpeckers will often search for food in downed logs within the forest. They will chip away at the log to find carpenter ants, wood boring beetles, and other invertebrates.

The Habitat

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

Spring 2015

volume 27 number 2



CALL TO ACTION! For Land Conservation

Call to Action for four critical conservation issues that need your immediate attention.

1. **Community Investment Act (CIA):** Open Space Funds proposed to be eliminated.
2. **Substitute Bill 347:** Will reduce “match funds” needed for state open space grants.
3. **State Parks Services:** \$2 million budget cut; services reduced.
4. **Council on Environmental Quality (CEQ):** Funding eliminated.

THE COMMUNITY INVESTMENT ACT (CIA)

Enacted in 2005, the CIA has provided funding for state land use programs for open space conservation, farmland preservation/dairy production, historic properties preservation and affordable housing development, supporting over 1,100 projects, in 165 towns for a total of \$133 million invested in our communities. (Compiled by a statewide CIA coalition).

Governor’s Bill No. 6825, Section 5. Sweeps \$10 million into general fund from DEEP CIA 2014-2015 account for “municipal open space grants.” Possibly threatening funding for the current grant round.

S.B. 946 Section 29(b): An Act Concerning Revenue Items to Implement the Governor’s Budget. Proposes complete sweep of the Community Investment Act account from January 1, 2016 through June 30, 2017 into the General Fund. Will undermine the administration, function and viability of the OSA program.

Funded by a surcharge on local recording fees, CIA is the only *consistent* source of funding for the state’s Open Space and Watershed Land Acquisition Grant Program (OSWA) – the state’s matching grant program for land trusts, towns and water companies seeking to conserve open space. Since its inception, the CIA has provided \$17,340,039 to support the acquisition of 4,447 acres and 16 community gardens. (DEEP 2013 Annual Report to the Environment Committee). The 2014 OSWA grants would permanently protect another 2,250 additional acres in 25 municipalities. CIA also funds three staff positions; the sweep of the CIA

account will undermine the administration, function and viability of the OSWA program.

The magnitude of these proposed cuts is unprecedented, not only putting a halt to investments slated for projects under all four of the programs for which the CIA was

Action, continued on page 10

Call to Action: Four Critical Conservation Issues Need Your Immediate Attention

1. **Community Investment Act (CIA):** Open Space Funds proposed to be eliminated.
2. **Substitute Bill 347** Will reduce “match funds” needed for state open space grants.
3. **State Parks Services** \$2 million budget cut; services reduced.
4. **Council on Environmental Quality (CEQ)** Funding eliminated.

Please make contact with your legislators—NOW! Use own words to support or oppose the legislation described here. To contact your legislator Google, “[Find Your Legislator](#)” to link to your legislator’s contact info. Use Contact button to submit email. Thank You!

Inside★	CACIWC News	2
	Case Law: 22a-19 Intervention	3
	Project Green Lawn	6
	CEQ Report 2015	9
	Permanent Protection Conservation Land	13
	CLCC Legislative Agenda	14

Board of Directors

Officers

Alan Siniscalchi	President
Laura Magaraci	Vice President
Maureen FitzGerald	Secretary
Charles Dimmick	Treasurer

County Representatives

Alicia Mozian	Fairfield County
Ann Beaudin	Hartford County
Steve Wadelton	Litchfield County
Marianne Corona	Middlesex County
Peter Bassermann	New Haven County
Vacant	New London County
Rodney Parlee	Tolland County
Steve Sadlowski	Windham County

Alternate County Representatives

Barbara Wilson	Fairfield County
Vacant	Hartford County
Vacant	Litchfield County
Vacant	Middlesex County
Maria Kayne	New Haven County
Vacant	New London County
Vacant	Tolland County
Vacant	Windham County

Darcy Winther DEEP Liaison



The Habitat is the newsletter of the Connecticut Association of Conservation and Inland Wetlands Commissions (CACIWC). Materials from *The Habitat* may be reprinted with credit given. The content of *The Habitat* is solely the responsibility of CACIWC and is not influenced by sponsors or advertisers.

Editor: Tom Odell

Associate Editor: Ann Letendre

Correspondence to the editor, manuscripts, inquiries, etc. should be addressed to *The Habitat*, c/o Tom Odell, 9 Cherry St., Westbrook, CT 06498. Phone & fax 860.399.1807 or e-mail todell@snet.net.

www.caciwc.org

During the first few months of 2015, the CACIWC Board of Directors has been working to identify new educational topics, workshops, and training programs for all of you who serve as our member commissions and staff. We have been reviewing the results of your membership surveys in order to ensure that CACIWC is aware of any new or ongoing challenges to your efforts in protecting Connecticut wetlands and other important local habitats. The CACIWC board has also been closely following proposed legislation and state budget negotiations to monitor for any threats to the long-term protection of lands of high conservation value throughout our state.

38th Annual Meeting and Environmental Conference

The Board of Directors has reviewed the valuable comments and suggestions submitted on our 2014 annual meeting survey. If you did not have an opportunity to complete the 2014 meeting survey you can still contact us with your comments and at AnnualMtg@caciwc.org. We welcome any suggestions for workshop topics and speakers that you would like us to recruit for our upcoming 38th Annual Meeting and Environmental Conference, scheduled for Saturday, November 14, 2015; please save the date! Please send your ideas to us at AnnualMtg@caciwc.org, along with any other suggestions. Watch for additional conference news in upcoming issues of *The Habitat* and on our www.caciwc.org website.

Membership Surveys

As previously mentioned, the CACIWC Board of Directors has been reviewing comments on the conservation commission and inland wetlands membership surveys that we have received during 2014. Your responses to this survey will make valuable contributions to the development our new strategic plan and help us prepare new education and outreach programs. If your commission has still not done so, please complete and mail in your survey that can be located and downloaded from the home page of our website: www.caciwc.org.

Improved Membership Communication

One proposed new goal of our revised strategic plan is improved membership communication, including expanding ways to quickly send you important messages on emerging topics of interest, including grants and funding, legislative issues, and education and training opportunities. These improved communications will include an expanded listserv and website-based systems. You will be receiving requests for updated email listings from both board members as well as our Membership Coordinator & Database Manager Janice Fournier.

Next Generation of Conservationists

An important goal of our strategic plan is the development and promotion of our next generation of Connecticut

CACIWC news, continued on page 15

Inland Wetland Case Law clarifying the “Nature” of Factual Allegations required under P.A. 13-186 for a “22a-19 Intervention” pursuant to Connecticut’s Environmental Protection Act of 1971.

by Attorney Elizabeth L. Heins, Branse & Willis, LLC

Connecticut’s 1971 Environmental Protection Act, codified as sections 22a-14 to 22a-20 of the Connecticut General Statutes [CGS], contains a provision that allows anyone to intervene in an administrative, licensing or other proceeding, or in the judicial review of such proceeding, that has a potential to harm the environment. This provision is in section 22a-19 of the CGS, and is often referred to as a “22a-19 intervention.” Inland Wetlands and Watercourses Commissions [Commissions] may be faced with a 22a-19 intervention.

A 22a-19 intervention can be thought of as having two phases: 1. becoming an intervenor [Phase One], and 2. proving that the proceeding or action involves *conduct which has, or is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the...water...of the state* [Phase Two]. Case law holds that one does not have to prove the allegations in order to become an intervenor; one may become an intervenor—Phase One—even if the allegations ultimately turn out to be unfounded—Phase Two.

This article will walk through some recent changes in 22a-19 that affect Phase One. First, the prior standard will be laid out, and then Public Act 13-186 will be introduced. Next, the case of *Sard Custom Homes v. West Hartford Planning & Zoning Comm’n/Inland Wetlands & Watercourses Agency* will be outlined, and the new standard of Public Act 13-186 will be analyzed in the context of this case. Finally, this article will offer

recommendations for Commissions faced with a 22a-19 petition for intervention in light of the new standards.

Phase One of the 22a-19 intervention process is when the would-be intervenor files a *verified pleading* with the agency or commission, sometimes called the *petition for intervention*. “Verified” means that the would-be intervenor swears to the truth of the allegations in the petition. Prior to Public Act 13-186, there was a question of how much evidence had to be presented in the petition to become an intervenor. If the statute requires the intervenor to claim that the application is reasonably likely to unreasonably pollute the water, is it enough to merely assert that the conduct is likely to unreasonably pollute, impair or destroy the public trust in the water, and nothing more? The answer, according to Public Act 13-186, is no.

Public Act 13-186 added a paragraph to section 22a-19 that reads as follows:

“(a)(2) The verified pleading [Phase One] shall contain specific factual allegations setting forth the nature of the alleged unreasonable pollution, impairment or destruction of the public trust in air, water or other natural resources of the state and should be sufficient to allow the reviewing authority to determine from the verified pleading whether the intervention implicates an issue within the reviewing authority’s jurisdiction. For purposes of this section, “reviewing authority” means the board,

Intervention, continued on page 4

INLAND & TIDAL WETLAND FLAGGING VERNAL POOL DETERMINATION

CHRISTIE COON
PROFESSIONAL SOIL SCIENTIST

WETLAND RESOURCE LLC
WETLANDRESOURCE.COM
203-661-3220



Connwood Foresters, Inc.

Serving CT, MA, RI & NY Since 1945

Forest Stewardship Plans
Property Tax and Cost Savings
Baseline Documentation Reports
Wildlife Habitat Improvements
Permit Acquisition

Expert Witness Services
Timber Sales and Appraisals
Boundary Location/Maintenance
Invasive Species Control
GIS & GPS Mapping

USDA NRCS Technical Service Provider for
Gov. funded stewardship plans/activities
for land trusts & individuals

860-349-9910

CONNWOOD.COM

commission or other decision-making authority in any administrative, licensing or other proceeding or the court in any judicial review.”

The would-be intervenor now must allege *specific facts* related to the nature of the alleged unreasonable pollution, impairment, or destruction. Mere conclusory allegations, mere speculation, is insufficient. This begs the question, how specific must the facts be? That is the issue in *Sard Custom Homes v. West Hartford Planning & Zoning Comm’n/Inland Wetlands & Watercourses Agency*.

In *Sard Custom Homes*, Sard Custom Homes, LLC [Sard] applied to a joint Planning & Zoning [PZC] and Inland Wetlands Commission [IWWC] for an inland wetlands permit, and to subdivide property owned by the American School for the Deaf. The joint PZC/IWWC denied the application in both its zoning and wetlands capacities. Sard appealed this decision to Superior Court. Ms. Rosalind S. Katz then filed a verified notice of intervention, pursuant to 22a-19 with the trial court. The petition had the following language:

- “a) The application violates the town’s Plan of Conservation and Development;
- b) The detention basin lacks sufficient capacity and efficacy to both prevent downstream flooding and remove contaminants from being deposited in the wetlands and Trout Brook;
- c) The reengineering of the steep slopes and the inadequate protections to the wetlands and the Trout Brook will result in sedimentation of both resources;
- d) The clear cutting of almost 86% of the approximate 5.53 acres site will remove the site’s natural filters resulting in increased storm water runoff and increased erosion which in turn will result in increased sedimentation, including pollutants, being deposited in the adjacent wetlands and Trout Brook.”

Sard argued that, under Public Act 13-186, this was not specific enough. Sard cited case law which allows the reviewing authority—Commission or Court—to deny an intervention if the “concern . . . does not rise above speculation.” Sard argued that the intervenor should have presented actual evidence.

The Superior Court disagreed with Sard, stating: “While it is correct that a commission or agency considering an inland wetlands application must ultimately determine during its deliberations whether there is any actual adverse impact to any wetlands or

Public Act No. 13-186: An Act Concerning Intervention in Permit Proceedings Pursuant to the Environmental Protection Act

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

Section 1. Subsection (a) of section 22a-19 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2013*):

(a) (1) In any administrative, licensing or other proceeding, and in any judicial review thereof made available by law, the Attorney General, any political subdivision of the state, any instrumentality or agency of the state or of a political subdivision thereof, any person, partnership, corporation, association, organization or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.

(2) The verified pleading shall contain specific factual allegations setting forth the nature of the alleged unreasonable pollution, impairment or destruction of the public trust in air, water or other natural resources of the state and should be sufficient to allow the reviewing authority to determine from the verified pleading whether the intervention implicates an issue within the reviewing authority’s jurisdiction. For purposes of this section, “reviewing authority” means the board, commission or other decision-making authority in any administrative, licensing or other proceeding or the court in any judicial review. Approved June 24, 2013.

watercourses, this determination does not need to be made at **this stage.**”

The Court was explaining that Phase One did not require the Court to determine “actual adverse impact.” The factual evidence is necessary, but it should be presented in the second phase, after the petition for intervention is granted. In fact, once the intervention is granted, the burden is on the intervenor to prove actual or likely unreasonable pollution, impairment, or destruction; the intervenor does not have to present that evidence *in order to become* an intervenor.

The Court in *Sard Custom Homes* emphasized that Public Act 13-186 “requires the petition to ‘contain

Intervention, continued from page 4

specific allegations setting forth the *nature* of the alleged unreasonable pollution’...the legislature required allegations of the *nature* of the impact—not allegations of the ‘actual adverse impact.’”

The reviewing authority—the Court in *Sard Custom Homes*, often the Commission—in Phase One must determine whether the verified pleading, the petition for intervention, adequately sets out the nature of the alleged unreasonable pollution, impairment, or destruction. If the answer is no, then the intervention is not allowed; there is no Phase Two in that case. If the answer is yes, then the would-be intervenor becomes an actual intervenor, and now has a burden of proving the allegations in the petition for intervention.

Notably, Public Act 13-186 codifies previous case law. *Nizzardo* addresses the second clause of 22a-19 (a)(2): “...and should be sufficient to allow the reviewing authority to determine from the verified pleading whether the intervention implicates an issue within the reviewing authority’s jurisdiction.” The would-be intervenor must provide the specific factual allegations setting for the nature of the

alleged unreasonable pollution so that Commission may make the determination of whether the petition addresses a matter over which they have jurisdiction. Specificity is required, because if a 22a-19 verified pleading regarding air pollution is presented to an Inland Wetlands and Watercourse Commission, the Commission could not grant the intervention because the Commission only has jurisdiction over the wetlands and watercourses.

Between Public Act 13-186 and the *Sard* case, Commissions now have two end points on a spectrum. The mere conclusion that the application is likely to unreasonably pollute, impair or destroy the wetlands or watercourses is not enough. Specific facts that prove the actual adverse impact are not required at this point. The petition must set forth the nature of the alleged unreasonable pollution, impairment or destruction. The Commission must determine whether it has jurisdiction, and whether the petition has met this requirement. The stage is then set for Phase Two.

Footnotes

¹*Red Hill Coalition, Inc. v Town Planning & Zoning Comm’n*, 212 Conn. 727, 734 (1989).

²258 Conn. L. Rptr. 697 (Conn. Super. 2014).

³emphasis added

⁴Note 2, *supra*.

⁵Although Ms. Katz intervened at the trial court level, not directly to the IWWC, the analysis is the same.

⁶*Id.*

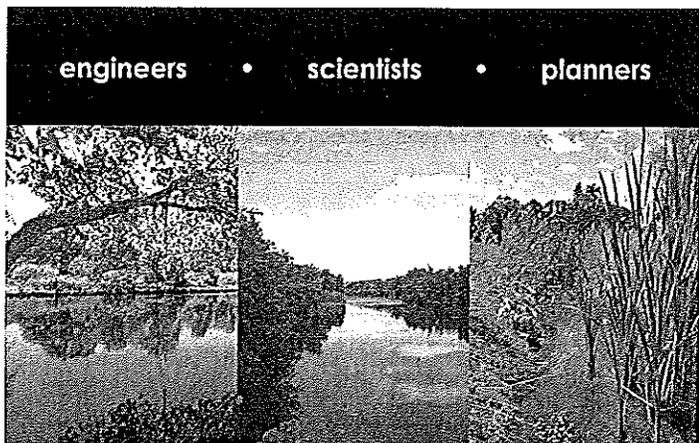
⁷Emphasis added

⁸See note 3, *supra*.

⁹*Nizzardo v. State Traffic Commission*, 259 Conn. 131 (2002).

¹⁰See figure 1.

¹¹Again, this evidence is required in Phase Two after intervention is granted in order to prove the 22a-19 violation. 🐦



f FUSS & O'NEILL

Providing engineering services
in New England since 1924

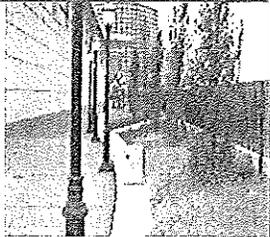
www.fando.com
860.646.2469

Connecticut • Massachusetts • Rhode Island • South Carolina

AGRESOURCE, INC.

800-313-3320 OR 413-265-0131

WETLAND SOILS
BIORETENTION SOILS
RAIN GARDEN SOILS
LIGHTWEIGHT SOILS FOR GREEN ROOF
CUSTOM SOILS



WWW.AGRESOURCEINC.COM

Project Green Lawn: A Sustained Public Awareness Campaign for Chemical Free Lawns

by Jane Brawerman, Executive Director, Connecticut River Coastal Conservation District

In 2005 the Connecticut River Coastal Conservation District collaborated with the City of Middletown and other community partners to initiate Project Green Lawn, a public awareness campaign to encourage residents and businesses to maintain safe, healthy lawns free of synthetic pesticides and fertilizers. Members of our working committee include children's advocates, environmental groups, members of the City's Recycling Commission and Conservation Commission and public health professionals.

Since the program's beginnings, we have hosted a variety of public events and presentations to educate residents, businesses and institutions about the health and environmental risks of traditional lawn care chemicals and the benefits of organic lawn care, including how-to workshops focused on making the switch to organic methods; sponsored a half-day course for professionals on natural turf management; written articles for local newspapers and other groups; sent educational alerts

through the public schools about the health risks associated with exposure to lawn care chemicals, in particular to children; worked with the City of Middletown on several levels to improve organic lawn care efforts on municipal grounds, making some inroads; and submitted testimony to the legislature on pesticide issues and encouraged others to take action on legislative issues as well. One of our most successful outreach tools in support of our efforts has been the documentary film, A Chemical Reaction. We have held two screenings of the film in Middletown, both of which drew good crowds and generated quite a bit of discussion.

Following is a summarized version of the educational brochure that was published for the campaign, and updated in 2009. The brochure is available on the District website: www.conservect.org/ctrivercoastal. Please contact us at 860.346.3282 if you have questions or would like additional information, or if you are interested in initiating a similar campaign in your town.

Green, continued on page 7

From wetland to upland...



we have what you need.

New England Wetland Plants, Inc.
Wholesale Native Plant Nursery

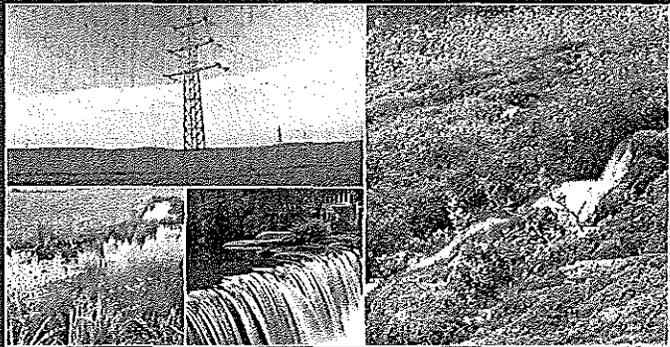
Your source for:

- Trees, Shrubs, Ferns, Flowering Perennials, and Grasses
- Coastal and Inland Wetland Plants
- Specialty Seed Mixes
- Coir logs, Straw Wattles, Blankets, and Mats

For Conservation · Restoration · Water Quality Basins · Natural Landscaping

New England Wetland Plants, Inc.
820 West Street, Amherst, MA 01002
Phone: (413) 548-8000 Fax: (413) 549-4000

Wetlands & Soils Scientists | Biologists | Ecologists | Archaeologists



BL Companies specializes in Natural & Cultural Resource studies related to:

- Land Development
- Energy
- Telecommunications
- Infrastructure
- Transportation
- Regulatory Compliance

Meriden
Hartford
Bridgeport

BL Architecture
Engineering
Environmental
Land Surveying

An Employee-Owned Company

www.blcompanies.com Companies

Green, continued from page 6

Everybody wants a lush green lawn—but at what cost?

Many people don't realize that lawns maintained with synthetic fertilizers and pesticides pose a serious health threat to people, pets and the environment. Lawns also decrease natural habitat vital to wildlife. Reducing the use of lawn care chemicals to foster healthier communities can be done individually, in our yards; in our parks, playing fields and other public places; and in our schools, where use of lawn care chemicals is currently banned by state law at day care centers and grades K-8.

Why Chem-Free?

Lawn care chemicals—applied by homeowners or lawn care companies—contain potent toxins that kill organisms considered pests, such as dandelions and grubs. Scientific evidence shows that these chemicals also affect people, especially children, and pets. Exposure to certain lawn care pesticides has been associated with increased risks of a variety of health problems, including asthma, several types of child and adult cancers, and cancers in dogs.

The effects of harmful lawn care chemicals reach far beyond your family and yard. These chemicals can make their way into the environment through rain runoff, polluting streams and groundwater, and move through the food chain, becoming more concentrated.

Using herbicides and pesticides to tackle weeds and insects can actually be counter-productive to your lawn's health. These poisons also kill good organisms in the soil that help produce nutrients plants need to grow. This weakens the grass, fosters thatch and encourages disease.

How to Have a Healthy Lawn and Yard

Fortunately, you can have an attractive and healthy lawn without using harmful synthetic chemicals. You can make simple changes, like mowing higher (3"), leaving your grass clippings on the lawn, using organic fertilizers, aerating to reduce soil compaction, and de-thatching, to make your lawn healthier and more vigorous naturally.

You can also reduce the size of your lawn by growing a variety of other plants to promote a healthy, diverse ecosystem in your yard. Grass, which requires lots of sun, water and good soil, is one of the highest maintenance plants we can grow. Instead, plant groupings of trees, shrubs, grasses and flowers that are compatible with existing environmental conditions; use ground covers that require less maintenance than grass; and, choose native plants adapted to our climate and conditions.

Finally, use safe alternatives to get rid of common pests. You can pull out dandelions at their weakest—when blooming; eliminate crabgrass by mowing high and using organic fertilizers; treat weeds in driveway or sidewalk cracks with white vinegar; and control grubs with alternatives like beneficial nematodes or Neem.

What More Can You Do?

Are you concerned about others who use lawn care chemicals in your neighborhood or community? You can register with the state for advance warning of nearby spraying. For information, go to www.ct.gov/deep, and search on "pesticide management." You can also talk to neighbors and friends about the harmful effects of using pesticides—both on private property and in public areas like playing fields. Together, by simply changing our behavior, we can make our yards, streams, and local environment better.

Project Green Lawn is a project of the City of Middletown Public Works Department, Resource Recycling Advisory Council and Conservation Commission, with support and assistance from the Connecticut River Coastal Conservation District and The Jonah Center for Earth and Art. Project Green Lawn has been supported by a generous grants from The Rockfall Foundation, Middletown, CT, and New England Grassroots Environment Fund. ♻️



NEE environmental consulting
Collaborating with Clients on Environmental Projects Since 1986:

- Natural Resources & Environmental Permitting
Wetland Science, Rare Species Evaluations,
Environmental Permitting & Review
- Ecological Restoration
Riparian, Wetland & Coastal Restoration,
Construction, Invasive Species Management
- Landscape Architecture & Ecological Design
Sustainable Design, Permitting & Construction
Plans, 3-D Modeling, Design Charettes
- Site Assessment & Remediation
Environmental Site Assessment, Asbestos
Services Hydrogeology

New England Environmental, Inc.
Environmental Consulting

15 Research Drive
Amherst MA 01002
(p) 413.256.0202

www.neeinc.com



2015 Legislative Bills Concerning
Pesticide Application for Lawn Care
(as of March 25, 2015)

For more information about these bills go to cga.state.ct.us/, click on Bill Info, Search on Basic Bill and Document Search, Use Quick Search at top of page.

S.B. 366 An Act Extending the Ban on the Use of Lawn Care Pesticides to Schools that House Grades Nine Through Twelve and to State Facilities.

To extend the ban on the use of lawn care pesticides to schools that house grades nine to twelve, inclusive, and to apply a similar prohibition to the application of lawn care pesticides on property that is under the custody, control or care of any state agency.

S.B. 1063 An Act Concerning the Application of Pesticides on School Grounds and Certain Public Spaces, Authorizing the Use of Certain Microbials and Reestablishing the Pesticide Advisory Council.

To authorize the use of certain microbials for the control of grubs, expand the current prohibition on the application of lawn care pesticides at schools to include grades nine through twelve, prohibit the application of lawn care pesticides on athletic fields and municipal greens and re-establish the Pesticide Advisory Council.

LAW OFFICES OF
Branse & Willis, LLC

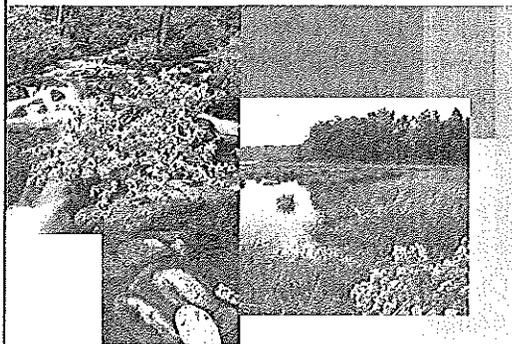


Zoning & Inland Wetlands
Commercial & Residential Real Estate
Business Law • Municipal Law
Wills & Probate

MARK K. BRANSE • MATTHEW J. WILLIS
RONALD F. OCHSNER • CALEB F. HAMEL
ELIZABETH L. HEINS

148 Eastern Boulevard, Suite 301
Glastonbury, CT 06033
Tel: 860.659.3735 • Fax: 860.659.9368

GEI Consultants, Inc.
Consulting Scientists and Engineers



Serving Connecticut

GEI is a multi-disciplinary national firm with a strong local presence. Our Glastonbury, CT office has a staff of 50 professionals with expertise in Ecological, Soil, Wetland, and Environmental Sciences. We also provide Environmental Assessment, Remediation, and Geotechnical Design. We offer Connecticut municipalities a variety of services including:

- Natural Resource Inventories
- GIS Services
- Soil Science Services
- Wetland Permit Peer Reviews
- Mitigation & Restoration
- Shoreline Enhancement and Stabilization

For more information about GEI, please contact Martin Brogie at 860.368.5340 or mbrogie@geiconsultants.com

www.geiconsultants.com

**REDNISS
& MEAD**

LAND SURVEYING
CIVIL ENGINEERING
PLANNING & ZONING CONSULTING
PERMITTING



22 FIRST STREET
STAMFORD, CT 06905
203.327.0500

www.rednissmead.com

CEQ'S ANNUAL REPORT ON CONNECTICUT'S ENVIRONMENT:

Improvements in Air Quality and Long Island Sound; Major Worries for Land and Wildlife

The following is from the Council's letter to Governor Dannel P. Malloy:

"The data show that restoring Connecticut's air and water quality and conserving its land and wildlife are multi-generational jobs that require unwavering financial and regulatory commitments.

Connecticut continued in 2014 to reap the benefits of past commitments and current practices in five notable areas:

- It was the best year in decades for air quality.
- More than 90 percent of Long Island Sound had adequate oxygen levels all year round, equaling 2013's record as the best in decades.
- Residents continued their trend of driving less and taking the bus more often.
- By using less gasoline, Connecticut residents continued their positive trend of reducing emissions of carbon dioxide, the pollutant that contributes to most of the observable climate change.
- Another path toward fewer emissions: Connecticut residents installed an unprecedented number of solar panels and purchased slightly more electricity from other renewable sources.

A lack of sustained commitment was evident in other indicators:

- Connecticut is so far off the track toward meeting its land conservation goals that success is in serious jeopardy. To get to the mandated goal for state parks, forests and wildlife management areas by 2023, the state will need to preserve more acres every year than it preserved in the last ten years combined. Water quality indicators show the dramatic effect of not preserving fields and forests.
- Some wildlife species, including turtles, are good indicators of ecological conditions. Unfortunately, many show discouraging trends.
- More than 1,200 violations of air, water and other pollution laws were detected by DEEP in 2014. While the Council no longer can assess overall rates of compliance, it is evident that full compliance remains a distant goal.

Connecticut residents set ambitious goals -- most of them decades ago -- for their air, water and wildlife. In some cases, progress slowed just as the goal line seemed within reach. In others (to continue the football analogy) the

field turned out to be a lot longer than it seemed initially. In all cases, the Council concludes, progress depends on consistent commitment."

Council Chair Susan Merrow, a resident of East Haddam, noted that this year's report adds some new measures, or "environmental indicators," that help the public to chart the fate of the state's water and wildlife.

"We added a new indicator that shows the level of dissolved nitrogen in the Sound," Merrow explained. "This is important because state residents have invested hundreds of millions of dollars to remove nitrogen from sewage treatment discharges, and we had read that in some areas of the country this effort has not always lead to less nitrogen in the waterbody itself. So we plotted the level of dissolved nitrogen in the Sound over ten years and -- good news! -- the nitrogen has been going down."

Merrow continued, "We added new data on the status of turtles and cave-dwelling bats, and there the news is not good. In fact, it is terrible, with two more turtle species and four bat species being proposed for listing as endangered, threatened or of special concern."

The Council on Environmental Quality submits Connecticut's annual report on the status of the environment to the Governor pursuant to state statutes. Additional responsibilities of the Council include review of construction projects of other state agencies, publication of the twice-monthly *Environmental Monitor*, and investigation of citizens' complaints and allegations of violations of environmental laws. The Council is a nine-member board that is independent of the Department of Energy and Environmental Protection (except for administrative functions). The chairman and four other members are appointed by the Governor, two members by the President Pro Tempore of the Senate and two by the Speaker of the House.

Environmental Quality in Connecticut -- the annual report on the state's environmental condition -- is a paperless publication available on the Council's website, www.ct.gov/ceq/AnnualReport. You can read it online or download a PDF version that can be printed.

Publication Date: March 17, 2015 🍀

Action, continued from page 1

created -- land use programs with few, if any, other sources of funding -- but also setting a very dangerous and perhaps irreversible precedent for future sweeps of the fund.

SUBSTITUTE BILL 347: AN ACT CONCERNING THE PERCENTAGE OF STATE AND FEDERAL FUNDS THAT MAY BE USED TO PURCHASE OPEN SPACE UNDER THE OPEN SPACE AND WATERSHED LAND ACQUISITION PROGRAM

"Be it enacted by the Senate and House of Representatives in General Assembly convened: Section 1. Subsection (c) of section 7-131g of the general statutes is repealed and the following is substituted in lieu thereof (Effective from passage):

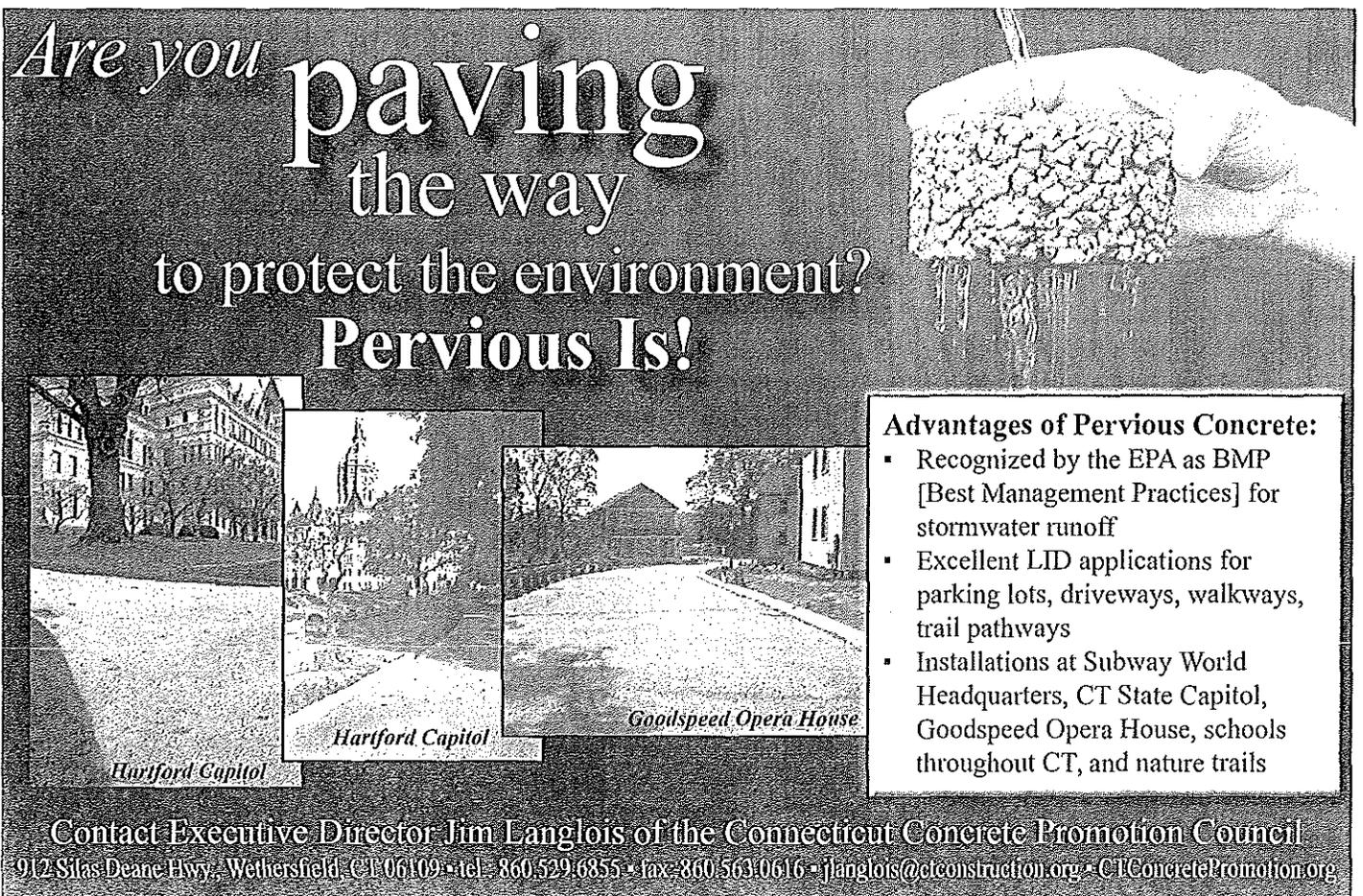
(c) For purposes of this subsection, the fair market value of land or interest in land shall be determined by one or more appraisals satisfactory to the commissioner and shall not include incidental costs, including, but not limited to, surveying, development or closing costs. The commissioner may consider a portion of the fair market value of a donation of land by an entity receiving a grant as a portion of the matching funds required

under this subsection. A potential grantee may use funds made available by the state and federal government to fund not more than [seventy] ninety per cent of the total cost of any project funded under this program."

The 70% cap (Connecticut General Statutes Section 7-131g) on combining federal and state funds for projects funded through the state's Open Space and Watershed Land Acquisition Grant Program (OSWA) is arbitrary, and creates an increasing additional hardship on local conservation partners already faced with the difficult task of raising sufficient funds to complete conservation projects. **Substitute Bill 347 proposes changing the cap to 90%.**

Reducing the required "match" for OSWA to 10% of the fair market value should be a significant incentive for land conservation particularly for municipalities and land trusts in areas of the state where municipal and private funds are difficult to raise due to the lack of wealth within a community or ability of a town to include funding in its budget or bonding.

Action, continued on page 11



Are you paving the way to protect the environment?
Pervious Is!

Advantages of Pervious Concrete:

- Recognized by the EPA as BMP [Best Management Practices] for stormwater runoff
- Excellent LID applications for parking lots, driveways, walkways, trail pathways
- Installations at Subway World Headquarters, CT State Capitol, Goodspeed Opera House, schools throughout CT, and nature trails

Contact Executive Director Jim Langlois of the Connecticut Concrete Promotion Council
912 Silas Deane Hwy., Wethersfield, CT 06109 • tel: 860.529.6855 • fax: 860.563.0616 • jlanglois@ctconstruction.org • CTConcretePromotion.org

Action, continued from page 10

STATE PARKS BUDGET CUTS: \$4 MILLION CUT, \$2 MILLION IN 2015-16 AND \$2 MILLION IN 2016-17

The \$2 million cut to State Parks in each of the next two seasons starting July 1, 2015, would further devastate the department's already burdened ability to manage public lands and would likely lead to the closure of several state parks around the state. Two years of reduced or no management will likely increase future management costs. In addition to their conservation and recreational values, Connecticut State Parks are investments worth protecting -- attracting 8 million annual visitors and generating over \$1 billion and 9,000 jobs for the state each year. For every \$1 spent on the State Parks, over \$38 is returned to Connecticut.

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ):

ELIMINATION OF FUNDING AND POSSIBLY INDEPENDENCE

The budget proposes eliminating staffing for CEQ -- the state's independent, environmental watch-dog agency -- and transferring it into the Office for Legislative Affairs (without any commitment from OLA that the agency will be funded in its current form). Created in 1971, CEQ is the state's independent watch-dog agency that the public relies upon to monitor environmental progress, assess the efficacy of state environmental laws, policies and programs, and investigate alleged violations of environmental laws. CEQ's annual report to the Governor on Connecticut's Environment includes an annual critique on how the state, municipalities and private non-profits are doing in preserving valuable natural resource and agricultural lands, challenging us to increase the pace, quality, scale and permanency of land conservation in Connecticut. Acting through its volunteer council and just two staff, with limited support from DEEP for administrative purposes only, CEQ provides the public with these services efficiently, effectively and at minimal cost (less than \$185,000/year) to the state. There is likely no other state agency that does so much for so little. *Also see page 9, announcement of CEQ's 2015 Report.*

We thank the Connecticut Land Conservation Council (ctconservation.org) and the Connecticut Forest & Park Association (ctwoodlands.org) for the legislative information used in this **Call to Action**. This **Call to Action** was first issued to over 400 enthusiastic conservation leaders at the Connecticut Land Conservation Conference, March 21, 2015 at Wesleyan, Middletown, CT. ♻️

Resources

National Pollinator Week June 15-21, 2015

Watch for Connecticut's Proclamation. Start growing plants that are pollinator friendly this spring. Look here for ideas: *Pollinator-Friendly Plants for the Northeast United States*, includes 58 species, in color, in bloom, growth requirements and value to beneficial insects. www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/hypmctn11164.pdf. ♻️



Ferrucci & Walicki, LLC



www.fwforesters.com

6 Way Road, Middlefield, CT 06455
CT and MA Certified Foresters
NRCS Technical Service Provider

Forest management, timber harvest,
recreation and wildlife habitat plans

Boundary and GIS mapping services

PA 490 and Chapter 61

860-349-7007 – fw@fwforesters.com

TRAFFIC STUDIES

THAT DON'T COST YOU

AN



AND A



KWH ENTERPRISE, LLC | KERMIT HUA | (203) 807-5482

STEVEN DANZER, PHD & ASSOCIATES LLC Wetlands & Environmental Consulting



STEVEN DANZER, PHD
Professional Wetland Scientist (PWS)
Soil Scientist

203 451-8319

WWW.CTWETLANDSCONSULTING.COM

WETLAND BOUNDARIES • POND & LAKE MANAGEMENT
CONSTRUCTION FEASIBILITY CONSULTATIONS • ENVIRONMENTAL STUDIES

Membership 2014-2015 - We Appreciate Your Support!

As of March 1, 2015 the following Town Commissions have supported CACIWC through membership for the 2014-2015 fiscal year (July 1, 2014 to June 30, 2015). THANK YOU! If you do not see your Commission's name on the list, please encourage your Commission to join. If we are in error we apologize and would appreciate knowing by emailing Tom O'Dell at tomodell@snet.net. Member Commissions receive a copy of The Habitat for each commissioner and staff if dues have been paid.

CC = Conservation Commission
CC/IW = Combined Commissions

IW = Inland Wetlands Commission
Z/IW = Combined Zoning/Inland Wetlands

(SUS) = Sustaining level of Support

Andover	IW		Farmington	CC+IW	Orange	IW
Andover	CC		Franklin	IW	Oxford	CC+IW (SUS)
Ansonia	CC	(SUS)	Glastonbury	CC+IW (SUS)	Plainfield	IW
Ansonia	IW	(SUS)	Goshen	IW	Plainfield	CC
Ashford	IW		Goshen	CC	Plainville	CC
Ashford	CC		Granby	IW	Plainville	IW
Avon	IW		Granby	CC	Plymouth	CC+IW
Barkhamsted	IW		Greenwich	IW (SUS)	Pomfret	IW
Barkhamsted	CC		Greenwich	CC (SUS)	Pomfret	CC
Beacon Falls	IW	(SUS)	Griswold	CC+IW (SUS)	Preston	CC
Beacon Falls	CC	(SUS)	Groton	CC	Preston	IW
Bethany	IW	(SUS)	Groton	IW	Prospect	CC (SUS)
Bethany	CC	(SUS)	Groton City	CC+IW	Redding	CC+IW (SUS)
Bethel	IW		Guilford	IW	Ridgefield	Z+IW
Bethlehem	IW	(SUS)	Guilford	CC	Ridgefield	CC
Bethlehem	CC		Haddam	CC	Roxbury	IW
Bolton	IW		Hampton	CC	Roxbury	CC
Bolton	CC		Hampton	IW	Salem	CC+IW
Bozrah	CC+IW		Hartland	IW (SUS)	Shelton	CC
Branford	IW		Harwinton	IW	Sherman	IW
Branford	CC		Hebron	CC	Sherman	CC
Brookfield	CC		Kent	IW	South Windsor	CC+IW
Brookfield	IW		Kent	CC	Southbury	IW
Brooklyn	CC		Killingworth	IW	Southington	CC+IW (SUS)
Brooklyn	IW		Killingworth	CC	Sprague	IW (SUS)
Canaan	CC+IW		Lebanon	CC	Stonington	IW
Canterbury	IW		Lebanon	IW	Stonington	CC (SUS)
Canton	IW		Ledyard	IW	Thomaston	IW
Canton	CC		Lisbon	CC	Thompson	CC
Chaplin	IW		Lyme	CC+IW	Thompson	IW
Chaplin	CC		Madison	IW	Vernon	IW
Cheshire	IW		Madison	CC	Vernon	CC
Cheshire	CC		Manchester	CC	Wallingford	CC
Clinton	IW		Manchester	Z+IW	Wallingford	IW
Clinton	CC		Mansfield	Z+IW	Warren	CC+IW
Colchester	CC		Marlborough	CC	Washington	IW (SUS)
Coventry	IW		Milford	IW	Waterford	CC (SUS)
Coventry	CC		Milford	CC	Watertown	IW
Cromwell	CC		Monroe	CC+IW	Westbrook	IW
Cromwell	IW		Montville	IW	Weston	CC+IW
Darien	CC+IW	(SUS)	Naugatuck	IW	Westport	CC+IW (SUS)
Deep River	CC+IW		New Canaan	CC	Wethersfield	IW
Durham	CC		New Canaan	Z+IW	Willington	CC
Durham	IW		New Fairfield	CC+IW (SUS)	Willington	IW
East Haddam	IW		New Hartford	IW	Wilton	CC
East Hartford	CC+IW		New Hartford	CC	Wilton	IW
East Lyme	IW		New London	CC+IW	Windsor	CC
East Lyme	CC		Newington	CC+IW	Windsor	IW
East Windsor	IW		Norfolk	CC	Windsor Locks	CC
Easton	CC+IW		North Branford	CC+IW	Windsor Locks	IW
Ellington	IW		North Stonington	IW	Woodbridge	IW
Ellington	CC		North Stonington	CC	Woodbridge	CC
Enfield	IW		Norwalk	IW (SUS)	Woodbury	CC
Enfield	CC		Old Lyme	IW	Woodbury	IW
Essex	IW		Old Saybrook	CC	Woodstock	IW
Essex	CC		Old Saybrook	IW	Woodstock	CC
Fairfield	CC+IW		Orange	CC		

Permanent Protection of State Conservation Lands

WHY ARE STATE CONSERVATION LANDS AT RISK?

Although Connecticut has over 255,000 acres of state parks, forests and open space classified as state conservation land, there are big loopholes that put these conservation lands at risk of being developed or used for unintended or inappropriate purposes.

Currently, the state's Conveyance Act allows the state legislature to convey or swap, sell or give away parcels of conservation land. In most instances, there is no legal protection to ensure the purposes for which the land was acquired are honored. There is typically nothing recorded in the deeds or town land records that either requires permanent protection, or clearly references the intended use or purpose of the land.

These legislative decisions for land swaps, made possible through the Conveyance Act, are often done behind closed doors with little public notice or comment. Past controversial land swaps, such as the proposed 2011 Haddam land swap, have spotlighted the flaws in the current process and created public distrust of the state's commitment to keep our conservation lands protected forever.

WHY IS THIS IMPORTANT FOR CONNECTICUT?

State conservation lands have many proven economic benefits. For instance, a 2013 UConn study showed that Connecticut's State Parks net over \$1.2 billion in annual revenue for our economy. Besides the revenue produced through recreational activities and jobs, state conservation land was also found to increase local property values since people are willing to pay more to live near conservation land. Additionally, thousands of volunteers invest their own time and money to help maintain these lands.

Preservation of our state conservation lands is critical to a healthy and vital ecosystem in Connecticut. Our natural resources — our water, air, forests, and wildlife — are at risk without changes to close the loopholes to ensure real protection of these lands in perpetuity. A transparent process will help ensure public lands are protected for their agricultural, conservation, and recreational purposes instead of swapped for development.

WHAT NEEDS TO BE DONE?

Pass a constitutional amendment — Connecticut should pass a constitutional amendment that mandates a new, transparent process for considering conveyances of public conservation, recreation and agricultural lands. A change to our State Constitution is the only way to ensure a conveyance process receives public input on every proposal and every parcel.

Use existing authority — While a constitutional protection is the best solution, the process for amending Connecticut's Constitution takes several years. Last year, the legislature gave specific authority to both Department of Agriculture (DoAG) and the Department of Energy & Environmental Protection (DEEP) to place conservation restrictions on public recreation and agricultural lands with high conservation value. Both agencies should actively use this authority to protect lands through conservation easements and deed restrictions as enabled in PA 14-169.

Require a public hearing — Legislation or a change to the Joint Rules is needed to require the final version of the land conveyance bill and any sale, transfer or conversion of state-owned lands held for agricultural, conservation or

Editor's Note: Are your municipal conservation lands permanently protected? Can the Town Council or Board of Selectman convey or swap, sell or give away parcels of conservation land? Can they use conservation lands for development of town facilities? Can municipal conservation lands be converted to active (not passive) recreation lands?

Answering these questions requires research and documentation. Start by reading this 2015 Connecticut Environmental Briefing Paper by the Connecticut League of Conservation Voter's Education Fund (www.conservationeducation.org). Then ask the town planner or town clerk to help you locate the deeds to municipal conservation lands in the town records. Do the deeds include descriptions of a conservation easement or restriction for the entire property? Does it specify how land is to be used and specify activities that are prohibited?

The CT Land Conservation Council, ctconservation.org, has developed a model conservation easement and may be able to guide you in making sure your municipal conservation lands are permanently protected.

Protection, continued on page 14

Protection, continued from page 14

recreational purposes to have a proper public hearing before the Environment Committee. Though the Environment Committee has jurisdiction over most matters that affect the DoAG or the DEEP, the Committee currently has no right to hold a public hearing on the conveyance of lands under the custody and control of these departments — this has to change.

Connecticut is fortunate to have beautiful open spaces with natural resources that allow us to live, play and

work. It is only right to involve the public when the state legislature looks to convey or swap, sell or give away, publicly-owned conservation lands.

In 2015, the General Assembly is considering legislation that will require notice, an appraisal and the opportunity for a public hearing in the town where the parcel is located prior to the exchange of state land controlled by DEEP or DoAG. ↩

Connecticut Land Conservation Council Legislative Agenda 2015

1. Ensure consistent and maximum funding for state land conservation programs (Open Space & Watershed Land Acquisition Program, Recreation and Natural Heritage Trust Program and Farmland Preservation Program).

2. Ensure that the level and integrity of the Community Investment Act fund are protected.

3. Pursue amendment to Connecticut General Statutes (C.G.S) Section 7-131g(c) to eliminate the 70% cap on federal/state matching grants for open space and agricultural land preservation.

4. Pursue policy and legislative reforms to ensure that there is a process to fully inform the public and provide an opportunity for public input before state conservation, recreation and agricultural lands (referred to herein as “public lands”) are exchanged, sold or otherwise conveyed, including:

(a) Require a public hearing before the Environment Committee when public lands are the subject of exchange or other conveyance;

(b) Expand the authority of the State Properties Review Board to include review of the land records and deed restrictions when evaluating a legislative conveyance;

(c) Encourage DEEP and the DoAg to place conservation restrictions on public lands in accordance with authority provided by P.A. 14-169; and,

(d) Support efforts to promote a Constitutional Amendment that mandates a transparent process for considering conveyances of public lands.

5. Pursue legislation requiring landowners transferring property subject to a conservation easement to provide notice to the holder of the easement no later than 30 days prior to closing.

6. Pursue amendment to C.G.S. Section 47-27(b) to clarify that it bars adverse possession and prescriptive easement claims when the land is subject to a conservation easement held by non-profit land holding organizations.

7. Support DEEP implementation of policies and initiatives required pursuant to P.A. 12-152 and P.A. 14-169, including revisions to the state Green Plan and the establishment of a statewide Public Use and Benefit Registry and associated database to inventory/track land protected by land trusts and municipalities.

8. Support funding and staff for DEEP for acquisition, management and inventorying of state lands.

9. Explore conservation tax incentives in the state income tax.

10. Explore new funding mechanisms for both land acquisition and stewardship, and land trust organizational capacity and effectiveness.

We thank Connecticut Land Conservation Council for the use of their 2015 Conservation Agenda on their website ctconservation.org. ↩

conservationists. To help CACIWC achieve this goal, the CACIWC Board of Directors has returned for a third year to assess environmental and conservation projects entered in the Connecticut Science & Engineering Fair (CSEF) by middle and high school students throughout Connecticut. As I write this column, CACIWC Board Treasurer Charles Dimmick and I have just completed a week-long service as coordinating judges for the environmental science awards in this year's CSEF. The CACIWC Board will be continue to pursue efforts to increase interest in careers and volunteer activities that support conservation and wetlands protection among Connecticut students. Watch this column and our website for more information on these activities.

Funding CACIWC Programs

Membership Dues are an essential part of our operating budget. They support various CACIWC programs including our annual meeting, educational materials, and The Habitat. During the next few months you will be receiving a reminder and renewal form for the 2015-16 membership year, which begins on July 1, 2015. A copy of this form and additional information will be placed 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. Our annual meeting and newsletter have become increasingly expensive activities to operate, so we will very much appreciate any additional contributions that you or your business can make to support CACIWC education and outreach efforts!

Board of Directors Opportunity

The officers and members the Board of Directors are now in the second year of their two-year term following the elections that took place at our November 16, 2013 annual meeting. Although we were able to fill a number of mid-year vacancies, several CACIWC board vacancies remain unfilled (please see the list in this issue of The Habitat and on www.caciwc.org). If you are interested in serving as a county or alternate county representatives, or as one of the alternate at large representatives please contact us at board@caciwc.org.

Working on CACIWC Programs

While you would enjoy working on CACIWC issues, you may find yourself too busy to join the board of directors. We are forming several additional CACIWC advisory committees to help us with our education and outreach efforts, contribute to the development of new goals and objectives for our updated strategic plan, or participate in the ongoing review of legislative initiatives. Please let us know of your interest by contacting us at board@caciwc.org.

We always welcome comments and suggestions on ways to improve our education and outreach efforts. Please do not hesitate to contact us via email at board@caciwc.org if you have questions or comments on any of the above items or if you have other questions of your board of directors. We thank you for your ongoing efforts to protect wetlands and other important natural resources within your town!

~ Alan J. Siniscalchi, President 

ENVIRONMENTAL PLANNING SERVICES

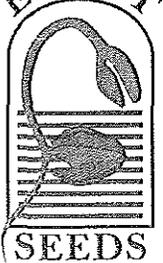
Wetland, Biological and Soil Surveys,
Impact Assessment and Mitigation Planning

MICHAEL S. KLEIN, Principal
JAMES COWEN, ERIC DAVISON
Professional Wetland Scientists, Soil Scientists & Biologists

89 BELKNAP ROAD • WEST HARTFORD, CT 06117
PHONE/FAX: (860) 236-1578
Email: michael.klein@epsct.com • Web: www.epsct.com

 **Restoring the native habitat**

 ERNST



ernstseed.com
sales@ernstseed.com
800-873-2321





Connecticut Association of Conservation and
Inland Wetlands Commissions, Inc.
27 Washington Street
Middletown, CT 06457

Non Profit Org
US Postage
PAID
Hartford, CT
Permit # 158

Spring 2015



*****AUTO**3-DIGIT 062 S6 P8

Joann Goodwin
Chair
Mansfield Inland Wetlands Agency
4 S Eagleville Rd
Storrs Mansfield CT 06268-2574

THE HABITAT

*Dedicated to constant vigilance, judicious management
and conservation of our precious natural resources.*

www.caciwc.org



Printed on
recycled paper

Connecticut's Wildlife Action Plan

DEEP is in the process of revising Connecticut's Wildlife Action Plan. Learn about revisions and contribute to the Plan by providing input for the future of fish and wildlife conservation in our state for the next 10 years.

Read the DRAFT Revisions and contribute your thoughts and recommendations. You are key to making the revised Wildlife Action Plan an effective tool for conserving Connecticut's diversity of wildlife resources for future generations. Go to www.ct.gov/deep/cwp/view.asp?a=2723&q=325886&deepNav_GID=1719.

SAVE THE DATE!

CACIWC's 38th Annual Meeting and
Environmental Conference
will be held this year on

Saturday, November 14, 2015

Watch for additional conference news in
upcoming issues of *The Habitat* and on our
website, www.caciwc.org.

Binu Chandy ▪ JoAnn Goodwin ▪ Roswell Hall III ▪ Gregory Lewis ▪ Peter Plante
Barry Pociask ▪ Kenneth Rawn ▪ Bonnie Ryan ▪ Vera Stearns Ward ▪ Paul Aho (A) ▪ Katherine Holt (A) ▪ Susan Westa (A)