THE HABITAT

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A Natural Resource Inventory - Ridgefield's Experience

by Dr. Benjamin Oko, Ridgefield Conservation Commission

Why do a natural resource inventory (NRI)? Although not a required activity for a conservation commission, under the State's statutory authorization establishing commissions, the inventory is specifically listed under the permitted activities. If one looks at CACIWC's Handbook for Conservation Commissions (caciwc.org, publications) it is suggested that it is a natural outgrowth of open space planning.

The Ridgefield Conservation Commission embarked on its inventory in 2010, the same year that the town's Plan of Conservation and Development, (POCD), was being completed. Ridgefield's motivation grew out of a wish to establish a baseline document to augment the POCD. This was

encouraged by the Land Use Leadership Alliance (LULA) program which emphasizes the need for a natural resource inventory if a town is going to introduce environmental regulations aimed at protecting land and water and encouraging biodiversity.

Step one; establish a steering group: The usual steering group is the town's conservation commission. In other instances, when the initiative for the inventory has come from the office of the town select board or the planning board or town planner, they may form the steering group. It is of value to try and include other stakeholders as part of the planning process which is,

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of course, easier when the impetus for the study comes from outside the commission.

Ridgefield's Conservation Commission was the steering group. We had the full support and cooperation of the town's planning staff throughout the process.

Step two; read the online NRIs: There are a dozen

"The Ridgefield Natural Resource Inventory was published in April of 2012, eighteen months after the planning began." or so NRI's online. Search "natural resource inventories Connecticut". The overall quality of the inventories is excellent. In Ridgefield's reading of them they looked at, first, how they were produced and, second, what their emphasis was.

Step three; choose an emphasis:

NRIs often are documents about open space planning with the goal of establishing areas of a community that are of high ecological value and thus should receive special protection. In other NRI's, town character, historic preservation or special resources are emphasized. Ridgefield is a relatively densely-developed community; less than 20% remains under-developed. "Underdeveloped" is defined for this NRI as a land parcel of 6 acres or more that contains no more than one house. (A map illustrating this point was developed for the NRI). At the same time, Ridgefield has almost 25 % of its land permanently protected as open space. Because of the relative absence of opportunity to add significantly

to the present open land holdings, the commission chose to emphasize studying the present resources with the aim of finding ways to sustain and improve the ecosystem through public and private participation.

Step four; who is going to produce the inventory: To decide how to produce an *Ridgefield, continued on page 12*

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CACIWC News Briefings

This past year marked a special anniversary for CACIWC as we celebrated our **35th Annual Meeting and Environmental Conference**. Preparing for the meeting was especially challenging for the CACIWC Board of Directors and its Annual Meeting Committee. After many years of service as the host to our annual meetings, MountainRidge in Wallingford was sold and closed to the public, requiring us to search for a new venue. After searching and reviewing many sites throughout central Connecticut, we were excited to return to our original location, now known as Four Points by Sheraton in Meriden.

1. The Board of Directors has begun a review of the many comments and suggestions submitted on the survey distributed at our 2012 annual meeting. We welcome early suggestions for workshop topics and speakers that you would like us to recruit for our **36th Annual Meeting and Environmental Conference,** to be scheduled for a Saturday in November 2013. 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.

2. The Board continues to appreciate the large number of commissions who have renewed their CACIWC membership. For those who have not yet done so, it is not too late to send in your **2012-13 membership dues**. A copy of the renewal form and additional information can still be found on our website: www.caciwc.org. Would you or your company like to provide additional support to CACIWC? The website also provides a description of additional individual and business membership categories. Please consider making an additional contribution to support CACIWC education and outreach efforts!

3. The officers and members the Board of Directors have begun the second year of their two-year term following the elections of our 34th Annual Meeting on November 12, 2011. Although we were able to fill several vacancies during 2012, the Windham County director and a number of other **CACIWC board vacancies** remain (please see the list in this issue of *The CACIWC news, continued on page 15*



CACIWC's 35th Annual Meeting & Environmental Conference

Connecticut Commissioners and Staff Celebrate Our Special Anniversary Conference

The CACIWC Board of Directors and its Annual Meeting Committee extends their appreciation to all members who were able to attend our 35th anniversary conference. We were especially appreciative to members who may have endured many days without power and suffered other hardships as a result of Hurricane Sandy. Unfortunately, subtropical Storm Sandy was followed a week later by a strong nor'easter that left up to a foot of snow in some areas of Connecticut. The experience must have seemed all too familiar to some of you who were also left powerless in 2011 by Hurricane/Tropical Storm Irene and the pre-Halloween nor'easter.

to various Federal agencies, and is adjunct faculty at several universities.

Dr. Klemens' well-received keynote address, entitled *Ecological Stewardship and Economic Development: Do We Have to Choose?*, examined the perceived limited choices between environmental health and economic prosperity. This keynote address explored the roots of this perceived dichotomy which is at the basis of so much of the conflict and confrontation that surrounds land use decision-making. Dr. Klemens reviewed options that are available to local leaders and communities to better resolve conflicts, understand the strengths and limitations of science and their

Keynote Speaker

CACIWC was pleased to host Dr. Michael Klemens, as the keynote speaker of our 35th Annual Meeting & Environmental Conference. Educated in the United States and Europe, Dr. Michael W. Klemens is a conservation biologist and land-use planner who seeks to achieve a balance between ecosystem requirements and human needs. He has conducted field work in East Africa and



Dr. Michael Klemens, Key Note Speaker. Photo courtesy of Heidi Wallace

throughout the United States, and has written several books including the definitive study of Connecticut's amphibians and reptiles.

Dr. Klemens has authored over 100 scientific papers. He is the co-author (with Aram Calhoun) of the Best Development Practices manual for vernal pool resources which is incorporated by reference into Connecticut's 2004 Stormwater Manual, as well as the guidance document promulgated by the Army Corps of Engineers for the New England Region in 2011. He is on the scientific staff of the American Museum of Natural History, serves as a consultant practitioners, and plan for more ecologically and economically resilient communities, drawing on his own thirty plus years of experience in the field.

Locally, Michael has served over six years on the Salisbury Planning and Zoning Commission (P&Z), most recently and currently as its Chairman. Under his leadership the P&Z has assumed authority over critical natural resources such as vernal pools,

complementing the authority of the local inland wetlands commission to afford protection of both the pools and the critical upland habitat. He states that "recognizing the distinct regulatory authorities of these agencies, and creating regulations that dovetail with one another, is the best legal fix that can fill the void created by the regressive Avalon Bay decision." He was recently re-elected on a platform that "brings an independent perspective to planning issues, mindful of the need to balance the stewardship of community interests with rights of land-owners to use their properties productively. Increased public participation *annual meeting, continued on page 4*

annual meeting, continued from page 3

in municipal government is essential, and that all points of view have merit and require the serious attention of local government."



Daniel Morley, Policy Development Coordinator CT Office of Policy and Management, presents workshop on "The State Plan of Conservation and Development, Next Steps." Photo Courtesy of Rod Parlee

Conference attendees were also treated to a brief lunchtime discussion on Connecticut environmental and land use legislation provided by **Martin Mador**, **Legislative Chair of The Connecticut Chapter of the Sierra Club**. During his discussion, Marty provided his insight on critical issues to watch during the coming legislative session, especially in light of the budget shortfalls facing the state and region.



Display Table: CT Environmental Review Team Photo Courtesy of Heidi Wallace

Workshops & Displays

Four newly organized workshop tracks were introduced at the 2012 annual conference: Open



Display Table: CT Department of Energy and Environmental Protection's Book Store. Photo Courtesy of Rod Parlee

Space & Conservation Biology, Land Use Law & Legal Updates, Wetlands Science & Engineering, and Commission Administration & Planning. These four tracks included a total of twelve workshops lead by experts in various interest fields for Connecticut conservation and wetlands commissioners and their staff. The workshops covered a variety of topics relevant to Connecticut commissioners.

Twenty commercial entities and non-profit groups also provided a variety of displays to further inform visitors of current issues relevant to their work and volunteer efforts.

Awards

Two annual CACIWC awards were given at the Saturday November 17, 2012 ceremony.

Elaine Sych, coordinator for the Connecticut Environmental Review Teams, received a 2012 "Special Recognition Award." In her position, Ms. Sych is responsible for bringing together Environmental Review Team members from a wide range of environmental, planning and land management professions. As the ERT Coordinator, Elaine oversees all aspects of the environmental review process, including serving as a liaison with municipal boards and governments, conducting field investigations, and developing concise reports. With over twenty years of experience, Elaine has been successful in advancing informed land management decisions and sound environmental practices. She *annual meeting, continued on page 5*

annual meeting, continued from page 4

has completed over 400 ERT reports, while the program is close to approaching 1,000 ERT Reports since its inception in 1969 and has served 161 of our 169 Connecticut municipalities.

Elaine began her career as the Eastern Connecticut ERT Coordinator in 1985. She assumed responsibility for the entire state in 1991. Elaine is a graduate of the Southern Connecticut State University with a BS degree in Geography and attended graduate school, also in geography, at the University of North Carolina



Elaine Sych, CT Environmental Review Team Coordinator, receiving Special Recognition Award from Alan Siniscalchi, CACIWC President Photo Courtesy of Rod Parlee

at Chapel Hill. She has a broad background in land use and environmental planning and has a strong interest in promoting outdoor education. She is also a certified Master Gardener and a recent participant in the Land Use Leadership Alliance (LULA) Training Program. CACIWC is pleased recognize her continued professional assistance to municipal land use commissions by selecting her as the recipient of this Special Recognition Award.

David Leff, former Deputy Commissioner of the Department of Environmental Protection also received a 2012 "Special Recognition Award." A long-time supporter of CACIWC's mission and goals, David had a 28-year career with the state of Connecticut as an agriculture and environmental policy advisor to the state legislature and as deputy commissioner of the Connecticut Department of Environmental Protection where he was primarily responsible for our state parks, forests, fisheries and wildlife. An unfortunate degeneration of his cervical spine forced him into early retirement.

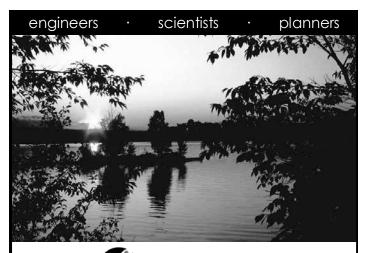
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annual meeting, continued from page 5



David Leff, Author, receiving Special Recognition Award from Alan Siniscalchi, CACIWC President. Photo Courtesy of Rod Parlee

Not willing to allow his condition to interfere with his love for the New England environment, David actively pursued a new career in writing, where he continues to promote conservation issues by focusing on the connection of people to their communities and the natural environment. His first book, The Last Undiscovered Place, is a memoir about one's efforts to rediscover our own neighborhoods. His second nonfiction book, Deep Travel: In Thoreau's Wake on the Concord and Merrimack, takes us on a canoe trip following the route of the great naturalist. In this work, David helps us examine the wide range of phenomena that contributes to our environments. David received a bachelor's degree from the University of Massachusetts at Amherst in 1975 and graduated from the University of Connecticut School of Law in 1978, passing the bar exam that same year.

CACIWC is pleased to recognize his continued efforts to preserve and promote awareness of Connecticut's many important habitats by selecting him as the recipient of this Special Recognition Award.

We again thank the conference attendees and all those responsible for organizing our **35th Annual Meeting** and Environmental Conference. The CACIWC Board of Directors has begun a detailed review of the evaluations forms submitted by participants of this conference. In addition to informing us of their opinions of the educational sessions, the participants also provided valuable suggestions for workshop topics for next year's conference. To allow all of our members the opportunity to submit ideas for workshop topics and other suggestions, the CACIWC Annual Meeting Committee has decided to again maintain the AnnualMtg@caciwc.org email throughout the year. Please keep those suggestions coming! We extend our sincere appreciation to our 2012 conference sponsors and look forward to seeing all of you at our 2013 Annual Meeting and Environmental Conference!

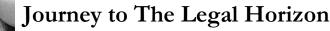


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The Habitat | Winter 2012



by Attorney Janet Brooks

Appellate Court Decision on Affordable Housing Proposal within Public Water Supply Watershed:

Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256 (2013)

Note: This column addresses concerns within the purview of conservation commissions: the protection of drinking water quality by limiting the density of residential development. Inland wetlands commissions are cautioned not to extrapolate sentences or holdings from this case, because the decision very much reflects the statutory language of the affordable housing appeals act -- which is not applicable to wetlands and watercourses agencies.

In November the Connecticut Appellate Court issued its ruling affirming that a substantial risk to drinking water supplies can outweigh the need for affordable housing. However, the Ridgefield planning and zoning commission went too far in its prohibition of any residential development in the public water supply watershed, when the evidence supplied by the potentially

affected water company and state agencies recommended a restriction of 1 residential unit per 2 acres. The zoning commission's prohibition of sewers or septic systems in the watershed was improper because it was based only on generalized fears and speculation.

In *Eureka V, LLC v. Planning and Zoning Commission*, 139 Conn. App. 256 (2013)¹, the applicant, Eureka V, LLC ("Eureka") sought amendments to the zoning regulations and the zoning map in preparation to build, based on a conceptual plan, 509 residential units (1, 2, and 3-bedroom townhouse units), with 30% of the units to be affordable housing. Sixty-seven acres of the 153 acre parcel are located within the watershed for the Saugatuck Reservoir. Eureka sought to rezone the property from a corporate development district to a housing opportunity development zone. After days of public hearing, the planning and zoning commission ("commission") adopted an "overlay zone" that limited development to a density of 1.9 units per acre of land within the zone, required all units to be supplied with municipal water and sewer system, and prohibited any line from crossing in watershed areas. That had the effect of limiting the non-watershed portion of the Eureka project to a density of 1.9 units/acre while prohibiting development in the watershed area -- since the residential units would be required to have sewers,

but sewers would be prohibited in the overlay zone.

As is allowed by the affordable housing statutes, Eureka came back with a <u>modification</u> to its conceptual plan: 1) allow the units to be connected to either sewers or septic systems, 2) limit development in the watershed area to 1 unit/acre (resulting in 2.6 units/acre for overall proj-

ect), and 3) a reduction from 509 units to 389 units. The commission <u>approved</u> 2 units/acre in the non-watershed area and denied the rest of the <u>modification</u>.

On appeal to the superior court (trial court), the court concluded that the commission's decision to limit density and to prohibit sewers in the non-watershed area was arbitrary and was not necessary to protect a substantial public interest. The court upheld the commission's prohibition of any residential units in the watershed as necessary to protect the public water supply.

Unlike in any other land use appeal, the burden of proof in an affordable housing appeal is on the commission.² Supreme Court precedent sets out that the reviewing court "must determine whether the record *legal horizon, continued on page 8*

"Guidance documents do not constitute standards that have the force and effect of law, nor do they constitute expert opinion for a specific outcome. Experts may refer to guidance documents, but better be prepared to substantiate their opinions with other knowledge."

legal horizon, continued from page 7

establishes that there is more than a mere theoretical possibility, but not necessarily a likelihood, of a specific harm to the public interest if the application is granted."³ If that is established, the court must independently, without deference to the agency decision, review the record and determine if the denial was "necessary."

The Appellate Court stated that "any substantial risk to the public's legitimate interest in maintaining safe and healthy drinking water certainly could outweigh the need for affordable housing."⁴ The Appellate Court pointed to the statutes that authorize zoning commissions to consider protections for drinking water supplies. The commission received conflicting opinions from the experts for the applicant and the commission itself. The commission permissibly sided with the opinions issued by the water company and the state department of public health. The water company relied on a CT Department of Environmental Protection (now Department of Energy and Environmental Protection) guidance document that included the limit of 1 unit/2 acres to protect drinking water quality. The Appellate Court quoted extensively from the letter of CT Department of Public Health (DPH) supervisor of the water protection unit, Lori Mathieu. Eureka's proposed zoning changes, in her words, had "the potential to increase the risk to public health due to the high density residential land use."⁵ Ms. Mathieu relied on the 2005 Plan of Conservation and Development which incorporated the decades-long policy of 1 residential unit/2 acres. She concluded: "Use of minimum sustainable lot sizes of two or more acres should adequately protect public drinking water supplies while allowing community growth."⁶

Based on these experts the Appellate Court affirmed the trial court's ruling that there was sufficient evidence in the record for the commission's determination that the granting of the applications "would present more than a mere theoretical possibility of a specific harm to the public's substantial interest in maintaining a safe and healthy drinking water supply."⁷

However, the Appellate Court did not uphold the commission's total prohibition of building in the watershed *legal horizon, continued on page 9*



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legal horizon, continued from page 8

area. Since Lori Mathieu of DPH stated in her letter that 1 unit per 2 acres is protective of water quality, further restriction wasn't necessary. The statutory standard is higher than reasonable: is the restriction necessary?

As for the prohibition of sewers through the public water supply watershed -- the Appellate Court said no. The water company's opposition to sewers "is based on generalized fears and 'guidance documents' and is inconsistent with the [commission's] treatment of all other watershed property in Ridgefield."⁸ Pointing to a similar case, the Appellate Court concluded that there wasn't evidence of the potential harm that would occur or the probability that it would occur.

There are two noteworthy matters. One, the state plan of conservation and development is in the process of being revised and reissued by the General Assembly. The draft proposed by the Office of Policy and Management omits all of the protective language which DPH relied on in its letter sent to the commission. While the revision process is not complete, if the new version of the state Plan of Conservation and Development omits the 1 unit/2 acre language, will the DPH



continue to write letters opposing development that has greater density? While it is difficult to predict future court action, it seems that the letter from DPH was of more importance than a guidance document (the state plan of conservation and development).

Finally, reliance on a guidance document without onthe-ground facts or other support is not likely to provide the evidence necessary to bolster an agency action. This is the second case this year from the Appellate Court in which the court disavowed reliance on guidance documents. In the earlier case, a wetlands appeal referring to the 2002 Guidelines for Soil Erosion and Sediment Control, the court stated: "although they [the guidelines] may contain a set of beneficial recommendations, non-adherence does not in itself imply a likelihood of adverse impact on wetlands."9 Guidance documents do not constitute standards that have the force and effect of law, nor do they constitute expert opinion for a specific outcome. Experts may refer to guidance documents, but better be prepared to substantiate their opinions with other knowledge.

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

(Endnotes)

 You can read the case on the Judicial Website at: http://www. jud.ct.gov/external/supapp/Cases/AROap/AP139/139AP559.pdf.
Or go to: www.jud.ct.gov, click on Opinions, click on Appellate Court Archives, click on 2012, scroll down to "published in the Connecticut Law Journal of 11/27/12, click on the case.
The Appellate Court decision lays out the statutory framework in a particularly readable manner. *Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 264-65 (2013). Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 266 (2013), citing River Bend Associates, Inc. v. Zoning Commission, 271 Conn. 1, 26 (2004).*

4 Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 271 (2013).

5 Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 274 (2013).

6 Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 274 (2013).

7 Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 274 (2013).

8 Eureka V, LLC v. Planning and Zoning Commission, 139 Conn. App. 256, 276 (2013).

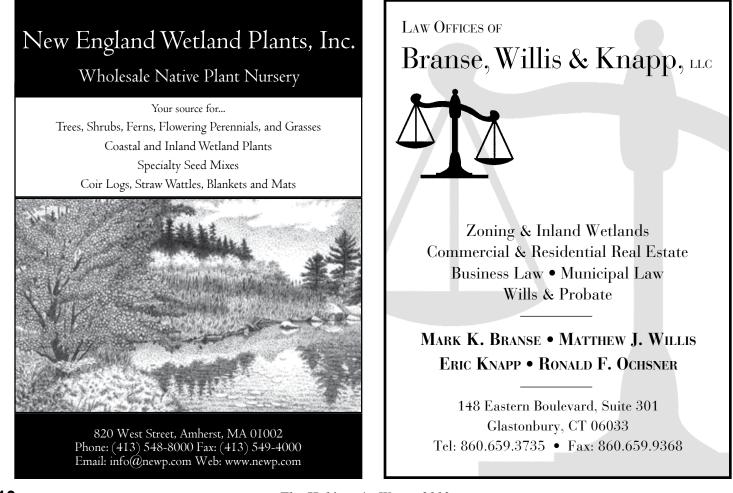
9 Estate of Casimir Machowski v. Inland Wetlands Commission, 137 Conn. App. 830 (2012).

CONSERVATION ALERT!! Emerald Ash Borer A Threat to all Connecticut Ash Trees

The Connecticut Agricultural Experiment Station (CAES) and the Department of Energy and Environmental Protection (DEEP) have confirmed that the emerald ash borer (Agrilus planipennis) was detected in Prospect, CT on July 16, 2012 by staff members at CAES. The identification has been confirmed by federal regulatory officials in the USDA Animal and Plant Health Inspection Service, Plant Protection and Quarantine (USDA APHIS-PPQ). This is the first record of this pest in Connecticut, which is added to 15 other states where infestations have been detected. A new probable site of infestation is located in the Naugatuck State Forest. The emerald ash borer is responsible for the death and decline of tens of millions of ash trees from the mid-west to New York State and south to Tennessee. Ash makes up about 4% to 15% of Connecticut's forests and is a common urban tree.

"The detection of the emerald ash borer (EAB) in Prospect and probably in Naugatuck reaffirms that statewide surveys for this pest were necessary," said Louis A. Magnarelli, director of CAES. "We expected to find the beetle in areas of Connecticut across from infestations in Dutchess County, New York; however, the EAB has great flight potential and can travel in infested wood moved by people. This pest attacks all species of ash trees. Our immediate goals are to determine how extensive the Connecticut infestation is, notify residents in the Prospect and Naugatuck area, and implement strategies to slow the spread of the insect."

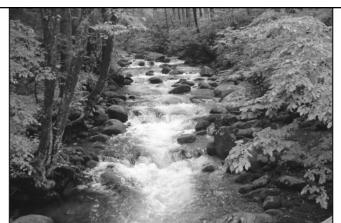
The insect specimens were recovered in Prospect from a ground-nesting, native wasp (*Cerceris fumipennis*), which hunts beetles in the family *Buprestidae*, including the emerald ash borer. The developing wasp larvae feed on the beetles provided by the adult wasp. The wasp provides a highly efficient and effective "bio-surveillance" survey tool and does not sting people or pets. This work was supported by the US Forest Service. In addition, 541 purple prism detection traps, containing a special chemical lure, have been set across *ash borer, continued on page 15*



Ellington Conservation Commission Receives 2012 Farmland Preservation Pathfinder Award

E stablished in 2003 by Working Lands Alliance, the prestigious Pathfinder Awards recognize individuals and groups that have significantly advanced farmland preservation through leadership, advocacy, planning, and education. Award winners log countless hours and great successes in the name of preserving Connecticut's most valuable and vulnerable resource - our farmland.

This year, Working Lands Alliance recognized the Ellington Conservation Commission (ECC) for their volunteer efforts to keep Connecticut farmland in agriculture. The ECC has continuously championed the preservation of open space and working farmlands since its creation approximately a decade ago. In 2006 the Conservation Commission developed an Open Space Plan defining preservation goals and implementation measures to preserve these lands. According to census data from 2000 through 2003, Ellington was the second fastest growing community of the 29 towns in the



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Steven Trinkaus, PE, CPESC, CPSWQ



Trinkaus Engineering, LLC 114 Hunters Ridge Road Southbury, CT 06488 203-264-4558 (phone & fax) Email: strinkaus@earthlink.net capitol region and farmlands were, and continue to be, under increasing pressure for development.

Recognizing that farmland defines Ellington's character and provides local produce, as well as other community benefits, the ECC, supported by Town Planner Robert A. Phillips AICP, initiated a farmland preservation movement which included a farmland ranking system for properties under consideration for preservation as well as a town-wide referendum in support of a 2 million dollar bond pre-authorization. To that end, in 2007 an overwhelming outpouring of support, approximately 80% of voter turnout, approved a two million dollar bond authorization to help permanently protect the town's remaining valuable farmlands. This provided the Conservation Commission with the funds needed to work toward preserving working farmland and assist in meeting local and regional preservation goals. It is also noteworthy that this program would not be as successful as it has been if not for the financial and logistical support of Joseph Dippel and his staff at the CT State Department of Agriculture (DoA) as well as those involved with the funding program at the Natural Resources Conservation Service (NRCS).

Since Ellington's bond authorization, ECC has executed Farmland Preservation Agreements with landowners and farmers preserving over 407 acres, with an additional 55 acres under consideration (approximately 2% of total land area in town). This amounts to four and possibly five preserved farmsteads since approximately 2008. Prior to that, only a few farms were preserved over many decades by the DoA alone. In addition, earlier this year, ECC worked with town officials to successfully sign a Cooperative Agreement with the state DoA making it possible for community farms (farms 30 acres or less) to be considered for a Community Farmland Preservation Program, further cementing the town's commitment to agriculture.

It is for the reasons above that the Ellington Conservation Commission was awarded the 2012 Outstanding Group Award for their tireless efforts in preserving farmland in Connecticut. CACIWC salutes ECC's team work and success. Congratulations on a well deserved award.

Ridgefield, continued from page 1

inventory one can draw on the NRI review. Some have been produced by professionals, others by volunteers with professional training, some used volunteers to support the work of town professionals, and some were produced by knowledgeable nonprofessional volunteers. In addition to the question of who will produce the inventory, one need consider how much time it will take and, importantly, what it will cost.

In Ridgefield there was a core of persons on the commission with very good skills, a landscape and civil engineer, an environmental expert, and a writer/editor. Although all were more than happy to chip in, none had a lot of time available. Town personnel likewise could contribute only on a limited basis. Because of Ridgefield's desire to pro-

duce the NRI in a timely fashion, they decided to hire a professional to produce the study. This choice was made possible, in part, because of the fortuitous existence of a small fund that the town had earmarked for doing a project related to the environment. To raise additional funds, the Commission dedicated its annual open space fundraiser to the project. The search led to the hiring of Michael Klemens and his assistant, Eric Davison.

In the course of outlining the scope and cost of the work with Dr. Klemens, it became clear that including an onthe-ground biodiversity study would be unaffordable if included in his scope of the work. Since this was central to Ridgefield's goal, it was decided to use community volunteers to provide this data. When the decision to use volunteers was made, it was clear that this was not going to be an all-inclusive scientific survey. However, as will be seen later, useful data about Ridgefield's flora and fauna was able to be developed.

Step five; developing a volunteer program: The volunteer group was recruited by using a combination of personal contacts, notices in the paper and drawing from an existing group of open space rangers. This produced a turnout of about 25 people, most of whom stayed involved through the year long duration of the project. During the planning period regular meetings were held with the volunteers with email used as follow-up. The initial meeting was used to establish people's areas of interest and expertise and, critically

The field surveys were done in a variety of ways. They all conformed to the rule that "we will do the best we can with what we have".

important, time availability. A questionnaire was used asking people to rate their skills in the world of flora and fauna. Focal activities involving all volunteers included vernal pool training, water quality sampling and a photography workshop. These increased overall satisfaction and involvement. All the surveys that were developed were open to all the volunteers but were formed around core groups based on interest and expertise; e.g. tree experts, birders, etc. The core group was often 2 or three people.

> Having examined the steps involved in setting up the Ridgefield NRI, let's turn to some of its components. The following elements are ones that are likely to be parts of all NRI's. Resources mentioned in these elements that are commonly available are in bold italics.

Maps: A suite of 14 maps was developed for the Ridgefield NRI by Eric Davison. These used a base map that was developed from the town's GIS maps. The Commission and others selected the street and place names used. (To give some notion of the time an NRI takes, this review of names took an estimated thirty hours of commissioners' and Davison's time.) Davison used data from the University of Connecticut's *Center for Land Use Education and Research*, (*CLEAR*, *http://clear.uconn.edu/)*, as well as information he developed from *USGS topo maps* to develop the map suite.

Additional maps used in the NRI were developed by the *town's GIS* mapper using the town's GIS program. An intern from *Highstead*, a land preservation organi-*Ridgefield, continued on page 13*



Ridgefield, continued from page 12

zation based in Redding, CT, developed a map showing the change in forest cover by combining a 1934 aerial survey map that can be found in the *Map and Geographic Information Center*, (*MAGIC.lib.UCO-NN.edu*) with the latest *CLEAR forest cover* map. Maps and information about forest types, sizes and buffering were also developed using *CLEAR* data.

Water Quality: Various sources were used for water quality including data from the *Federal Clean Water Act, (section 305b)*, the *CT Department of Energy and Environmental Protection's (DEEP) benthic macro invertebrate sampling, Norwalk River watershed studies*, and a *local lake association's* water quality study.

Wildlife: The findings of both current and historical wildlife studies were examined from two perspectives. The first was to compare the survey results with the state listed species found in Ridgefield in the *DEEP Natural Diversity Data Base.* The second compared the results to a data base developed by Dr. Klemens called the Focal Species Approach or FOSA. This looks at what the presence of a species indicates about the environment; for example, a breeding wood thrush is an indicator for an intact large core forest.

Illustrations: A photo list was supplied by the writers of the NRI to the commission for illustration of different segments of the text. The volunteers and members of the commission were asked to supply photographs from material they might have in hand. To add to these and to photos that were taken during the surveys, a special photo-shoot day led by a volunteer, a professional photographer, added to the mix. Historical photographs were available from the *Ridgefield Historical*



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Society archives. When needed some *online photos* were used.

Field Surveys: The field surveys were done in a variety of ways. They all conformed to the rule that "we will do the best we can with what we have". The appendices of the NRI contain details of the methodology of the individual surveys as well as the results. Surveys were done of forests, vernal pools, water quality, birds, butterflies, reptiles and amphibians, wildflowers, and mammals. These selections follow the skills and interests of the volunteers. A final step in the survey process was to make the findings available as a series of checklists that can be downloaded from the conservation website. This, it is hoped, will serve to increase community involvement and also encourage the submission of new species not found during the survey.

Additional Resources: In addition to the above mentioned resources, those listed below are generally available. (In instances where the resource listed is specific to Ridgefield, as for example, the Land Conservancy of Ridgefield, the "generally available" resource would be the area's local land trusts.)

- NEMO, (Nonpoint Education for Municipal Officials) a Uconn program that will come to your community to do a workshop on how to do a community resource inventory, which is much the same as an NRI. Go to http://nemo.uconn.edu/
- Western Connecticut University Dept of Biological and Environmental Sciences
- Yale Peabody Museum
- Land Conservancy of Ridgefield
- Environmental studies for development applications and other land use projects
- Published studies on species populations like the Connecticut Butterfly Atlas are found in the relevant sections of the NRI and its bibliography.

The Ridgefield Natural Resource Inventory was published in April of 2012, eighteen months after the planning began. It is available for download online at ridgefieldconservation.org. The maps from the printed version are also on line. The printed version is available for purchase for \$20 which is below the printing cost of \$30. This discount is to encourage its dissemination in the community. For further information contact Benjamin Oko at benoko@comcast.net or conservation@ridgefieldct.org.

Resources for Commissioners

Municipal Inland Wetlands Commissioners Training Materials/Information

The 2012 Municipal Inland Wetlands Commissioners Training Program Segment 3 workshops were conducted with over 100 participants. Two workshop topics were presented: (1) *Vernal Pool Ecology and Monitoring* and (2) *Benthic Macroinvertebrates and What These Organisms Can Tell Us About the Health of a Stream*. All training materials/ information have been posted on the DEEP Wetlands Management Section webpage:

- Vernal Pools: http://www.ct.gov/dep/cwp/view.asp?a=2720&q=514222&depNav_GID=1907
- Benthic Macroinvertebrates: http://www.ct.gov/dep/cwp/view.asp?a=2720&q=514238&depNav_GID=1907

The NOFA Organic Land Care Program

NOFA's Organic Land Care courses are designed with the goal of enabling schools and towns to comply with the Connecticut K-8 School Pesticide Ban and with improving water quality in rivers and Long Island Sound.

THE LAWN CARE CERTIFICATE COURSE

January 24: Manchester Community College, Manchester, CT

February 26: Three Rivers Community College, Norwich, CT

This one-day course will cover how pesticide and fertilizer runoff harms water quality, how to grow a beautiful lawn organically, and how to market organic services. This introductory course is designed for inland wetlands and conservation commissioners, for municipal and school groundskeepers, homeowners, environmental educators, town committee members and lawn care professionals. The course addresses compliance with Connecticut's school pesticide restrictions and fertilizer regulations and how to communicate the environmental value of sustainable land care practices to customers. Registration is \$80. For more information or to register, go to http://www.organiclandcare.net/lawncertificatecourse. Contact: Kristiane Huber, Kristiane@ctnofa.org,



203-888-5146.

THE ACCREDITATION COURSE IN ORGANIC LAND CARE

February 11-14 at Three Rivers Community College in Norwich, CT

For over a decade the Accreditation Course in Organic Land Care has taught land care professionals ecology principles related to land care, and how these principles can be replicated or directly applied the design and management of yard, gardens, school grounds and playing fields. Now in its 12th year the course has been revamped to include stormwater management instruction, compost tea and specialized tracks for lawn care professionals and for organic landscaping. At the conclusion of the course, attendees may take the Accreditation Exam to join NOFA's over 500 Accredited Professionals in 20 states.

Registration: \$495 in Connecticut (group discounts and a payment plan option are available) For more information or to register go to http://www. organiclandcare.net/education/accreditation-course. Contact: Kristiane Huber, Kristiane@ctnofa.org, 203-888-5146.

CACIWC news, continued from page 2

Habitat and on www.caciwc.org). We were pleased to receive approval for our **bylaws amendments** during our November 17, 2012 meeting (see our website for the amended bylaws: www.caciwc.org). These amendments included the creation of several *alternate at large* positions that are not restricted to a specific county and allow us to retain well qualified directors from areas whose county and alternate county representatives are already filled. Please submit your name to us at board@caciwc.org if you are interested in serving as the Windham County Representative, one of the vacant alternate at large representative positions.

4. Are you too busy to join the board at this time but would still like to work with CACIWC? We are forming several additional **CACIWC advisory committees** to help us with our education and outreach efforts, help us select new goals in objectives for our updated **strategic plan**, or participate in the review of legislative initiatives. Let us know by sending your name and interest area to us at board@caciwc.org.

Finally, the CACIWC Board of Directors sends a special message to our member commissions and staff of the Town of Newtown. We join the many expressions of condolences from around the world on the tragic events at the Sandy Hook Elementary School on Friday, December 14, 2012.

We thank all of our members throughout Connecticut for your efforts and wish you a safe, healthy, and happy new year.

~ Alan J. Siniscalchi, President

ash borer, continued from page 10

the state in all eight counties by The University of Connecticut Cooperative Extension System via an agreement with the USDA APHIS PPQ. Three additional EAB have been captured in a trap located in Prospect, while other beetles were captured in a trap in Naugatuck.

"This is a disturbing discovery and one that has the potential for great environmental harm in the state," said DEEP Commissioner Daniel C. Esty. "Connecticut has more than 22 million ash trees. The presence of EAB here could have a devastating effect on the beauty of our forests, state and local parks and neighborhoods, as well as the state's wood product industries. Now that EAB has been detected here, it is more important than ever to limit its spread. It is imperative that residents and visitors throughout the state not move firewood. The movement of firewood that contains the presence of EAB is the quickest way to rapidly spread the insect."

The EAB is a small and destructive beetle, metallic green in color, and approximately 1/2 inch long and 1/8 inch wide. Adults emerge from the bark of infested trees leaving a small "D"-shaped exit hole roughly 1/8 inch in diameter. This insect is native to Asia and was first discovered in the Detroit, MI and Windsor, Ontario regions of North America in 2002. It has since spread through the movement of firewood, solid-wood pack-ing materials, infested ash trees, and by natural flight dispersal. It is unknown how the EAB entered Prospect or Naugatuck. Movement of infested firewood is a high risk activity that can spread the beetle over long distances. Prior to the pest's discovery in Prospect, the closest known infestation to Connecticut is in eastern New York near the Hudson River.

The emerald ash borer is a regulated plant pest under federal (7 CFR 301.53) and state (CT Gen. Statute Sec. 22-84-5d, e, and f) regulations. For more information about the EAB, please visit the following website: www.emeraldashborer.info.

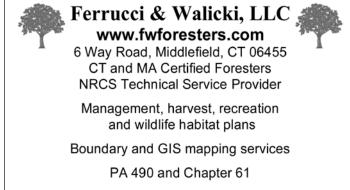
ENVIRONMENTAL PLANNING SERVICES

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

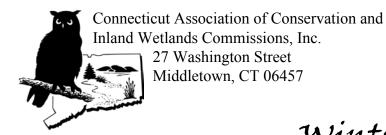
- MICHAEL S. KLEIN, Principal -Certified Professional Wetland Scientist / Registered Soil Scientist

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"CAN OPEN SPACE BE PERMANENTLY PROTECTED?" 29th Annual Connecticut Land Conservation Conference

Saturday, March 23, 2013 ~ Wesleyan University, Middletown 8:30am – 4:45pm (conference) 5:00pm – 6:00pm (reception)

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

AGENDA

- **Plenary Session** -- New for 2013! Interactive panel discussion exploring the issues and obstacles in protecting state, local and private lands in perpetuity.
- **24 Workshops on a Variety of Topics** *Strengthening Land Protection; Land Trust Management, Leadership and Capacity Building; Communication, Marketing and Social Networking; and more!*
- Lunchtime Regional Roundtables *New for 2013! -- Join conservation peers from your region for an hour of networking, information sharing, and trouble shooting.*
- Excellence in Conservation Awards *New category for 2013! -- Recognizing outstanding achievements by organizations and individuals.*
- **Post Conference Reception** *New for 2013! Join us for an evening of socializing and celebrating. Details coming soon!*

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