

The Habitat

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

Fall 2015

volume 27 number 4



CACIWC's 38th Annual Meeting & Environmental Conference "Herpetology in Connecticut: A 25-Year Retrospective"

CACIWC is pleased to recruit Dr. Michael Klemens, as the keynote speaker of our 38th Annual Meeting & Environmental Conference. Educated in the United States and Europe, Dr. Klemens is a well-known conservation biologist and land-use planner who seeks to achieve a balance between ecosystem requirements and human needs.

Formally trained as a herpetologist, his current practice spans conservation biology, land-use planning, and empowering communities through the understanding and use of scientific data. Working at the interface of human societies and the natural world, he engages a diversity of stakeholders to explore how to create patterns of development that are ecologically resilient, economically viable, and socially equitable. More than three decades of field work have been concentrated in the northeastern United States.

Through the support of the MacArthur Foundation he spent several years in east Africa, working with indigenous institutions to build capacity in biodiversity assessment and application of those data to protected area management, as well as studying the ecological impacts

and economic mechanisms of the wildlife trade. His publications include the definitive study of Connecticut's amphibians and reptiles and over 100 scientific papers.

In 1979 he joined the scientific staff of the American Museum of Natural History, where he continues collections-based research on amphibian and reptile biodiversity. He serves as a consultant to various government agencies, as well as municipalities, not-for-profit organizations, and developers. He is in his second elected term to the Salisbury Planning and Zoning Commission, most recently (and currently) as its Chairman.

Dr. Klemens plans to support our continued efforts to educate members on the impact of climate change and habitat degradation on local environments by reviewing new Connecticut-specific species population and habitat data in his keynote address, entitled "Herpetology in Connecticut: A

25-Year Retrospective." As part of his presentation, he will also promote better use of scientific data and discuss ways for commissions and their staff to increase collection of local information, while improving the resiliency of their communities to climate change. 🐾



Dr. Michael Klemens with Bog Turtle
Photo Credit: Dennis P. Quinn, 2015

Conference Date - Saturday, November 14, 2015 - Register Now!

CACWIC will introduce a revised agenda with new workshops and networking opportunities. The conference will be held at Villa Capri Banquet Facility, 906 North Colony Road, Wallingford, CT; (203)265-7174, www.villacapri.com. We revised the layout of our 2015 workshop rooms to provide more space for displays and encourage networking. Questions? Email: AnnualMtg@caciwc.org. 🐾

★ REGISTER ONLINE at bit.ly/caciwc_am15 ★

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www.caciwc.org

CACIWC News

Many CACIWC members are familiar with the value of using indicator species in the assessment of the health of important habitats within their towns. Amphibians and reptiles can be useful indicators of habitat degradation due to their dependency on a narrow range of environmental conditions through critical phases of their lives. This is especially true in the assessment of wetlands and watercourses since most amphibians, and a large percentage of reptiles, are associated with these habitats for at least part of their lifecycles. Threats to their habitats, ranging from acidification, sedimentation, toxic chemical contamination, introduced species & emerging diseases, vegetation removal to drainage and burial, all take their toll on these indicator species. Alteration of rainfall and temperature ranges associated with climate changes can contribute additional environmental stressors to the habitats that host these fascinating members of our native fauna.

Unfortunately, the long-term status of many reptile and amphibian populations are in jeopardy. The International Union for Conservation of Nature (IUCN) estimates that almost a third of all amphibian species worldwide are experiencing major population loss or threatened with extinction.¹ A United States Geological Survey (USGS) study found that U.S. amphibian populations were declined at an annual rate of 3.7% between 2002 -2011. More alarming were the findings on the species most threatened “red-listed” by the IUCN, which declined 11.6% annually. Moreover, the study showed that all species, even species of least concern showed declining numbers.² Unless these rates are altered, these population changes will not be sustainable for many reptile and amphibians species. These include species in Connecticut, which are also under threats from local and global changes.

To help our members understand the impact of these threats on Connecticut reptiles and amphibians, CACIWC is pleased to host **Dr. Michael Klemens**, as the keynote speaker of our **38th Annual Meeting & Environmental Conference**. During his presentation, Dr. Klemens will describe ways for commissions and their staff to increase collection of local data, to provide scientific support for municipal decisions and policy while helping to document statewide trends.

Please see the detailed workshop descriptions in this issue of *The Habitat* and watch for additional conference news on our www.caciwc.org website. You may direct any questions or comments on our annual meeting to us at: AnnualMtg@caciwc.org.

Other News

1. It is not too late to renew your **2015-16 membership dues** and take advantage of the \$15/per person annual meeting registration discount. Dues paying commissions can save an additional \$10/per person in annual meeting registration fees by registering by October 31, 2015. A copy of the membership dues notice form recently mailed to you can also be found on our website:

CACIWC news, continued on page 12



Journey to The Legal Horizon *by Attorney Janet Brooks*

Wetlands Agencies: What's in Your Appendices to Your Regulations? Hopefully Nothing of Substance

In the past month I've happened upon appendices to the municipal wetlands regulations in two different towns. In each case it was unclear what the content in those appendices was supposed to mean. Was the substance contained in the appendix meant to be binding just as the regulations that preceded it? If so, what were they doing in the appendices, instead of in the regulations? I got to wondering how common a practice it is for wetlands agencies to incorporate material into appendices and what material is being appended. I undertook a decidedly modest and perhaps statistically insignificant survey of 10 % of all municipal wetlands regulations (17 sets).¹ I looked at regulations from large and small towns throughout the state, those with and without staff.

To begin, what is an appendix? According to Black's Law Dictionary, 8th Edition, it is "a supplementary document attached to the end of a writing." In this case, to the end of the municipal wetlands regulations. The regulations themselves "have the full force and effect"² of statutes. One half of the towns had no materials in an appendix. About a third of the towns in my survey provided material in an appendix that I categorize as "helpful" or "illustrative." The application form, instructions on filling out the form, diagrams of the placement and control of sedimentation and erosion control barriers, and an application checklist are examples I found. Another category of material is the verbatim inclusion of other laws. In less than a third of the towns I surveyed, I found examples, such as the underlying ordinance that created the wetlands agency, the statutory definition of "farming" from General Statutes § 1-1(q), statutory provisions for processing land use applications in General Statutes § 8-7d and the citation process (for issuing fines) adopted by town ordinance. That can be helpful – as long as the referenced law is up-to-date.

That was a problem with the three towns that included General Statutes § 8-7d. They referenced a version of § 8-7d that was no longer in effect. What was missing was the amended version addressing how additional public notice may be undertaken and the specifics of that notice. That's a significant amendment. If an agency wants to provide the wording of a statute, perhaps it should be prefaced with a statement, such as: "For informational purposes only. For the current language in effect, consult

the most recent version of the Connecticut General Statutes at www.cga.ct.gov/." (That is the website for the Connecticut General Assembly which maintains a digital version of the state statutes for public access.) For municipal ordinances, the instruction could be to consult the most recent version in the town clerk's office.

I was stumped to find the entire 1997 DEP Guidelines Upland Review Area Regulations Connecticut's Inland Wetlands & Watercourses Act in one set of appendices. Those guidelines were designed to support wetlands agencies with technical information as agencies consider adopting upland review areas. The guidance document offers a variety of approaches for establishing the areas. It's not particularly useful to an applicant, the public or members of an agency, once an upland review area is adopted by regulation. At that point, only the adopted regulation is of concern. In another town, one sentence was excerpted from the guidelines and included in an appendix. However, that town already had established an upland review area which was reflected in its regulations, which was not the same as the method included in the appendix. What was intended by putting a different method in an appendix?

The fourth edition to the DEEP Inland Wetlands and Watercourses Model Municipal Regulations includes three appendices: General Statutes § 1-1(q) (the definition of farming) in Appendix A, General Statutes § 8-7d (the procedural requirements and deadlines for processing land use applications) in Appendix B and the DEP upland review area guidelines in Appendix C. However, DEEP included those to explain what or why it was proposing revisions to the third version of the model regulations.³ While I didn't see anything in the Model Regulations that encouraged agencies to include the appendices in their municipal regulations, perhaps DEEP was advocating just that through its wetlands training program. A conversation with Darcy Winther, the DEEP municipal liaison set me straight. DEEP had not done so. Perhaps some agencies just included Appendix A, Appendix B and Appendix C of the Model Regulations to their regulations thinking it was expected of them. It has been more than a decade since DEEP has reviewed

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Editor's Note: This article is a reprint from *The Habitat*, Summer 2010 issue. The Westbrook Conservation Commission uses the practical information about target invasive plant characteristics as part of our training for volunteers and interns assisting with invasive plant management on the town's protected open space. Chemicals are not used; prioritizing when, where and what is cut and/or pulled, and revisited, has been an effective control method.

Practical Prescriptions for Managing Invasive Vegetation

in Wetland Settings by David Roach, General Manager, All Habitat Services, LLC

Almost everyone can remember a favorite pond or wetlands that was once cattails and perhaps open water that has been overrun by common reed (*Phragmites australis*) or purple loosestrife (*Lythrum spp.*). Most of us have realized that if we ignore the problem of invasive species, they don't go away. We have also realized that sometimes our best efforts to mow or hand pull the offenders doesn't make them go away either, in fact it often makes them more aggressive. The conundrum faced by managers is often how to find the balance between defending native ecosystems from alien invaders without doing more damage to the areas we seek to protect.

In the search for management techniques to control invasive species the options must be scientifically defensible, economically viable and socially acceptable. Within the toolbox of control techniques there are four primary categories to choose from: cultural, physical/mechanical, biological, and chemical controls.

Cultural controls may be the most desirable of all. By not planting invasive species in the first place we avoid the problem, native plants remain healthy and viable and the ecosystem continues to function in balance. Invasive species are opportunists, if habitats are not disturbed the opportunity for new species to become established is minimized. If a site it disturbed remediation of the site using native plants and seeding will help to restore the area to its original undisturbed state. Sometimes, understanding the characteristics of the plant we are trying to control makes modification of the habitat a viable control method. Habitat modification may include manipulating the water or light levels in favor of desirable species to the detriment of invaders.

Biological controls rely on species-specific mechanisms to control certain invasive plant infestations by introducing pathogens or insects to the site. Examples include the milfoil weevil (*Euthrychiopsis lecontei*) which feeds exclusively on Eurasian watermilfoil (*Myriophyllum spicatum*), loosestrife beetles (*Galerucella spp.*) that feed on purple loosestrife and water star grass (*Heteranthera dubia*) which may help

to suppress Eurasian watermilfoil. However, while this method can be extremely effective, it should be used with caution as there is always the possibility of unintended consequences. Multiflora rose (*Rosa multiflora*) and Japanese knotweed (*Polygonum cuspidatum*) were both endorsed by a variety of government agencies for their ability to stabilize soils and stream banks before we realized the implications of introducing those species into the ecosystem.

The use of physical and mechanical control such as pulling, cutting or mowing is another option. Pulling is most effective on young shoots, plants with shallow root systems and or when the ground is relatively soft (such as spring). Varying degrees of success can be achieved through cutting. It will often depend on the characteristics of the target species. Mowing may be used to reduce the overall height to allow more effective follow up treatments. Girdling is useful for larger shrubs and trees. Often this technique may be accompanied by an herbicide application.

For many, chemical control is seen as a last resort. However, anyone that has tried hand pulling Mile-A-Minute Weed (*Persicaria perfoliata*) or mowing Japanese knotweed, only to have it come back even more vigorously, starts to recognize that herbicides may represent the only chance at control. Fortunately, the composition and application of herbicides has reached new levels of sophistication that go beyond simply spraying from the

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first jug in the tool shed with the skull and crossbones on the label. The tools are available to target individual plants for foliar applications, wipe on, wick applicators and even to inject chemicals onto the stem of the target species. Specialized saws allow herbicides to be applied while the stem is cut. Understanding how the chemicals work in the plant and careful adherence to the label instructions make chemicals another possible tool.

The battle may not be lost if we understand the common traits of invasive plants and use that information to make educated decisions about the timing and application of control mechanisms. Phenology is the study of periodic plant and animal life cycle events and how these are influenced by seasonal and annual variations in climate. In general the phenology of invasive plants presents opportunities for control. Invasives tend to show early expression in spring, and have often greened up while native plants are still dormant. This allows the plant to take advantage of reduced competition for light from the tree canopy but it also highlights their presence in the ecosystem making them easier to target. This is followed by rapid growth, quick maturation and the formation of dense shade and root mass. Their success may be attributed to prolific seed and fruit production as well as

efficient dispersal mechanisms enabling them to colonize available growing space and out-compete native vegetation. Invasive species also tend to have a high degree of plasticity which allows them to adapt quickly to cutting, mowing, or other manipulations of the habitat. They often display some form of allelopathy which allows them to suppress competition from neighboring plants by releasing chemicals to inhibit growth of competition. Other important lifecycle information includes knowing if it is an annual, biannual, or perennial? What is the main mode of reproduction (sexual, asexual or vegetative)? What organ(s) or life cycle stage are the over-wintering stages?

Understanding the invasive plant's physical and lifecycle characteristics provide a framework for determining the best and most targeted control that will have the least impact on the native species we are trying to protect. When all of these factors are taken together it turns out that chemical control is often the most effective method for controlling aggressive invasive species. It is also cost effective offering the greatest control with the least amount of effort. New "reduced risk" formulations using plant specific amino acids offer low toxicity with favorable environmental fate profiles. By selecting the proper

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formulations, wise use and strict adherence to label instructions unintended consequences can be avoided.

Once the decision has been made to use a chemical control there are a variety of options available to suit the particular needs of each individual site. Understanding how these herbicides work helps to tailor their use to the appropriate plant during the appropriate time of year.

- Glyphosate (N-(phosphonomethyl) glycine, isopropylamine salt) commonly available under the Round-up® label for terrestrial sites and Aquamaster® for aquatic sites. Glyphosate functions as a metabolic disruptor that blocks the synthesis of critical plant amino acids, inhibits growth and causes chlorosis (yellowing of the leaves). It's translocation ability is plant dependant. It is a non-selective treatment for woody or herbaceous plants. It can be applied to the foliage, cut stump, evergreen plants, and invasives like garlic mustard (*Alliaria petiolata*) or Japanese honeysuckle (*Lonicera* spp.) that leaf out before other desirable species. In its concentrated form it is used in frill, girdle and cut stump treatments.
- Triclopyr (3,5,6-trichloro-2-pyridyloxyacetic acid) is the primary ingredient in Garlon® and Brush-B-Gone®. It functions as a growth regulator which mimics the plant hormone auxin. It weakens the cell walls and causes uncontrolled epinastic growth (resulting in leaves that bend downwards). The rapid growth depletes stored food, disrupts the photosynthetic cycle and prevents transport of nutrients to roots. It translocates readily affecting all parts of the plant. It is selective and will not harm monocot species such as cattails and grasses. It is available in ester (oil soluble) and amine (water soluble) formulations as Garlon 4® and Garlon 3A® respectively.
- Imazapyr Isopropylamine salt is a branch chain amino acid inhibitor found in Habitat®, Arsenal®, Chopper®, and Assault®. Imazapyr is a potent growth inhibitor that is very effective at low concentrations. It enters through the meristematic tissue and blocks the synthesis of critical plant amino acids. It translocates readily. The slow action depletes stored food, disrupts the photosynthetic cycle and prevents transport of nutrients to roots. It may take eight or more weeks before the onset of chlorosis is visible. It is generally non-selective although certain grasses and forbs exhibit tolerance. It is foliar and soil active so care must be exercised around the root zones of non-target vegetation.

"In general the phenology of invasive plants presents opportunities for control."

- Krenite® or fosamine ammonium ethyl carbamoylphosphonate is a growth regulator that prevents cell mitosis. A foliar application allows the active ingredients to migrate to the apical meristematic tissue where it inhibits foliar expression the following spring. There are no visible effects to the plant in the year of application allowing control of tree and woody brush species without unsightly discoloration. It is selective to woody plant species will not injure grasses and forbs.
- Some herbicides carry an aquatic, wetland or upland edge label for control in site specific conditions.

Understanding the phenology of an aggressive invasive provides insight into why that plant is so successful and the windows of opportunity that exist to maximize control measures. Each species and each site is a little different and will require a customized approach to restore the ecological balance. Understanding the tools that are available and the most effective ways to apply those tools will help to ensure success. With a careful application of the suite of available management techniques that can be supported with scientific research, they are more likely to be acceptable to all interested parties and can be effectively accomplished within budgetary limitations.

See page 7 for The Rogues Gallery of common invasive plants found in wetlands and some practical methods for managing them.

Additional Resources

- All Habitat Services, LLC - www.allhabitat.com
- University of Connecticut, College of Agricultural and Natural Resources
- Integrated Pest Management Program - www.hort.uconn.edu/IPM/index.htm
- Invasive Plant Atlas New England - <http://invasives.eeb.uconn.edu/ipane/>
- USDA NRCS Plant Database - <http://plants.usda.gov>
- Dow Agro Sciences Invasive Plant Resource Library - www.dowagro.com/ivm/invasive/

David Roach is the General Manager of All Habitat Services, LLC, an innovator in the field of aquatic, wetland and upland habitat management. He has 15 years' experience in both vegetation management and public health mosquito management programs and holds commercial supervisory pesticide applicator licenses for categories of Aquatic Pest, Right of Way, Bird, Mosquitoes and Biting Flies, and Public Health in Connecticut, Rhode Island, Massachusetts and New York. 🐦

The Rogues Gallery of common invasive plants found in wetlands and some practical methods for managing them.

*Although Poison Ivy is not an invasive species it is included in the list because of its noxious characteristics.

Invasive	Physical/Mechanical	Biological	Chemical
Japanese Knotweed <i>Polygonum cuspidatum</i>	Cutting increases stem density. Repeated cutting may weaken. Cut material is viable. Root fragmentation will result in re-sprouting		Triclopyr or Imazapyr foliar during early growth. Glyphosate injection with sufficient stem diameter or foliar after flowering.
Purple Loosestrife <i>Lythrum salicaria</i>	Cutting ineffective. Pulling may be effective for young plants. Medium plants may be Weed-Wrenched. Root fragments are viable.	<i>Galerucella</i> beetles can defoliate stands of Loosestrife. Beetles must be maintained once Loosestrife population is reduced to biennial rosettes.	Triclopyr foliar during early growth. Glyphosate over-wintering rosettes.
Japanese Barberry <i>Berberis thunbergii</i>	Cutting may be effective for widely scattered plants. Pull with Weed-Wrench when ground is soft.		Triclopyr foliar/basal during early growth. (one of the first plants to leaf out in spring)
Asiatic Bittersweet <i>Celastrus orbiculatus</i>	Frequent cutting may be effective for small infestations. Vines entangled in trees should not be pulled. Hand pull light infestations and/or early growth.		Triclopyr foliar during early spring or to regrowth of cut vines, basal treatment to mature vines.
Garlic Mustard <i>Alliaria petiolata</i>	Cutting close to ground at onset of flowering can achieve 99% mortality. Repeat process to deplete seed bank. Hand pull when soil is soft, must remove upper ½ of root to prevent resprouting.		Triclopyr foliar during early growth. Glyphosate over-wintering rosettes.
Multi-flora Rose <i>Rosa multiflora</i>	Frequent cutting may control growth but will not eradicate. Weed-Wrench small to medium plants. (larger plants should be trimmed for accessibility)		Triclopyr foliar during early spring or to regrowth of cut stems. Basal treatment to fresh cut stems.
Autumn Olive <i>Elaeagnus umbellata</i>	Cutting alone is ineffective. Will sprout from stumps. Seedlings and very young plants can be pulled when ground is soft. Saplings can be pulled with Weed-Wrench.		Triclopyr, Glyphosate or Imazapyr foliar to small/medium scattered shrubs. Basal bark or cut stump treatment.
Winged Euonymus <i>Euonymus alatus</i>	Cutting alone is ineffective. Will sprout from stumps. Seedlings and very young plants can be pulled when ground is soft. Large plants can be Weed-Wrenched.		Triclopyr or Glyphosate foliar to small/medium scattered shrubs. Basal bark or cut stump treatment.
Tree of Heaven <i>Ailanthus altissima</i>	Cutting alone is ineffective. Will sprout vigorously from stumps and root zone. Seedlings and very young plants can be pulled when ground is soft. Large number of seedlings may make this impractical.		Triclopyr foliar to small/medium scattered shrubs. Basal bark or cut stump treatment in late winter/early spring.
Poison Ivy* <i>Toxicodendron radicans</i>	Cutting alone is ineffective. Will sprout vigorously from stumps. Pulling NOT RECOMMENDED – All parts of plant contain volatile oils which may cause allergic rash at all times of year.		Triclopyr or Glyphosate foliar to low growing vines and shrubs. Basal bark or cut stump treatment with Pathfinder II to aerial vines.

CACIWC's Environmental Conference Workshops

Climate Adaptation & Water Management

Legal and Regulatory Updates & Issues

SESSION 1
(9:30 - 10:30 AM)

A1. "Connecticut Invasive Plant List"

Nicole Gabelman, CT Invasive Plant Coordinator

This workshop will provide background information on invasive plant issues in CT and on how to identify, control and report plants listed on the CT Invasive Plant Early Detection List. Plants on this list are known to be invasive and are present only in relatively low numbers at limited locations, while plants listed on the separate Research List require more documentation in order to evaluate their invasive potential. Conservation Commissions can serve as resources for identifying and reporting such plants. Together we can document the current distribution of these plants and act quickly to detect and control new occurrences.

SESSION 2
(10:45 AM - 11:45 PM)

A2. "Invasive Forest Insects"

Kirby C. Stafford III, PhD, Chief Entomologist, State Entomologist; The Connecticut Agricultural Experiment Station (CAES)

Connecticut's forests face increasing pressures from invasive insects. Recently, we have seen the expansion of the emerald ash borer and winter moth, an outbreak of gypsy moth, some increased damage to hemlocks due to the elongate hemlock scale, and the detection this year of the southern pine beetle. CAES, the plant pest regulatory agency for the State, conducts forest health surveys and research on various invasive forest insects. Dr. Stafford will review these insects and how we can potentially reduce their impact on our forest resources.

SESSION 3
(1:30 - 2:30 PM)

A3. "Pesticides & Integrated Pest Management"

David R. Brown, ScD, Public Health Toxicologist & Director of Public Health Toxicology for Environment and Human Health, Inc.; and Louis Burch, Program Coordinator, Citizens Campaign for the Environment

The Connecticut General Assembly has considered numerous bills to extend existing limits on pesticide use on school grounds and other municipal land. This workshop will serve to educate attendees on the current debates regarding pesticide use on these properties. Pesticide toxicity will be reviewed; also use of alternate approaches, including integrated pest management.

SESSION 4
(2:45 - 3:45 PM)

A4. "Smartphone Apps for Mapping and Managing Land & Resources"

Cary B. Chadwick, MS, Geospatial Educator; UCONN Center for Land Use Education and Research (CLEAR)

This session will review mapping apps that can be very useful tools for conservation commissions and staff. Armed with these apps and a mobile device, one can: (1) digitize any paper map, (2) collect tracks and waypoint data, (3) create custom forms for mobile data collection, and (4) create custom web maps. This session will demonstrate various apps and how they can be used for to inventory locations of features such as invasive plants, wetlands and sensitive habitats.

B1. "Back to Basics: Wetlands Law & Regulations"

Janet Brooks, Attorney at Law, LLC

Designed for both the new and experienced wetlands commissioner, this workshop will review the important rules and procedures for conducting meetings, reviewing and acting on wetlands applications, and responding to appeals. Attorney Brooks will draw upon her private practice experience and work with the Connecticut Attorney General's Office to present this review of the basic steps to ensuring that your inland wetlands commission is functioning within the law while protecting local wetlands and watercourses within your town. She will also utilize findings from both Connecticut court cases and results from her 2013-14 statewide-survey of municipal wetlands regulations to illustrate these important basic points.

B2. "2015 Wetlands Law Update with Question & Answer Session"

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

This trio of wetlands attorneys has been brought back by again popular demand to keep you current with recent legislative changes and the latest state Supreme Court and Appellate Court cases. This workshop will also include the 30-min question-and-answer session that you asked for!

B3. "The Other Half: All About Planning & Zoning and the Zoning Board of Appeals"

Steven Sadlowski, AICP, Zoning Enforcement Officer & Inland Wetlands Agent; Town of New Hartford; Attorney Mark K. Branse, Branse & Willis, LLC

This workshop will be a primer on how Planning and Zoning (P&Z) Commissions and Zoning Boards of Appeals (ZBA) work. It will look at their history, authority, the various permits they issue and how they interface with the Wetlands and Conservation Commissions. Just think, you will finally know the real difference between a Special Exception, a Variance and a Site Plan Review! During the Q&A session, Attorney Branse will discuss how CCs and IWCs can work more effectively with their local PZCs.

B4. "2015 Revisions to the Public Health Code Governing Technical Standards for Subsurface Sewage Disposal Systems"

Matthew Pawlick, Sanitary Engineer II; CT Department of Public Health (DPH), Environmental Engineering Program

Significant changes to the State Health Code became effective January 1, 2015. Learn how these changes affect septic system design, function and analysis by wetland agencies, including required separating distances from Low Impact Development features such as rain gardens.

Saturday, November 14, 2015

Conservation Biology & Habitat Management

C1. "Pond dredging, Part 2"

Mark June-Wells, PhD, Limnologist & Plant Ecologist, NALMS Certified Lake Manager; Aquatic Ecosystems Research (AER)

Pond dredging imparts a significant disturbance to lentic systems. However, dredging is an important tool that can help manage pond and lakes in Connecticut. Mr. Wells will expand on his 2014 CACIWC workshop with additional information on dredging techniques, their risks and what regulatory processes are required.

C2. "Resilience & Climate Adaptation"

Rebecca A. French, PhD, Director of Community Engagement; Connecticut Institute for Resilience and Climate Adaption (CIRCA) University of Connecticut, Avery Point Campus

The Connecticut Institute for Resilience and Climate Adaption (CIRCA) is a partnership of UConn and the CT DEEP. The CIRCA team of professionals provides outreach and extension professionals from UConn to both develop relationships with community leaders of at-risk communities along Connecticut's coastline & inland waterways and to provide them with pertinent information on the impacts of climate change on the natural, built, and human environment. In this workshop, Dr. French will review current projects and efforts of the team.

C3. "Sensible Stormwater Management & Ecological Restoration Solutions - Case Study"

Joanne Parsons, ASLA, Site Systems, Inc.

A demonstration project in Trumbull that sought to restore the Pequonnock River to a natural and sustainable ecosystem by improving water quality, increasing native habitat, and promoting sustainable land use strategies will be presented along with suggestions for other restoration solutions along streamsides. This project at Trumbull's Old Mine Park, won the Connecticut Chapter of the American Society of Landscape Architects (CTASLA) 2014 Design Merit Award for ecological pond & stormwater management.

C4. "Low Impact Development (LID)"

Sean Hayden, Executive Director; Northwest Conservation District

This workshop will review a series of low impact development (LID) inspired structures that have been installed and are functioning in Connecticut. The presentation will provide information on how they work and why they are important. Mr. Hayden, who has been actively involved in municipal commission education and training programs, will also discuss various methods of incorporating an LID design requirement into town land use regulations and ordinances.

CONFERENCE SCHEDULE

Registration & Breakfast	8:30 – 9:00 am
Welcome & Business Mtg.	9:00 – 9:30 am
Session 1 Workshops	9:30 – 10:30 am
Break 1	10:30 – 10:45 am
Session 2 Workshops	10:45 – 11:45 am
Break 2	11:45 am – 12:00 pm
Luncheon, Keynote Speaker	12:00 – 1:15 pm
Break 3	1:15 – 1:30 pm
Session 3 Workshops	1:30 – 2:30 pm
Break 4	2:30 – 2:45 pm
Session 4 Workshops	2:45 – 3:45 pm
Conference ends	4:00 pm

Displays will be on view
from 8:30 am – 2:45 pm.



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Editor's Note: Conservation Commissions can use Wintonbury Land Trust's actions as a model for supporting and promoting farmers in your community.

Wintonbury Land Trust: Supporting and Improving Land Access to Local Farmers *by Rachel Murray*

Land trusts are at the forefront of reshaping the agricultural landscape in Connecticut. They can be a leader supporting and promoting new and beginning farmers by providing access to farmland.

Wintonbury Land Trust and Hawk Hill Preserve

Protection of natural resources, conservation of farmland, and community building through the natural landscape are part of the strongly held mission of The Wintonbury Land Trust (WLT) in Bloomfield, Connecticut. On a recent walk through the newly acquired Hawk Hill Preserve, Land Trust President Dale Bertoldi and Treasurer Vikki Reski spoke about the historical and agricultural presence Hawk Hill has in the community. According to the Connecticut Land Conservation Council (CLCC) there are over 137 land trusts throughout Connecticut. These include local, regional, and statewide organizations. Land trusts provide a real and thriving opportunity for new and beginning farmers to commence a local agriculture business.

The 45-acre Hawk Hill Preserve is nestled between two adjoining farms, including the farmland that's part of the LaSalette Park owned by the Town of Bloomfield. Bloomfield is a community rich in agricultural and cultural history so the desire to acquire this property with its prime agricultural soils, scenic vistas, and potential to support multiple farmers selling local products has been very strong with the Wintonbury Land Trust. The Hawk Hill preserve is one of the oldest continuously operating farm properties in Bloomfield. The Kelly Family purchased the farm land in the 1860's, and operated it as a Dairy Farm until it was sold to a developer in the early 1980's. The original farmhouse, located on an adjoining parcel of land, dates back to 1746 and was originally a Tavern. Additionally, there are fields across the street that were once part of this farm, but are now owned privately could add to the 21 acres of tillable land at Hawk Hill in the future.

Wintonbury Land Trust partnered with the Town of Bloomfield, CT Department of Energy and Environmental Protection, and the USDA Natural Resources Conservation Service to purchase the property from its current owners and additionally purchase the easement on the land so that Hawk Hill is guaranteed to stay as working farmland and open space. In this

arrangement, the Town holds the easement rights and Wintonbury Land Trust owns the property outright. Through the work of a strong local campaign to raise money to purchase the land along with the help of several foundations, Wintonbury Land Trust purchased the Hawk Hill property on April 23, 2015. To help protect the multiple conservation values, and according to the easement, any farmer using the land must provide and follow a detailed Conservation Plan. Additionally, a designated walking trail is available and maintained for hikers to pass through Hawk Hill connecting several local trails.

For the 2015 season, Wintonbury Land Trust leased the 45-acre Hawk Hill Preserve to a local farmer raising Scottish Highland cattle. In this arrangement, the farmer provides and installs her own temporary fencing for the cattle while also mowing hay for her cattle for the upcoming winter. The farmer also agreed to mow the fields not suitable for hay to maintain the aesthetic appeal of the farm and continued management of perennial weeds and invasives. For the 2016 season, it is planned that Wintonbury Land Trust will formally accept "Request For Proposals" (RFPs) for farmers interested in a long-term lease on the Hawk Hill property. Keeping the farmable portions in agriculture will reduce WLT and the Town's stewardship costs, help maintain the conservation values, and add fresh local agricultural products into the community. Stay connected with the Wintonbury Land Trust through their website for more details - <http://wintonburylandtrust.org/>.

wintonbury, continued on page 13

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Connecticut Land Access Programs

As more Connecticut land trusts realize the value in making land available to farmers, the importance to list and find properties is increasingly significant. The Connecticut Department of Agriculture’s CT FarmLink, <http://www.ctfarmlink.org/>, is a statewide resource for farm owners and farm seekers to advertise land available and additionally to search farm properties that are available. Along with farm properties listed on CT FarmLink, New England Farm Finder (NEFF), <http://newengland-farmlandfinder.org/>, is another resource that includes all properties and farm seekers throughout New England. Utilizing these two matchmaking websites are excellent opportunities for land trusts to efficiently and effectively find a farmer for their land. A statewide reality is that there are significantly more farm seekers than there are farm properties available making the case that land trusts have the potential to significantly alter and improve the agricultural landscape in Connecticut.

Land For Good (LFG), <http://landforgood.org/#sthash.FTFWomZ4.dpbs>, is a New England based non-profit with Field Agents in each state working to improve farmland access and keep more farmers working the

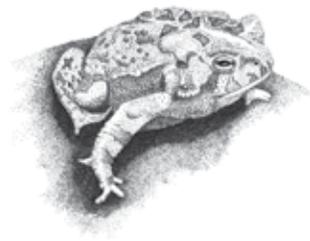
land. LFG has an extensive “Toolbox” available on their website with resources helpful for farm seekers and farm owners, including sample leases and different models to use as a guide depending on the needs of the land trust and farmer. Consultation to actually help craft the match between the two parties is also available. In addition, the Connecticut Land Conservation Council, <http://www.ctconservation.org/>, provides users information about land trusts throughout the state and has model agricultural easement language and leases to use as guidance. Lastly, UConn Extension, <http://newfarms.extension.uconn.edu/>, has a helpful website with various agricultural programs and services they provide, from a list of essential resources for beginning farmers called “The Bucket List”, to contacts for Extension educators and specialists, and the Farmland ConneCTions Guide and model leases. All of these resources are ready, available, and free of charge for land trusts, land owners, and land seekers alike to utilize.

The role of land trusts is becoming one of establishing a model for acquiring the land through creative partnerships, protecting the land, and establishing a farmer on the land. They can help lead the renaissance for agriculture in Connecticut.

Rachel Murray, M.S. is the Connecticut Field Agent for Land For Good. She can be reached at rachel@landforgood.org or 603-357-1600. 🌿



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3. 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 hope to see all of you at our 38th Annual Meeting and Environmental Conference, Saturday, November 14, 2015!

~ Alan J. Siniscalchi, President

Endnotes

¹ Stuart SN, Chanson JS, Cox NA, Young BE, Rodrigues ASL, et al. (2004) Status and trends of amphibian declines and extinctions worldwide. *Science* 306: 1783–1786. doi: 10.1126/science.1103538

² Adams MJ, Miller DAW, Muths E, Corn PS, Grant EHC, Bailey LL, et al. (2013) Trends in Amphibian Occupancy in the United States. *PLoS ONE* 8(5): e64347. doi:10.1371/journal.pone.0064347

legal, from page 3

proposed amendments to municipal wetlands regulations. DEEP oversight as agencies are amending their regulations – *as the legislature envisioned and mandated*⁴ – would be invaluable.

Before leaving this topic, I did find one novel issue in an appendix: fining guidelines. I hope that those guidelines reflect an already adopted ordinance which established a citation process reflecting those “fining guidelines.” Simply adopting “fining guidelines” and putting them in an appendix or in municipal regulations isn’t enough. There needs to be authority in the wetlands statute. To date, the legislature has set out three methods to have someone violating the wetlands law financially penalized: the agency can bring an enforcement action in court to stop the violation and, among other things, to have the court impose a civil penalty;⁵ a town may adopt an ordinance establishing fines and a citation process;⁶ as part of a criminal action handled by the state’s attorney’s office, a court may impose criminal fines.⁷

Each commission would serve its community well by examining the wetlands regulations and noting if there is information contained in appendices. If there is an appendix and the information is “helpful,” no further action

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may be needed. On the other hand, if there is some substantive material that the commission wants to rely on, show it the sunlight of the regulation process: adopt it as a regulation after conducting a public hearing. And for those other issues that leave the commission members wondering why something ever was put in an appendix – or upon reflection sets up a process not supported by the wetlands law, well, an appendectomy may be warranted.

Janet P. Brooks practices law in East Berlin. Read her blog at: www.ctwetlandslaw.com and access prior training materials and articles at: www.attorneyjanetbrooks.com.

(Endnotes)

¹ In a recent discussion with Darcy Winther, DEEP municipal wetlands liaison, I learned that there are 171 “municipalities” for purposes of wetlands regulations, the usual 169 + Fenwick (in Old Saybrook) and the borough of Groton, geographically located within the town of Groton.

² *Sarrazin v. Coastal, Inc.*, 311 Conn. 581, 603 (2014).

³ Discussion with Darcy Winther, DEEP municipal wetlands liaison.

⁴ “A copy of the notice and the proposed regulations or amendments thereto . . . shall be provided to the commissioner at least thirty-five days before such hearing.” General Statutes § 22a-42a(b).

⁵ General Statutes § 22a-44(b).

⁶ General Statutes § 22a-42g.

⁷ General Statutes § 22a-44(c).

Remembering Suellen

Suellen Kozy McCuin died August 21, 2015, after a too short battle with an enemy she did not know, just eight days after the official dedication of The Preserve, the “1,000-acre forest” she battled 15+ years to preserve. Suellen was a good person, a fighter, a passionate grass roots environmental activist, and a persistent advocate for preserving nature’s landscapes—as is! Particularly a certain “1,000-acre forest” that Rachel Carson might describe as a spiritual “sense of place.” Her advocacy was not loud, not forceful. Quietly, she knew when to speak, who to speak to, and what to say - indispensable in the ever changing battle for The Preserve.

It was Suellen’s tenure as Executive Director of the Connecticut Council on Soil and Water Conservation that I first became aware of her quiet, “under the radar” persuasive capacity, a skill vital for advocating and educating, politically and otherwise, for Council and Conservation District funds. She was very effective, made friends easily and truly believed in the conservation work her job supported. We miss her.

Suellen’s friendship and passionate voice for conservation touched so many. On a beautiful evening in August we celebrated her life, her accomplishments, and her “sense of place”. Each celebrant in the seemingly endless line that wrapped around the parking lot could have easily represented one acre in the now preserved “1,000-acre forest.”

~ Tom ODell 🍀

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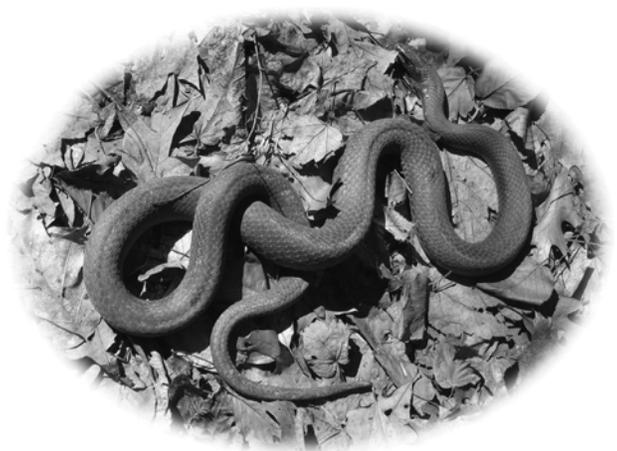
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The Open Space and Watershed Land Acquisition (OSWA) Grant Program provides financial assistance to municipalities and nonprofit land conservation organizations to acquire land for open space and to water companies to acquire land to be classified as Class I or Class II water supply property. For more information and an application, google “CT DEEP Open Space Grants.”

A Memorial

As you consider applying for a DEEP Open Space and Watershed Land Acquisition Grant take a moment to thank former Senator Eileen Daily for the funding opportunity. Almost 20 years ago Eileen coauthored the legislation establishing this fund for open space acquisition that has led to the preservation of thousands of acres of forest, field and wetlands that contribute to our protected “green” legacy and quality of life.

Eileen died July 29, 2015. She served the 33rd District from 1992 to 2011. Prior to that Eileen served as Westbrook’s First Selectwoman; while in that position she provided continuous support and guidance for the town’s Conservation Commission. When she left for the Senate in 1992 we knew we had a friend in the legislature. It was no surprise when Eileen became Chair of the Environment Committee; she promoted environmental legislation passed in 1993, 1995 and 1997 that provided excellent local conservation opportunities. In particular, the 1997 open space funding legislation provided a new sense of purpose, support and direction for Conservation Commissions.

Eileen was always just a local call away from assisting with an environmental problem or idea that needed direction or support. I would like to think that her environmental advocacy, and now legacy, was first nurtured in Westbrook. Thank you Eileen.

~ Tom ODell, Chairman, Conservation Commission, then and now. 🍂