# AGENDA

## Commission for the Environment
**November 11, 2013**
**7:30 p.m.**

Orange County Solid Waste Management Administration Building
1207 Eubanks Road, Chapel Hill

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| Time | Item | Title |
|---|---|---|
| **7:30** | **I.** | **Call to Order** |
| **7:32** | **II.** | **Additions or Changes to Agenda** |
| **7:35** | **III.** | **Approval of Minutes – September 9** (Attachment 1) |
| **7:40** | **IV.** | **Industrial Hemp Film ("Bringing it Home")**<br>CFE members will discuss the pre-screening of the film (Sept. 30) and decide whether to co-sponsor a screening for a larger audience (Attachment 2) |
| **7:50** | **V.** | **State of the Environment 2014**<br>CFE members will discuss the status of the State of the Environment (SOE) report preparation and the next steps for review and comments. Staff requests direction on format changes and revisions. (Attachment 3)<br>**Draft #3 of SOE report sections is available from a special CFE link to the DEAPR webpage** |
| **8:45** | **VI.** | **Updates and Information Items**<br>Staff and/or CFE members will provide updates on the following items:<br>➢ Community garden initiative along Bolin Creek (Sassaman)<br>➢ CFE meeting calendar 2014 (Attachment 4)<br>➢ Cane Creek Mitigation Tract forest management update (Attachments 5-6)<br>➢ Wood pellets as fuel (Attachment 7)<br>➢ Carrboro's energy and climate action plan (Attachment 8)<br>➢ The relative certainty of climate change (Attachment 9)<br>➢ Guidance for permitting of solar projects (Attachment 10)<br>➢ Orange County recycles oyster shells (Attachment 11)<br>➢ Legislative scorecard – NC League of Conservation Voters (Attachment 12)<br>➢ Fracking wastewater study findings – Duke Univ. (Attachment 13)<br>➢ US Forest Service water quality BMP newsletter (Attachment 14)<br>➢ "The Nature of Orange" photo contest winners (Attachment 15) |
| **9:00** | **VII.** | **Committee Meetings**<br>The CFE will break into its two standing committees (Air & Energy, Water & Biological) to discuss their assigned sections of the State of the Environment report (Attachment 16) |
| **9:30** | **VIII.** | **Adjournment** |

***Next meeting: December 9 (Hillsborough)***

# Orange County
# Commission for the Environment

## Draft Meeting Summary

### September 9, 2013
### Solid Waste Management Administration Building, Chapel Hill

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PRESENT: David Neal (Chair), May Becker, Terri Buckner, Peter Cada, Loren Hintz, Jeanette O'Connor, Tom O'Dwyer, Jan Sassaman (Vice Chair), Gary Saunders, David Welch

ABSENT: Lucy Adams, Susie Enoch, Steve Niezgoda

STAFF: Rich Shaw, Tom Davis GUESTS: Donna Lee Jones (CFE prospect)

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I. **Call to Order** – Neal called the meeting to order at 7:30 pm.

II. **Additions or Changes to Agenda** – None

III. **Approval of Minutes** – Neal asked for comments on draft August 12 meeting summary. Hintz motioned to approve as written; Saunders seconded. Approved unanimously.

IV. **Updates and Information Items** – Information on the following subjects was included in the meeting materials and two topics were chosen for further discussion: a) proposed screening of film about industrial hemp, b) Orange Well Net – 2013 Annual Report, c) Duke Forest annual closure, d) Native plants along Buckhorn Road, e) Triangle smart grid dominance, f) OWASA's treatment and recycling of wastewater and biosolids, g) Town of Hillsborough's stormwater newsletter, h) NC conservation trust funds, i) NCDENR reorganization, j) food waste as a source of fuel, and k) FestiFall.

O'Dwyer discussed his interest in the CFE sponsoring a screening of a new, 55-minute documentary film advocating for the legal production of industrial hemp in the United States. He encouraged members to watch the trailer and to read the Congressional Research Service white paper ("Hemp as an Agricultural Commodity") he sent via email.

CFE members asked what O'Dwyer hoped could be gained from the screening. He said it would be beneficial for people in this area, including farmers, to learn about the benefits of hemp as an alternative crop and to then encourage others outside of this county to also learn about this issue. O'Dwyer listed some of the benefits of hemp. He suggested the CFE consider inviting other groups to co-sponsor a film screening, including Agricultural Preservation Board, Economic Development Commission, and Orange County Cooperative Extension.

Sassaman suggested that CFE members view the film before considering whether to sponsor a wider screening. O'Dwyer offered to acquire the film and schedule a private viewing for CFE members, with a date tentative scheduled for Monday, September 30.

Shaw asked CFE members if they wished to have an exhibit table at Chapel Hill's annual Festifall, scheduled for October 6. He said if there was interest he would work with Davis to prepare for the event. Saunders, Hintz, O'Connor and O'Dwyer said they may be available to work at the exhibit. Shaw said he would report back within the next week on whether we could reserve space and get an exhibit together for this year.

V. **Committee Meetings** – Neal asked Shaw to provide a status report on the State of the Environment (SOE) report before breaking up into the two standing committees. Shaw handed out a memo describing what has occurred since the August CFE meeting and repeating the proposed schedule for publishing the SOE report. He noted there were paper copies of the report draft #2 available for CFE members to use for reference and note taking during the committee meetings.

CFE members raised questions and issues for discussion prior to the break-out session. Sassaman noted some issues were of interest to members of both committees, and he was interested in commenting on one or more items in the Land Resources section.

*[As it turned out, the CFE decided not to break out into committees. Instead, CFE members continued to discuss the report format, content, and editing process.]*

VI. **State of the Environment 2014**

Buckner said some of the draft narrative is too technical for most county residents. She asked who are the intended audiences for the SOE report. Shaw said the CFE usually aims for county residents and secondary school children.

- Buckner recommended including more information on what county residents and households can do to protect or improve the environment.

O'Dwyer and Sassaman agreed. Hintz said the technical level of the draft report is suitable for high school students that he teaches in Chapel Hill. He agreed, however, that the narrative could be more concise and could include more about what is being done and what else county residents and households could do to lend a hand.

CFE members discussed the merits of listing "What You Can Do" in each section of the report as well as including a more comprehensive listing with the executive summary.

- Neal recommended including tips found on the Clean Energy Durham website
- Saunders recommended looking at the NC Air Awareness Program information on the NC DENR Division of Air Quality website (ncair.org).
- Sassaman said he likes the current report format, but would like to include more about what is being done in Orange County to address the issues, what the County could do, and what residents, institutions and others could and should do.
- Jones said the information provided for each environmental indicator seems appropriate, but recommended that the introductory background narrative for each section explain why the indicators were chosen for inclusion in the report.
- O'Connor suggested rearranging the information to make the material more interesting and accessible. She suggested moving "What You Can Do" information to the beginning of each item.
- Buckner recommended writing to the 8$^{th}$ grade educational level; she agreed that the report needs to grab the reader's attention up front;
- Buckner said Water Usage indicator should include water conservation measures
- Neal recommended placing technical information in an appendix
- Cada said the executive summary will be an important component

Neal led a discussion on how to format the document. He listed components for each report section as follows:

- What's the concept?
- Why is it important?
- What you can/should do
- How are we doing (include local gov'ts., challenges/opportunities, trends)
- How is it measured /How do we know → Appendix

Saunders and Buckner offered to edit and reformat the Air Resources section for CFE members to consider before further wholesale edits are made to the Land and Water resources sections, and CFE members agreed with that strategy. Staff will provide a Word version of the Air Resources section to facilitate their editing.

Shaw was asked to provide a list of new topics and issues identified by CFE members.

Neal encouraged CFE members to continue to read through the draft report work with committee members to provide staff with recommendations for further County action.

VIII. **Adjournment** – Neal adjourned the meeting at 9:15 pm.

Summary by Rich Shaw, DEAPR Staff

NewsObserver.com

Next Story >

**'The Butler' serves up a No. 1 weekend at box office**

# Local documentary heralds healthy hemp

Published: August 17, 2013

U.K. hemp farmers, Henry Braham and Glynnis Murray at their farm in North Devon, from the documentary "Bringing It Home."

COURTESY OF LINDA BOOKER

By Glenn McDonald — Correspondent

Christopher Columbus journeyed to America using hempen ropes and sails. The United States Declaration of Independence was drafted on hemp paper. Hemp was a major agricultural boon to World War II domestic war efforts.

These are just a few of the more patriotic points made in the locally produced documentary film “Bringing It Home,” which premieres Thursday in Durham. The film examines the issue of industrial hemp farming and argues that federal law prohibiting the cultivation of hemp on U.S. soil is one of America’s most puzzling and misguided public policies. Despite having no psychoactive properties, industrial hemp is classified as a controlled substance under the 1970 Controlled Substances Act.

Filmmakers Linda Booker and Blaire Johnson – both graduates of Duke University’s Center for Documentary Studies – began the project in 2010. The story would eventually lead them to film in the

United Kingdom, Spain, Washington, D.C., California, and back to North Carolina. Booker, speaking from her home in Pittsboro, said she wasn't a hemp advocate when the project began.

"I'm naturally a little bit of a skeptic on things, and like a lot of people, I didn't really get what hemp was," Booker said. "I thought it was just a stoner hippie issue. But it really didn't take very long for me to get engaged and interested."

While hemp is illegal to grow in the U.S., hemp products are not illegal to sell. In fact, American consumers purchase around $450 million worth of hemp products annually – mostly apparel and nutritional products like hemp oil. But all the hemp used for these products must be imported, mostly from Canada. The U.S. is the world's largest importer of hemp. China is the world's largest exporter.

The film begins with the story of Asheville home designer Anthony Brenner, who made headlines in 2010 when he built the nation's first "hemp house," made from environmentally friendly hempcrete – a building product similar to concrete. Brenner would later design his own hemp-based home to provide a safe indoor environment for his daughter Bailey, who has a rare genetic disorder that makes her sensitive to synthetic chemicals.

From here, the film explores the many industrial uses of hemp, focusing in particular on its utility as a building material, clothing fabric and food supplement. The filmmakers traveled to Spain and the U.K. to speak with hemp advocates and farmers. Footage from Berkshire, England, shows vast fields of hemp farmed as a cash crop, and several experts are consulted to extol the virtues of the plant.

"Bringing It Home" employs the usual techniques of the documentary film to tell its story – interviews, statistics, animations – and it covers a lot of ground.

Booker said the goal was to make the film relatively short, as part of the team's education outreach campaign, so that it could be presented along with discussion events and panels. For a 52-minute film, it's ambitious in scope, breaking down the various political, economic and historical aspects of the issue.

"The best analogy I can come up with is that it's kind of like when a sculptor has a big chunk of marble in front of them, and they whittle and chip away to make something of it," Booker said.

In developing the project, Booker and Johnson worked with the Durham-based Southern Documentary Fund (SDF), a nonprofit that provides feedback and helps filmmakers secure funding.

Triangle filmmakers

Rachel Raney, executive director of the SDF, said "Bringing It Home" is a good example of the kind of work that's coming out of the Triangle's booming documentary filmmaking community.

"This is a tough film to pull off," Raney said. "It's a really complex, multilayered topic. They knew they wanted to get this film in hands of the people working in this issue."

Indeed, the film seems to be coming out at an opportune time. The hemp issue is being vigorously debated at the state and federal level, with several states having already passed legislation legalizing industrial hemp cultivation. The federal Drug Enforcement Administration has continued to block such state initiatives, but the U.S. House of Representatives just last week approved a version of the highly contested Farm Bill that includes new rules on hemp farming.

"I think it's incredibly timely," Raney said of the film. "And that often happens in documentary films. You can start something when its not on anyone's radar, then the stars align and everyone catches up with you."

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**Man faces sentencing in Vt. film fraud scheme**

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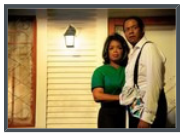

**'The Butler' serves up a No. 1 weekend at box office**

ORANGE COUNTY

Department *of* Environment,
Agriculture, Parks & Recreation

# MEMORANDUM

**To:** Commission for the Environment
**From:** Rich Shaw and Tom Davis
**Date:** November 5, 2013
**Subject:** Orange County State of the Environment 2014

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A third draft of the State of the Environment report 2014 is ready for your review and comments.

Since your September meeting Tom and Rich have revised the Water Resources and Land Resources chapters, although considerably more input from the CFE is needed. There have been no changes to the Air and Energy Resources chapter pending editing and a proposed reformat by members of the Air and Energy Resources Committee.

As the steering committee for this report, we ask CFE members to continue reading the draft document and provide critical feedback on its format and content. Again, we are especially interested in your thoughts for the "*What is the Trend in Orange County?*" and "*How Can Orange County Improve?*" sections for each indicator.

Text from the 2009 report that is largely unchanged is shown in *red italics* so that we don't need to start from scratch. For those environmental indicators whose data show little or no change in the trends since the 2009 report, much of the text can remain the same.

We also need you to identify what you believe are the key issues and recommendations of the report as whole, which will be summarized in the introductory pages.

The following is a revised schedule for the project.

| | |
|---|---|
| May 2013 | DEAPR hires graduate Research Associate (M. Munkittrick) |
| May-June 2013 | Munkittrick verifies data sources, investigates new potential data sources, discusses with staff and CFE members |
| June-July 2013 | Munkittrick collects data, reports to staff & CFE committees. CFE comments on proposed new style/format and new/deleted environmental indicators and emerging issues |
| August 2013 | Munkittrick and DEAPR Staff present initial draft SOE report to CFE. Identify needs for further input/text from CFE and outside entities. |
| Sept-Oct 2013 | Staff completes the data entries for remaining indicators. CFE provides further input/text for each indicator. CFE identifies those indicators it would like to highlight in the report overview and executive summary. |
| Nov-Dec 2013 | Staff creates revised draft (proposed final) SOE report. CFE reviews draft, makes final edits/changes. Staff incorporates changes into final report. |
| January 2014 | Document is made "camera-ready." SOE report prepared for on-line viewing. A limited number of reports are printed for libraries and other entities. |
| Feb/March 2014 | CFE hosts Environmental Summit, SOE report presented |

*Environment, Agriculture, Parks and Recreation*
*PO Box 8181 / 306-A Revere Road*
*Hillsborough, NC 27278*
*(919) 245-2510*

# Orange County Commission for the Environment

# 2014

Department of Environment,
Agriculture, Parks & Recreation
306-A Revere Rd.
Hillsborough, NC 27278
Phone: 919-245-2510
www.orangecountync.gov/deapr/

**All meetings begin at 7:30 p.m.*

| MEETING DATES | LOCATIONS |
|---|---|
| • January 13 | Hillsborough |
| • February 10 | Chapel Hill |
| • March 10 | Hillsborough |
| • April 14 | Chapel Hill |
| • May 12 | Hillsborough |
| • June 9 | Chapel Hill |
| • *July – No Meeting* | |
| • August 11 | Hillsborough |
| • September 8 | Chapel Hill |
| • October 13 | Hillsborough |
| • November 10 | Chapel Hill |
| • December 8 | Hillsborough |

**MEETING LOCATIONS:**
Chapel Hill: Southern Human Services Center, 2501 Homestead Rd., Chapel Hill, NC
Hillsborough: Environment and Agricultural Center, 306 Revere Rd., Hillsborough, NC

JANUARY

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# ORANGE WATER AND SEWER AUTHORITY

*A public, non-profit agency providing water, sewer and reclaimed water services to the Carrboro-Chapel Hill community.*

September 20, 2013

Dear Neighbor:

**RE: UPCOMING WORK ON OWASA'S 491-ACRE CANE CREEK RESERVOIR MITIGATION PROPERTY NEAR BUCKHORN ROAD**

I am writing to inform you that OWASA has selected a contractor to implement the forest management plan provided by the North Carolina Wildlife Resources Commission (WRC) for our 491-acre Cane Creek Reservoir Mitigation Tract. This work is being performed to comply with the requirements of the 404 permit that the US Army Corps of Engineers issued for construction of the Cane Creek Reservoir.

We anticipate finalizing a contract with the timbering company sometime in October and begin harvesting trees later that month or in November. I have attached a map summarizing the forest management plan. The area north of the stream has already been harvested, and no further activities will occur on that portion of the site as noted on the attached map. The area scheduled for management is approximately 407 acres out of the total 491 acre tract. As shown on the attached map, the following management activities will occur:

- No Harvesting – approx 151 acres (37% of area) – no cutting will occur in the riparian buffer areas, visual buffers at the property boundaries near occupied homes, and near historic home sites found on the property.
- Thinning – approx 201 acres (49% of area) – these areas will be thinned to promote overall forest health and vigor and improve wildlife habitat. Many of the thinnings protect the healthier trees and higher value species.
- Final Harvest – approx 43 acres (11% of area) - these areas include pine stands and areas which were severely damaged from Hurricane Fran. All trees will be harvested from these management areas (largest area is 8 acres, but average size is 3.6 acres). These areas will be reforested in shortleaf or loblolly pine following harvest.
- Hardwood Openings – approx 12 acres (3% of area) – these are small group harvests within the hardwood thinning areas which average one acre in size. Mature oak and hickory trees may be left to help regenerate the center of the openings.

The current plan is for the contractor to begin work west of the access road shown on the map. All work will be completed in accordance with *North Carolina Forest Practices Guidelines Related to Water Quality* and recommendations described in *North Carolina Forestry Best Management Practices (BMP) Manual to Protect Water Quality* as amended in September 2006.

We anticipate two main impacts to neighbors:

1. Noise – neighbors may be able to hear equipment during hours of operation.
2. Vehicular traffic – all trucks will enter and exit the site via Martin Road; we anticipate six to eight truckloads of timber per day during normal harvest operations.

We will continue to keep you informed about our forestry management activities. If you did not receive e-mail notification (with this same letter attached) please send me an e-mail (see below) and I will add your name to our distribution list. Conversely, if you prefer not to be contacted about our activities at this site please notify me and I will remove your name from our list.

Please contact me at 919-537-4214 or at rrouse@owasa.org if you have any questions or would like more information regarding our forestry management activities at the Cane Creek Reservoir Mitigation Tract.

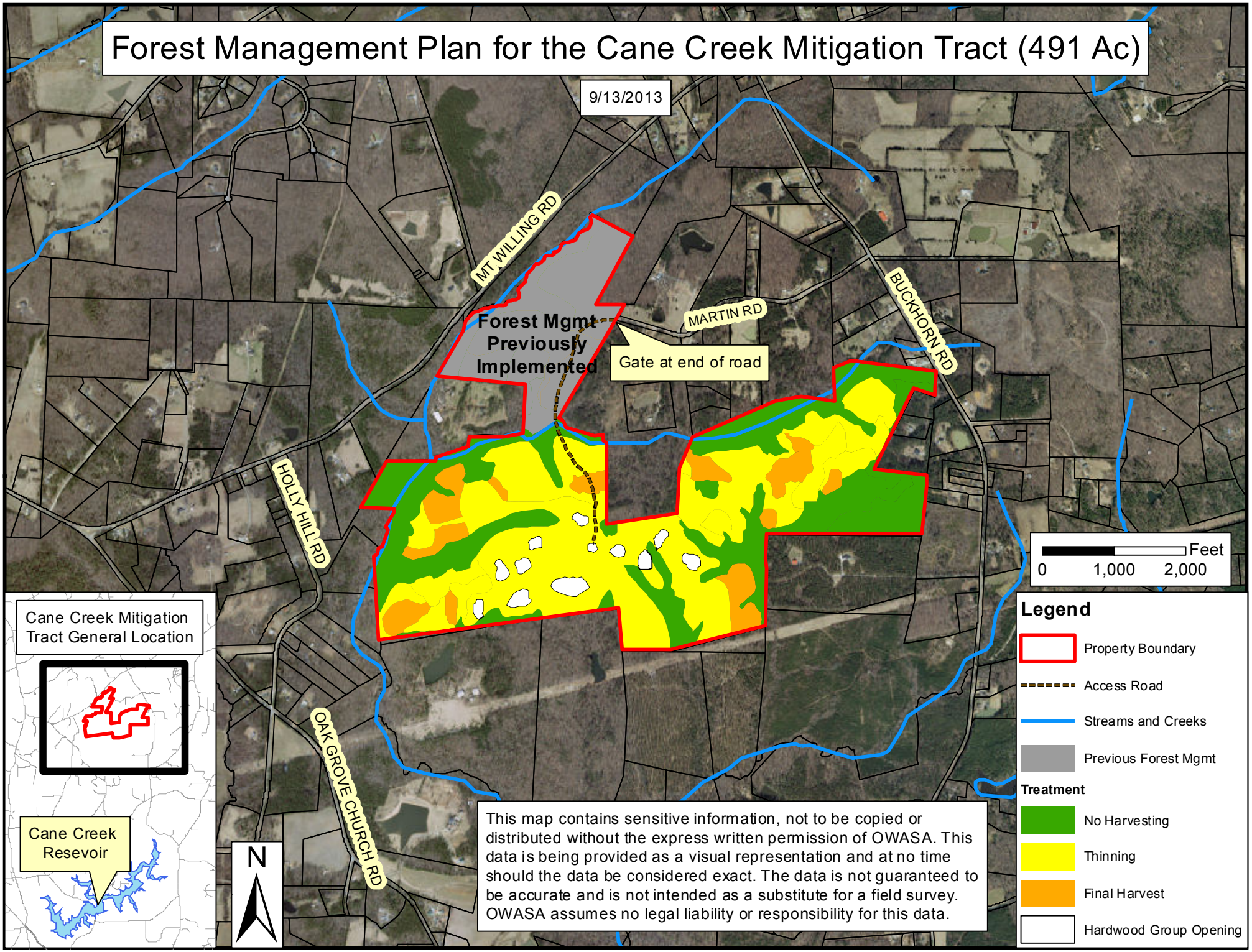
Thank you very much.

Sincerely,

Ruth C. Rouse

Ruth C. Rouse, AICP
OWASA Planning and Development Manager

# Forest Management Plan for the Cane Creek Mitigation Tract (491 Ac)



News - Observer 9/25/13

# Trees not trash; pellets not 'green'

By Andrew George

"Tug on anything in nature, and you'll find that it is connected to everything else." I was recently reminded of this John Muir quote after reading about a growing and controversial new industry spreading across North Carolina and the entire Southeast: wood pellet manufacturing.

In rural communities such as Ahoskie, Garysburg and Roxboro, this new industry is turning whole trees into tiny wood pellets to be burned in European power plants to produce so-called biomass energy, which is essentially burning wood. The growth of biomass energy and the wood pellet industries is based on the need to find alternatives to coal. In Europe and in many U.S. states, the biomass industry has fooled people into thinking it is a green energy, and large subsidies are given away annually to electric utilities to burn trees from North Carolina and elsewhere. As a result, the demand for wood pellets from our native Southeastern forests is skyrocketing. According to a recent News & Observer article, Europe imported 3 million tons of wood pellets last year, and by 2018 that number is expected to climb rapidly to 30 million.

**Point of View**

There are some obvious ironies in logging trees, shipping them to the other side of the Atlantic Ocean and burning them in European power stations under the guise of "green energy." In fact, the most recent data show that burning whole trees is worse (per unit of energy) for the environment than burning fossil fuels like coal.

At first, the pellet industry tried to convince us that it was using only "waste" wood – the tops and limbs left over from other logging operations – but there is no way near enough left over residues from clearcutting to feed this industry so now it is finally admitting it is using whole trees.

The Ahoskie facility operator, Enviva, assures North Carolinians that it is using only gnarled and knotted trees – and that no harm is being done to the local ecology as a result of its operation. Recent evidence from the Wall Street Journal, however, shows one of the manufacturer's suppliers clearcutting a wetland forest near the facility. Wetland forests are comprised of ecologically valuable plant species and provide irreplaceable habitat for native wildlife, some of which are endangered. Losing these unprotected forests means losing a part of North Carolina's natural heritage, and these natural areas become more susceptible to destruction as the demand for wood pellets increases.

**It's even more alarming** that Enviva is acting as if it is doing us and the environment a big favor by using deformed trees on its way to making a fortune. The arrogance with which it describes what it uses is telling. Claiming to be a responsible steward of our forests by accepting only unwanted, blemished trees – trees that can't be manufactured into things like furniture or building materials – wrongfully assumes that trees serve only an economic purpose. There is no "waste" in a functional ecological system.

Moreover, the earth's atmosphere depends on trees to capture carbon, regardless if knotted or gnarled. In fact, in the U.S. we count on our forests to suck up roughly 13 percent of our total, economy-wide greenhouse gas emissions each year. That's like taking more than 180 million cars off the road.

Certainly trees have economic value, but for the wood pellet industry to imply that's all they're good for shows its true priorities: the bottom line.

The emergence of the wood pellet industry has flown under the radar. But as it grows, we must not forget how important our forests are for North Carolina's ecology and everything else connected to it.

Dr. Andrew George is an adjunct lecturer at the UNC-Chapel Hill and the Nicholas School for the Environment at Duke University.

TOWN OF CARRBORO

NORTH CAROLINA

**DELIVERED**
**VIA:** ☐ *HAND*

☐ *MAIL* ☐ *FAX* ☒ *EMAIL*

**To:** **David Andrews, Town Manager**
**Mayor and Board of Aldermen**

**From:** **Randy Dodd, Environmental Planner**

**Cc:** **Management Team**
**Energy Plan Workgroup Members**

**Date:** **Wednesday, October 2nd, 2013**

**Subject:** **Strategic Energy and Climate Action Planning Update**

## Background and Summary

This memo provides an update to the Town's energy and climate action planning efforts. Potential "next steps" are identified, along with a summary of current initiatives. After receiving Board feedback, staff will prepare a draft Strategic Energy and Climate Action Plan for Board review, and will also consider items presented in this memo in the upcoming updates to the Capital Improvements Program (CIP) and annual budget cycle.

## Information

Town staff have been collaborating in 2013 to recommend new energy and climate action initiatives, with a goal of providing input into annual capital improvement and budget processes. After Board review of this update, staff intend to focus on the best opportunities for inclusion in a draft and final Strategic Energy and Climate Action Plan, and the annual CIP and budget updates. Multiple workgroups have been temporarily established to help develop the plan, with about 15 staff members participating in one or more groups. The workgroup structure is presented in Table 1. This structure recognizes and aligns with elements of the plan, as envisioned.

The Town has been involved in activities associated with inventorying greenhouse gas emissions and planning for and pursuing emissions reductions since 2001, when the Board of Aldermen adopted a resolution pledging the Town's commitment to reduce greenhouse gas emissions, improve air quality and save energy through joining the Cities for Climate Protection (CCP) program. In 2009, the Board of Aldermen passed a resolution resolving that the Board "will seek, and will facilitate the community at large, to cut CO2 emissions by its proportion of the amount which is required to stabilize the climate back to <350 ppm of $CO_2$ …", and asks staff to evaluate how to achieve this target for municipal operations and the community. In April 2012, a detailed municipal emissions inventory using local data was completed, with a recommendation that the Town "investigate the financial costs of implementing a GHG reduction policy across all Town operations with a goal of reducing emissions 2% of 2007 levels annually through at least 2025. If the costs are found to be acceptable, then it is recommended that the Town implement the policy in order to further the Town's stated goals of environmental stewardship and "leading by example"". This inventory was updated in the spring of 2013, with the Board requesting at its June 18th, 2013 meeting that staff also look into the implications of a 7% annual reduction in emissions.

**Table 1: Workgroups Structure**

| | | | |
|---|---|---|---|
| Municipal Fleet<br>*Matt Efird (TMO)*<br>*Chris Sherman (PW)*<br>*Lynwood Daniel (PW)*<br>*Jeff Brubaker (PL)*<br>*Walter Horton (PD)*<br>*Ryan Downs (FRD)* | Outdoor Lighting<br>(including street lights)<br>*Matt Efird (TMO)*<br>*Tina Moon( PL)*<br>*David Poythress (PW)*<br>*Robert Douglas (RPD)*<br>*Walter Horton (PD)*<br>*Cathy Wilson (TCO)* | Community Transportation<br>*Jeff Brubaker (PL)*<br>*Tina Moon (PL)*<br>*David Poythress (PW)* | Land Use/Urban Forest<br>*Randy Dodd (PL)*<br>*Tina Moon (PL)*<br>*David Jantzen (PW)* |
| Municipal Buildings<br>*Chris Sherman (PW)*<br>*Robert Douglas (RPD)*<br>*Cathy Wilson (TCO)*<br>*Tina Moon (PL)* | Community Commercial Sector<br>*Randy Dodd (PL)*<br>*Annette Stone (ECD)* | Community Residential Sector<br>*Randy Dodd (PL)*<br>*Tina Moon (PL)* | Management/Finance<br>*Matt Efird (TMO)*<br>*Sandy Svoboda (MS)* |

Examples of actions the Town has taken historically that address energy and climate action include (more details in Attachment 1):

- participating in the State's most ambitious and successful (and fare free since 2001) transit program (Chapel Hill Transit) for several decades;
- assertively supporting bicyclists and pedestrian for many years via Safe Routes to Schools, bicycle facilities, sidewalks and greenways;
- other transportation efforts to provide alternative modes and reduce vehicle use (transportation demand management, transit-oriented/mixed use land use planning, participation in regional transit efforts, road connectivity, alternative fuels, expansion of affordable housing options)
- the "Worthwhile Investments Save Energy" (WISE) program for community buildings;
- partnering with OWASA and Orange County on water/sewer and solid waste management initiatives;
- municipal fleet emissions reductions;
- building Fire Station #2 to LEED silver standards;
- energy audits of Town buildings and follow up;
- pursuing a community solar project and providing ongoing contributions to NC Green Power.

## Potential Next Steps

The proposals presented below expand on past municipal and community sector efforts to reduce energy consumption and emissions and increase the effectiveness of the urban forest in climate protection and providing other ecological and community services. The intent is to present tractable "next steps". Table 2 summarizes each step for further review and consideration for programming in the CIP and the 2014-15 operating budget update. A more comprehensive and longer term perspective will be included in the draft plan.

### Municipal Sector

#### *Streetlights*

Assuming a new rate structure is available[1], a primary recommendation is that the Town plan for and implement a streetlight replacement program over the next several years. Prioritizing this action is warranted because of the large contribution of street lighting to all municipal emissions (22%), the significant efficiency improvement offered by LED lighting (at least 50% improvement), the relatively short payback anticipated, and the potential to capitalize future energy savings with the cost savings for LED lighting.[2] Key decisions will be: developing an agreement with Duke Energy that lays out ownership, replacement, and maintenance of fixtures; capitalization of the initiative (very preliminary estimate of $200k for lights on Town streets); deciding what fixtures to replace and when; and outreach to the community. This approach is modeled on Asheville's approach to LED streetlight replacement program that is paying for itself and for other energy improvements with the savings realized. A factsheet on Asheville's initiative is included as Attachment 2. In the immediate future, staff will continue to collaborate with Piedmont Electric (PEMC) on the pilot LED lighting project at Anderson Park.

#### *Buildings*

For municipal buildings, it is recommended that the Town: continue in the near future to replace lights and lighting controls; replace older/less efficient water fixtures and small HVAC units with more efficient fixtures and units; and seek outside assistance for more detailed studies of energy use and efficiency opportunities[3]. The results of more detailed studies of Town buildings should provide important information on costs and energy savings to guide decisions and priorities for building retrofits and system maintenance/replacement. It is specifically recommended as a near term step that a study of the HVAC system at the Century Center be completed, and that improvements identified in the study be pursued. Over the longer term, it is recommended that the Town plan for and program additional energy improvements in Town buildings, with priorities and timing considering cost-effectiveness.

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[1] The NC League of Municipalities (NCLM) intervention in the Duke Energy rate case includes a request for a new rate option which is tentatively included in the settlement. The NC Attorney General's office has challenged the NC Utilities Commission final order (Sept., 2013), seeking less financial impact on customers.

[2] See Table 2. Note that LED technology is very rapidly advancing, and costs/efficiencies/payback are expected to only become more attractive for the Town. For example, CREE has just announced a new product line: "the XSPR™ LED Residential Street Light delivers payback in less than a year while consuming over 65% less energy." See more at: http://www.cree.com/Lighting/Products/Outdoor/Streetlights/XSP-Series-Streetlight

[3] Plans should at a minimum take advantage of available utility incentives.

## Table 2: Recommended Energy and Climate Action Items

| Component | Action Item |
|---|---|
| **MUNICIPAL OPERATIONS**<br><br>***Streetlights*** | • Development and implement comprehensive streetlight replacement plan upon adoption of rate structure by Duke Energy<br>o Negotiate agreement with Duke Energy<br>▪ Ownership of fixtures; responsibility for installation<br>o Develop and implement plan<br>▪ Identify fixtures to include; estimate upfront costs, savings, payback, energy/ emissions reductions; develop financing plan; develop implementation schedule<br>▪ Seek contract support |
| ***Municipal Buildings*** | • Continue to implement lighting retrofits<br>• Install more efficient water fixtures and small HVAC units<br>• Upgrade HVAC and building envelopes<br>o Complete study and implement for Century Center HVAC<br>o Study other buildings and systems and pursue improvements<br>▪ Install insulation in 2nd floor/replace roof at Town Hall |
| ***Municipal Fleet*** | • Seek grant funding from CFAT for solid waste truck<br>• Continue to prioritize fuel-efficient vehicle replacement in CIP; repurpose/ reduce fleet as needed<br>• Study dual-battery setup for Police vehicles that allow essential systems to run without fuel use<br>• Research training, certification and equipment requirements for fleet mechanics to service a growing hybrid/electric fleet<br>• Evaluate use of Fire-Rescue vehicles for fire inspections |
| ***Land use/ urban forest*** | **Municipal**<br>• Study opportunities for increased tree canopy on Town land<br>• Implement opportunities for increased tree canopy on Town land<br>**Community**<br>• Investigate and recommend ordinance updates and improvements in development review/permit compliance process<br>• Estimate current and historical tree canopy<br>o Seek data collection contract support<br>• Study opportunities for increased tree canopy in the community<br>• Support opportunities for increased tree canopy in the community |
| **COMMUNITY**<br><br>***Community Transportation*** | • Commit local matching funds for Bolin Phase 2 and Morgan greenways<br>• Support Safe Routes to Schools Implementation Committee<br>• Additional action items that may be considered:<br>* Consider GHG emissions during development of Town parking management plan.<br>* Work with transit agencies to plan for increased transit service/new transit connections.<br>* Work with the MPO to ensure that future plans (i.e. long-range transportation plans) include goals related to GHG reduction and methods of modeling GHG emissions.<br>* Encourage car sharing and explore the feasibility of bike sharing systems.<br>* Encourage walking by increasing pedestrian safety at key intersections and in key corridors.<br>* Work with partners to encourage carpooling and other TDM strategies. |
| ***Community Buildings*** | • Support Elite Pete volunteers (small supply budget; explore intern opportunities)<br>• Update website |
| **PLANNING** | • Present draft of energy and climate plan to BoA<br>• Continue annual contract for municipal inventory ; update community inventory every 3-5 years<br>• Engage community in long term plan development |

*Fleet*

For the municipal fleet, an immediate recommendation is to seek grant funding (upon release of an RFP anticipated for the fall of 2013) from the North Carolina Solar Center's Clean Fuel Advanced Technology Project to replace a solid waste truck.[4] Staff will also consider and pursue steps shown in Table 4 for vehicle replacement, new technology, training and certification, and equipment requirements.

Community Sector

For community transportation, a step that is currently included in Town planning documents but is worth emphasizing for its climate protection/energy benefits is for the Town to identify local matching funds to allow greenways design work for Bolin Phase 2 and Morgan future phases to proceed. These greenway segments are anticipated to provide significant reduction in motor vehicle trips. Timely identification of a local match will also leverage 80% federal funds, and will avoid the loss of priority of these projects from the MPO's project list. With the expiration of grant funds, it is also recommended that the Town offer support for Safe Routes to Schools implementation and Elite Pete volunteers (trained by Clean Energy Durham) to help maintain momentum created by grants that recently ended.

Consideration of climate protection in Carrboro should also consider the role that the urban forest provides for energy efficiency in buildings and carbon storage and sequestration, and steps the Town can take to encourage additional climate protection through urban forestry. A recent study by the Ecological Society of America [5] provides a helpful perspective into further exploration of this opportunity:

- On a global scale, urban forestry has a small role in sequestering carbon, but significantly contributes to the energy efficiency of buildings and reduction of the heat island effect.
- In the U.S. in 2003, carbon removed from the atmosphere by forest growth or stored in harvested wood products offset 12-19% of U.S. fossil fuel emissions
- Forest carbon storage differs from many other mechanisms that control atmospheric CO2 because forests have a life cycle during which carbon stocks, gains, and losses vary with forest age. Younger forests such as disturbed urban forests can sequester carbon at greater rates.
- The net climate impact of urban trees varies as a function of: 1) the net effect of trees on building energy use; 2) the carbon storage rate of the specific trees; 3) fossil fuel emissions from energy associated with planting, maintenance, irrigation, fertilizer use.

Of particular interest in including urban forestry as a climate protection tool are the many co-benefits of forest protection and restoration (Attachment 4), which are important to community interests in Carrboro.

Immediate steps for supporting renewable energy are not included in this update; however, renewable energy warrants inclusion for longer term energy and climate action planning. It is encouraging that the upfront costs of renewable energy are very rapidly declining and shifting the market. At the same time, local governments are financially constrained in their role to promote and utilize renewable energy by the nature of currently available financial incentives (e.g., tax credits), which are available to the private sector but not the public sector. The

[4] Solid waste vehicle replacement is already programmed without the assistance of the grant. However, the grant would allow for the purchase of a truck that has fuel savings estimated at ~40%, with an equivalent of 38 tons of CO2 reduction, or the removal of 6-7 cars from the road .

[5] Ryan, M.G. et al. A Synthesis of the Science on Forests and Carbon for U.S. Forests. Issues in Ecology, Spring 2010. Report Number 13.

Town does have land and facilities with solar access that some homeowners and businesses do not have access to. The absence of recommending near future next steps with renewable energy also recognizes the potential for significant staff impact and possibly fiscal impact for pursuing renewable energy and acknowledges the impact that will be involved with other elements of the planning presented[6].

In general, these recommendations present a near term course of action to continue to pursue both community and municipal measures. Town assistance in community energy use improvements may result in relatively small improvements on a relative basis but important on an absolute scale because of the overwhelming (98%) share for the community footprint. Therefore, efforts in the community sector can conceivably be significant in terms of effectiveness for staff hours and municipal budget invested.

The Board specifically asked staff in June, 2013 to consider implications for a 2% versus 7% annual reduction goal in municipal emissions. Some information has been gathered for this update, with a preliminary sense of the scale of fiscal impacts summarized below. However, additional and ongoing study will be needed to more fully document the impact, implications and tradeoffs for this range of annual reduction goals. In addition to the information provided in Table 3 and as a first step towards quantifying the impact, the following points are offered:

- Assuming that a rate structure is available to the Town, implementing LED streetlights is anticipated to be a major step with a relatively rapid payback that could result in a roughly 10% municipal footprint reduction for the year(s) in which fixture replacement occurs. The Town may wish to initiate plans with Duke Energy and pursue other steps to move forward with streetlight upgrades on Town roads to more energy efficient LED lighting, assuming that a rate structure incentivizing the upgrade is available.
- Further study of the fiscal and staff impact of both the measures proposed in this memo and any new measures identified will be included in the upcoming draft plan, CIP update, and annual operating budget.
- The municipal inventory update presented in June, 2013 suggests that significant energy savings opportunities could exist for the Century Center, but the specific steps, costs for pursuing the improvements and payback are uncertain without further study, which will require outside assistance. Securing this assistance is recommended for FY 2014-15.
- Community outreach and participation and maintaining a community inventory are both steps that will require further study, staff effort, and funding support. Of note for outreach efforts is the recent loss of outside support due to the expiration of grants for Safe Routes to Schools and the grant administered by the Southeast Energy Efficiency Alliance.
- Support of urban forestry data gathering will enable staff to quantify the value of the urban forest and recommend specific future steps to enhance the urban forest.

[6] In considering future community solar projects, it is worth noting that: 1) the Town Commons project involved about ¼ FTE; 2) Appalachian Institute for Renewable Energy (partner on the Town Commons project) is currently focused on ~50-100kW installations for future projects (10-20 times larger than the Town Commons project).

## Table 3: Scale of Fiscal Impact for Next Steps[7]

| | Recommended Step | Notes |
|---|---|---|
| **> $100k** | 1. Develop and implement comprehensive streetlight replacement plan | 1. ~$200k upfront costs; annual cost savings >$50k for ~700 Duke fixtures on Town roads. Energy savings 50% (or more) per fixture and ~10% of municipal energy use (*see footnote #1 on p. 2; preliminary estimate based on Asheville experience*). |
| **$10k-$100k** (for each item) | 1. Century Center HVAC<br>2. Building lighting retrofits/controls<br>3. Replace water fixtures and small HVAC units<br>4. Additional building studies/ improvements<br>5. Collect data to support urban forest inventory | 1. Cost for Century Center HVAC study to be determined; cost estimate of improvements awaiting results of study (could exceed $100k)<br>2,3. Cost estimates available from previous studies (see Attachment 3)<br>4. Additional improvements (e.g., building envelope improvements) would likely require outside support with assessments. Improvements would exceed $100k[8]<br>5. Data collection for forest inventory to support valuation study using i-Tree Eco requires 2 person crew for 12 weeks, est. $20k.[9] Could cost less, e.g. via internship. |
| **<$10k** (for each item) | 1. Pursue grant for solid waste truck<br>2. Support Safe Routes to Schools Implementation<br>3. Support Elite Pete Volunteers<br>4. Annual update of municipal inventory | 1. Additional information presented at near future BoA meeting.<br>2-4. <$5k per item |

## Recommendation

Staff recommends that the Board of Aldermen receive this update, identify any additional initiatives for staff to pursue, and authorize staff to continue work on the plan and include relevant items for the CIP and budget cycle.

[7] For items for which preliminary cost estimates are currently available. Generally, the higher cost items are also anticipated to result in greater staff impact.

[8] Building maintenance offers significant opportunities for reducing operating expenses. For example, as the roof on Town Hall approaches the end of its life cycle the Town has an opportunity to replace it with a more reflective surface which may reduce HVAC loads, particularly if combined with additional attic insulation. Initial estimates indicate that this would be a CIP expense (upwards of $125k for the roof alone), and would likely require a consultant to assist with project management. However, roof replacement, increased attic insulation and HVAC system analysis and upgrades at Town Hall and the Century Center would likely result in a noticeable reduction in energy use and increased comfort for occupants.

[9] Per information provided at i-Tree workshop in Wilmington, NC June 2013.

**Attachment 1**

# Background on Energy and Climate Planning

A baseline greenhouse gas emissions inventory provides a starting point for planning for emissions reductions, and is considered to be one of the 5 milestones of the CCP 5 Milestone process (Table 1).

**Table 1. Cities for Climate Protection Five Milestone Process**

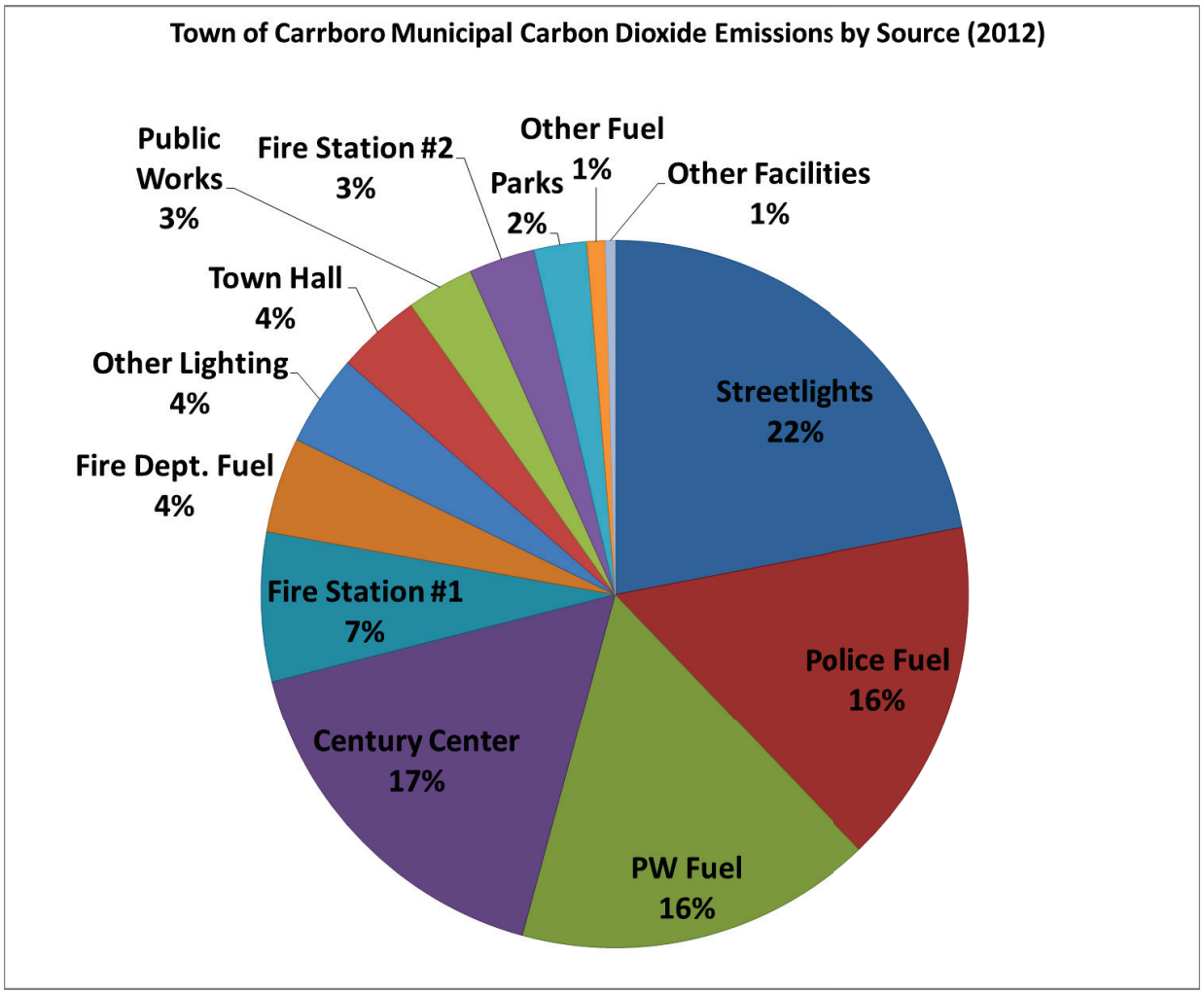
| Milestone | Description | Notes |
|---|---|---|
| 1 | Conduct a baseline emissions inventory and forecast. | A summary of the most recent municipal inventory is available from the June 18, 2013 Board of Aldermen agenda item at http://carrboro.legistar.com/Calendar.aspx. Several previous municipal and community inventories have also been completed |
| 2 | Adopt an emissions reduction target. | The Orange County Greenhouse Emissions Inventory presented several scenarios for reduction targets. The Board of Aldermen adopted a climate protection resolution in 2009. Further articulation of the resolution using a 2%-7% annual reduction goal is currently being reviewed. |
| 3 | Develop a Local Action Plan | The Orange County Greenhouse Emissions Inventory presented preliminary concepts for inclusion in a Local Action Plan. While the Town has not formally adopted a Local Action Plan, the Town has pursued components of a plan, for example, through the WISE program, and through various local planning efforts. Staff intend to present a draft plan after receiving Board feedback for this update. |
| 4 | Implement policies and measures | Carrboro has adopted the climate protection resolution, and has pursued various measures, such as: the WISE program; policies and initiatives that encourage alternative transportation; support of alternative fuels; and energy assessments and follow up for Town buildings |
| 5 | Monitor and verify results | The Town has been involved in annual monitoring of municipal emissions for the past two years, and worked with a UNC Capstone team on emissions estimates in 2011. This memo recommends that staff continue annual monitoring and also develop an approach for periodically updating community emissions estimates. |

Standard greenhouse gas (GHG) reporting classifies emission types into three types or "scopes". Scope 1 emissions are direct emissions resulting from the combustion of fuel on-site. Examples of Scope 1 emissions include vehicular tailpipe emissions from vehicles and emissions from burning natural gas to heat buildings. Scope 2 emissions are indirect emissions associated with the consumption of purchased or acquired energy. Scope 2 emissions primarily result from electricity consumption. Scope 3 emissions are other indirect emissions not covered in Scope 2, such as the extraction and production of purchased materials and fuels, electricity-related activities such as transmission and distribution losses, outsourced activities, and waste disposal. In 2011, a UNC Capstone team provided an inventory for Carrboro (Table 2). The most salient point for the remainder of this memo is that the Town's municipal inventory was calculated as roughly 2k metric tons of carbon dioxide equivalents (MTCDE), or a little less than 2% of the 115k total community inventory, including all community and public sources. This inventory has been subsequently updated twice for municipal sources only (Figure 1).

| TABLE 2: UNC Capstone Inventory | Scope 1 GHGs (MTCDE) | Scope 2 GHGs (MTCDE) | Scope 3 GHGs (MTCDE) | Row Total (MTCDE) |
|---|---|---|---|---|
| **Town of Carrboro Municipal Sources** (excludes school and OWASA sources) | | | | |
| **Buildings and Facilities** | 100 | 484 | - | 584 |
| **Streetlights, Floodlights and Traffic Signals** | - | 467 | - | 467 |
| **Vehicle Fleet** | 676 | - | - | 676 |
| **OCSW** | - | - | 55 | 55 |
| **Public Transit* (Chapel Hill Transit)** | - | - | 960 | 960 |
| ***Municipal Subtotals*** *(excluding Scope 3)* | ***776*** | ***951*** | - | ***1,727*** |
| ***Municipal Subtotals*** *(including Scope 3)* | ***776*** | ***951*** | ***1015*** | ***2,742*** |
| **Town of Carrboro Public Sources** (includes municipal, school, OCSW and OWASA sources) | | | | |
| **Schools** (within municipal limits) | 1,292 | 4,651 | - | 5,943 |
| **OWASA** | - | - | 2,030 | 2,030 |
| ***Public Subtotals*** *(excluding Scope 3)* | ***2,068*** | ***5,602*** | - | ***7,670*** |
| ***Public Subtotals*** *(including Scope 3)* | ***2,068*** | ***5,602*** | ***3,045*** | ***10,715*** |
| **Town of Carrboro Community Sources** (excludes public sources) | | | | |
| ***Residential*** | 8,430 | 44,691 | - | 53,121 |
| ***Commercial*** | 1,782 | 16,687 | - | 18,469 |
| ***Industrial*** | 15 | 39 | - | 55 (due to rounding) |
| ***Transportation*** (within municipal limits) | 31,576 | - | - | 31,576 |
| ***OCSW*** | - | - | 1,678 | 1,678 |
| ***Community Subtotals*** *(excluding Scope 3)* | ***41,803*** | ***61,417*** | - | ***103,220*** |
| ***Community Subtotals*** *(including Scope 3)* | ***41,803*** | ***61,417*** | ***1,678*** | ***104,899*** (due to rounding) |
| **Town of Carrboro Sources** (includes community and public sources) | | | | |
| ***Town total*** *(excluding schools, excluding Scope 3)* | 42,579 | 62,368 | - | ***104,946*** |
| ***Town total*** *(including schools, excluding Scope 3)* | 43,871 | 67,019 | - | ***110,889*** |
| ***Town total*** *(including schools, including Scope 3)* | 43,871 | 67,019 | 4,723 | ***115,614*** (due to rounding) |

* For this table, Chapel Hill Transit buses GHG emissions are considered as Scope 3 relative to Carrboro because the Town of Chapel Hill administers the service.

## Figure 1[10]




[10] Inventory update completed by Chris Lazinski, first as a UNC DELTA Fellow and then under contract. Emissions are shown for 2012. For future calculations, staff intend to use a 3-year average as a baseline.

Existing Initiatives

Carrboro has historically pursued initiatives that are primarily or secondarily motivated by reductions in energy use and emissions (especially for the community sector) which are briefly discussed in this section.[11] The community transportation sector is perhaps the sector that the Town has been most active in. To provide alternatives to vehicle use in general, the Town has been a partner in the State's most ambitious and successful (and fare free since 2001) transit program (Chapel Hill Transit) for several decades. The system provides over 7 million rides per year. The Town contributes about $1M annually to the operation of the system, or about 5% of the Town's annual budget. In addition to the high ridership, higher efficiency busses are being employed in the fleet, with 15 new hybrid busses acquired in 2013 (one third of the fleet is now employing hybrid technology), and solarizing lighting at bus stops has also been pursued. The Town has also been assertively supporting bicyclists and pedestrian for many years, with the Town being recognized as a "Silver" level bicycle friendly community by the League of American Bicyclists. (Carrboro is one of a handful of communities, and the smallest, east of the Mississippi River to receive this designation.) The Town has promoted walkability and bikability through the Safe Routes to Schools Action Plan, bicycle facilities[12], and sidewalks and greenways with support from a bond passed in 2003. The Town continues to pursue other measures (e.g., transportation demand management, transit-oriented/mixed use land use planning, participation in regional transit efforts, road connectivity, alternative fuels) to reduce community vehicle miles traveled and emissions and encourage alternative transportation modes. A relatively recent area of focus relevant to community transportation has been working to expand affordable housing options for workers employed in and near Carrboro that currently commute long distances, in part because of high local housing costs.

With support from federal stimulus funds, Carrboro pursued efforts in the past several years to reduce energy use in buildings in the community through establishment of the "Worthwhile Investments Save Energy" (WISE) program. During the recently ended grant period, the Carrboro WISE program: provided commercial loans to local businesses through the Energy Efficiency Revolving Loan Fund (EERLF); provided incentives for 18 single-family home and two multifamily complexes energy efficiency retrofits; reached over 200 additional citizens in Chapel Hill and Carrboro through a grass roots energy efficiency outreach and education campaign; and trained home performance contractors to be Home Performance with Energy Star certified contractors.

[11] Carrboro is one of 34 communities that has achieved the NC League of Municipalities Green Challenge "Advanced" level (2009).

[12] e.g., bike lanes, sharrows, multi-use paths, paved shoulders

While not being formally part of Carrboro municipal operations, entities that the Town cooperates with are important partners for energy and climate action efforts. Perhaps the two most important of these are OWASA and Orange County. OWASA's water conservation efforts are important for energy conservation, as every gallon conserved is a gallon that is not pumped and treated. OWASA staff estimate that, for every 1000 gallons of treated water and sewage conserved, 7.5 kilowatt hours (kWh) of energy/electricity are also saved, which is equivalent to the energy generated by the solar array at Town Commons for 1.5 hours. In addition, OWASA is pursuing opportunities to reduce energy use and costs e.g., by replacing older mechanical equipment with more efficient units, installing more efficient lighting and temperature controls, and using renewable energy sources instead of conventional fuels. Promising energy conservation projects that OWASA has identified include the replacement of the methane gas engine and boilers and the installation of a new aeration system at the Mason Farm Wastewater Treatment Plant. For solid waste, Orange County is recognized as being number one in the state for waste reduction, reaching 59% of its 61% reduction goal. The County is disposing 0.56 tons/person compared to the base year of 1991-92, when the disposal rate measured 1.36 tons. Waste reduction benefits emissions reductions both through reductions in methane (a potent greenhouse gas which is being captured at the landfill) and reduced emissions associated with hauling. The Town is faced with an emission reductions challenge with the closure of the landfill on Eubanks Road given the longer transport to the transfer station and out-of-county landfill. Another partner worth mentioning is Piedmont Biofuels (PBF) Cooperative; the Public Works facility has been hosting a community biodiesel pump run by PBF since 2004, with this pump being one of the earliest on the "B100" trail, and the supply chain for the fuel produced being provided from carbon neutral local sources.

For Town operations, the Town has taken the following steps in the past to address emissions. In 2008 and 2009, the Town partnered with Waste Reduction Partners, a program sponsored by the State and Triangle J COG, to perform an energy audit of Town buildings (Century Center, Town Hall, Fire Station #1, Public Works). The Town also worked with Big Woods Engineering in 2009-2010 to identify lighting and HVAC retrofits that could be pursued through the Energy Efficiency Conservation Block Grant program administered by the State Energy Office for these four buildings. (The grant application was not funded because criteria favored economically disadvantaged communities; more information on measures recommended is available in Attachment 2.) The Town also designed the new fire substation on Homestead Road to LEED silver standards. In the past several years, Public Works staff has been replacing older (T-12 fluorescent) lighting ballasts and bulbs with higher efficiency (T-8) ballasts and bulbs. Public Works staff estimate that 40% of these fixtures have been upgraded to date. Other incremental steps have also been pursued, such as installation of programmable thermostats, a community solar project at the Town Commons, and contributions ($80/month) for renewable energy to NC Green Power. The Town has also taken steps for the municipal fleet to reduce emissions, use alternative fuels, and save on operational expenses. Examples include: purchasing hybrid vehicles; implementation of 2007 emissions standards phased in over several years; downsizing/rightsizing of vehicle purchases; adoption of idling policy; and a fuel conservation initiative.

**Attachment 2**

# LED Streetlights: Summary of Asheville Experience

Asheville is in the third and final phase of the streetlight upgrade program in which traditional bulbs will be upgraded to LED fixtures. When complete in 2013 all roads in city limits except NC Department of Transportation roads will be upgraded to LED streetlights. Over the last two years the City has upgraded 3,400 street lights to energy efficiency LED technology and expects to complete the city wide program in 2013, bringing the total to 7,400 fixtures. Once completed, all three phases are expected to save $450,000 annually and 1,294 tons of avoided carbon, which is equal to the emissions from burning 7 rail cars of coal. This lighting upgrade will result in reducing City of Asheville overall municipal carbon footprint by roughly 8%, a tremendous impact for one capital improvement project. The energy savings from the street lights are reinvested into additional efficiency improvements and sustainability programs through the Green Capital Improvement Program. The City of Asheville is the first in the nation to implement this innovative financial model that ensures the city has adequate resources to continue carbon reduction efforts in lean fiscal years. The lights typically last over 100,000 hours, or 20+ years, and feature a "plug and play" electrical system, which lowers maintenance costs. The LED lamp is also now owned by the City, rather than leased from the utility company, which also saves money. These lighting upgrades build further upon the successful lighting ordinance passed in 2008 which ensures all municipal streetlights adhere to "Dark Sky" standards. The lights have a 0 Backlight, Uplight and Glare "BUG" rating, meaning there is no light trespass or sky glow. Asheville has installed lights manufactured by CREE, with Durham/RTP based headquarters and technology development offices.

More information is available at:
http://coablog.ashevillenc.gov/2012/11/led-streetlights-coming-to-a-street-near-you/
http://coablog.ashevillenc.gov/2011/05/city-of-asheville-streetlight-led-upgrades-begin-this-week/
http://www.ashevillenc.gov/Portals/0/city-documents/Finance/Budget/CIPandDebtFY1112.pdf
http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/msslc-case-studies_webcast_05-08-2013.pdf
http://www.cree.com/Lighting/Products/Outdoor/Streetlights/XSP-Series-Streetlight

**Attachment 3**

**Summary of Recommended Energy Improvements for Municipal Buildings, 2010 Study**
(Big Woods Engineering)[13]

| Building/Improvement | Upfront Cost | Annual Energy Savings | Annual Cost Savings |
|---|---|---|---|
| **Town Hall:** 1) Lighting retrofit: T12 to T8 fixtures/lamps (50% delamping); Incandescent to CFL; Exit signs to LED 2) Heat pump replacement : 4 units (2,3,4,5 ton), 6 SEER to 16 SEER | $30k | 44,865 kWh | $4030 |
| **Fire Station #**1: 1)Lighting retrofit: T12 to T8 fixtures/lamps (50% delamping); 2) Heat pump replacement : 4 units (3 ton), 8 SEER to 16 SEER | $23k | 19,700 kWh | $1170 |
| **Public Works:**1) Lighting retrofit: T12 to T8 fixtures/lamps (50% delamping) | $8k | 10,270 kWh | $822 |
| **Century Center**: Lighting Controls: new switches and sensors for corridors, meeting rooms, and offices- substantial wiring work required and engineer stamp. 60 fixtures are currently uncontrolled and on 24/7. Remaining fixtures to be controlled would benefit from sensors in meeting rooms, offices, and other rooms. (*Note that heating/cooling system beyond scope of Big Woods study*) | $15k | 38,000 kWh | $2300 |

[13] Public Works staff estimate that T12 to T8 replacements are 40% complete.
The costs and energy savings have not been adjusted for inflation or other factors from 2010. More efficient (19 to 20 SEER rated), and more expensive, heat pumps are now available. The cost of a four ton 20 SEER unit currently averages about $6,500 to $7500.

**Attachment 4**

# Urban Forestry, Climate Protection, and Ecological and Community Benefits

The following discussion demonstrates why Carrboro's urban forest has a wide variety of benefits that include but are not just limited to climate protection and energy management.[14] Therefore, there is significant merit and synergy in managing the forest to reduce energy consumption and store carbon, while simultaneously forwarding many community goals.

Nationally, urban forests in the United States are estimated to contain about 3.8 billion trees, with an estimated structural asset value of $2.4 trillion. This dollar value reflects only a portion of the total worth of an urban forest. Urban trees also provide innumerable ecosystem services that affect both the local physical environment (such as air and water quality) and the social environment (such as individual and community well-being) that contribute to urban quality of life.

Urban forest services and benefits include:

Local climate and energy use—Trees influence thermal comfort and energy use by providing shade and reducing wind speeds. The establishment of 100 million mature trees around residences in the United States has been estimated to save about $2 billion annually in reduced energy costs. For example, three or more large trees strategically placed on sunny sides of a house shade it from the hot summer sun, thus reducing the air-conditioning cost as much as 30 percent.

Carbon storage—urban trees mitigate climate change by directly storing carbon within their tissues and by reducing carbon emissions from power plants through lowered building energy use. Urban trees in the conterminous United States have been estimated to store 770 million tons of carbon, valued at $14.3 billion. One acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen. This is enough to meet the annual needs of 18 people.

Air quality—Trees improve air quality by lowering air temperatures and removing air pollutants and in doing so, reducing the impacts of emissions from both stationary and mobile sources. Urban trees in the conterminous United States have been estimated to remove some 784,000 tons of air pollution annually, with a value of $3.8 billion.

Water flow and quality—Trees improve water quality, reduce runoff and erosion, and mitigate the need for costly stormwater treatment by intercepting and retaining or slowing the flow of precipitation reaching the ground. This allows more recharging of the ground water supply. During an intense storm in Dayton, OH, for example, the tree canopy was estimated to reduce potential runoff by 7 percent. In Carrboro, increased tree canopy could have a specific regulatory benefit of helping the Town comply with rules to protect Jordan Lake by reducing nitrogen and phosphorus in runoff.

Wildlife and biodiversity—Urban forests help create and enhance animal and plant habitats.

Soil quality—Trees and other plants help improve soil quality by breaking up heavy soils, mining nutrients, and remediating soils at contaminated sites by absorbing, transforming, and containing a number of contaminants.

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[14] Most of information in this section extracted from Nowak, D. et al., "Sustaining America's Urban Trees and Forests". USDA Forest Service, Northern Research Station. State and Private Forestry General Technical Report NRS-62. June 2010.

Community well-being—Urban forests make important contributions to the economic vitality and character of a city, neighborhood, or subdivision. Community involvement in urban forestry efforts has been demonstrated to contribute to a stronger sense of community and neighborhood empowerment.

Individual well-being and public health—The presence of urban trees and forests creates a more aesthetic, pleasant, and emotionally satisfying place in which to live, work, and spend leisure time. Urban trees also provide numerous health benefits. For example, tree shade reduces ultraviolet radiation and its associated health problems. Hospital patients with window views of trees have been shown to recover faster and with fewer complications than patients without such views. The reduction in airborne pollutants results in significant human health benefit such as reduced rates of respiratory disease and illness. In laboratory research, visual exposure to settings with trees has produced significant recovery from stress within five minutes, as indicated by changes in blood pressure and muscle tension.[15]

Aesthetics- trees are not only beautiful in themselves but add beauty to their surroundings. Trees add color to the urban scene, soften the harsh lines of buildings, screen unsightly views, and provide privacy and a sense of solitude and security, while contributing to the general character and sense of place in communities. The specimen trees in downtown Carrboro are a great example of this benefit.

Noise abatement—properly designed plantings of trees and shrubs can significantly reduce noise. Wide plantings (around 100 ft.) of tall dense trees combined with soft ground surfaces can reduce apparent loudness by 50 percent or more (6 to 10 decibels).

Real estate and business—landscaping with trees can increase property values and commercial benefits. One study found that on average, prices for goods purchased in Seattle were 11% higher in landscaped areas than in areas with no trees. A mature tree can often have an appraised value of between $1,000 and $10,000[16]. Landscaping, especially with trees, can increase property values as much as 20 percent.[17]

A well-recognized national nonprofit, American Forests, recommends that communities set and maintain tree canopy goals. A community can design tree cover targets that fit the policy and environmental quality needs of the community. Chapel Hill updated its tree protection ordinance, and in doing so, established minimum tree canopy standards:[18] As another local example, Raleigh recognizes the community benefits of the urban forest by treating it as a local government capital responsibility. The City not only maintains an active urban forestry program[19], but also includes significant funds for tree replacement in their capital budget.

Town staff are considering using i-Tree, a state-of-the-art, peer-reviewed software suite from the USDA Forest Service, as a tool to support urban forestry efforts. The i-Tree tools help communities strengthen their urban forest management and advocacy efforts by quantifying the environmental services that trees provide and the structure of the urban forest. More information is available at http://www.itreetools.org/index.php.

[15] Dr. Roger S. Ulrich Texas A&M University, as reported by City of Raleigh
[16] Council of Tree and Landscape Appraisers, as reported by City of Raleigh
[17] ICMA, as reported by City of Raleigh
[18] http://www.townofchapelhill.org/index.aspx?page=879 (December, 2010)
[19] http://www.raleighnc.gov/neighbors/content/PRecParks/Articles/UFDivision.html

# What 95% certainty means on climate change

By Seth Borenstein
Associated Press

**WASHINGTON** Top scientists from a variety of fields say they are about as certain that global warming is a real, man-made threat as they are that cigarettes kill.

They are as sure about climate change as they are about the age of the universe. They say they are more certain about climate change than they are that vitamins make you healthy or that dioxin in Superfund sites is dangerous.

They'll even put a number on how certain they are about climate change. But that number isn't 100 percent. It's 95 percent.

And for some non-scientists, that's just not good enough.

There's a mismatch between what scientists say about how certain they are and what the general public thinks the experts mean, specialists say.

That is an issue because this week, scientists from around the world have gathered in Stockholm for a meeting of a U.N. panel on climate change, and they will probably release a report saying it is "extremely likely" – which they define in footnotes as 95 percent certain – that humans are mostly to blame for temperatures that have climbed since 1951.

Some climate-change deniers have looked at the 95 percent figure and scoffed. After all, most people wouldn't get on a plane that had only a 95 percent certainty of landing safely, risk experts say.

But in science, 95 percent certainty is often considered the gold standard for certainty.

## Inescapable uncertainty

"Uncertainty is inherent in every scientific judgment," said Johns Hopkins University epidemiologist Thomas Burke. "Will the sun come up in the morning?" Scientists know the answer is yes, but they can't really say so with 100 percent certainty because there are so many factors out there that are not quite understood or under control.

George Gray, director of the Center for Risk Science and Public Health at George Washington University, said that demanding absolute proof on things such as climate doesn't make sense.

"There's a group of people who seem to think that when scientists say they are uncertain, we shouldn't do anything," said Gray, who was chief scientist for the U.S. Environmental Protection Agency during the George W. Bush administration. "That's crazy. We're uncertain and we buy insurance."

With the U.N. panel about to weigh in on the effects of greenhouse gas emissions from the burning of oil, coal and gas, The Associated Press asked scientists who specialize in climate, physics, epidemiology, public health, statistics and risk just what in science is more certain than human-caused climate change, what is about the same, and what is less.

They said gravity is a good example of something more certain than climate change. Climate change "is not as sure as if you drop a stone it will hit the Earth," Princeton University climate scientist Michael Oppenheimer said. "It's not certain, but it's close."

## Like cigarettes

Arizona State University physicist Lawrence Krauss said the 95 percent quoted for climate change is equivalent to the current certainty among physicists that the universe is 13.8 billion years old.

The president of the prestigious National Academy of Sciences, Ralph Cicerone, and more than a dozen other scientists contacted by the AP said the 95 percent level of certainty regarding climate change is most similar to the confidence scientists have in the decades' worth of evidence that cigarettes are deadly.

"What is understood does not violate any mechanism that we understand about cancer," while "statistics confirm what we know about cancer," said Cicerone, an atmospheric scientist. Add to that a "very high consensus" among scientists about the harm of tobacco, and it sounds similar to the case for climate change, he said.

But even the best study can be nitpicked because nothing is perfect, and that's the strategy of both tobacco defenders and climate deniers, said Stanton Glantz, a medicine professor at the University of California, San Francisco and director of its tobacco control research center.

For Immediate Release – October 29, 2013

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**Industry Experts, Local Officials Conclude Input on Guidance for Solar Projects**
*Final Working Group meeting clears the path for production of a template solar ordinance*

RALEIGH – The NC Sustainable Energy Association (NCSEA) and the NC Solar Center hosted a final working group meeting on October 28, 2013 that was part of a months-long process to guide the creation of a template ordinance for solar energy projects. The template ordinance addresses some of the most common considerations that arise in the permitting of solar energy facilities. It is intended to offer a path that could facilitate solar project development for companies and landowners while simultaneously creating a framework for local governments to ensure the safeguarding of local values and interests.

At the final working group meeting solar industry representatives, legal experts, developers, local and state government officials and other stakeholders sought ways to address and incorporate the latest comments received on the template ordinance draft. Some of those comments came out of the fifth and final regional public forum that NCSEA and the Solar Center held in Charlotte, NC on October 18, 2013 to spur discussion on the topic and solicit feedback on the current draft. Through the public forums and the working group sessions, NCSEA and the Solar Center encouraged participants to identify and put forward information on solar project permitting and development that can serve as useful guidance for parties dealing with these issues, but they stopped short of proposing that the resulting template ordinance be taken as a prescriptive approach.

“The template is solely a guideline for local governments that wish to design a solar ordinance and need a model that is uniquely relevant to the state,” said Michael Fucci, Regulatory and Market Analyst for NCSEA. “The industry is assisted because companies could rely on the template in jurisdictions where a lack of understanding of how to regulate solar development could otherwise create a significant barrier to entry.

“Even before the draft template has been completed we have already seen demand for it from cities and counties developing their own solar ordinances,” noted Tommy Cleveland, Renewable Energy Project Coordinator for the NC Solar Center. “This is an early indication of the demand for a model

ordinance. We hope and expect that there will be significant use of this first-of-its kind template in NC, and perhaps also in surrounding states, once the final version is published."

The final version is expected to be published before the end of the year.

***About the NC Sustainable Energy Association:***
*Founded in 1978, the NC Sustainable Energy Association (NCSEA) is a 501(c)3 non-profit membership organization of individuals, businesses, government and non-profits working to ensure a sustainable future by promoting renewable energy and energy efficiency in North Carolina through education, public policy and economic development. Learn more at www.energync.org*

***About the North Carolina Solar Center***:
*The North Carolina Solar Center, as part of the College of Engineering at North Carolina State University advances a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies. It serves as a resource for innovative, green energy technologies through technology demonstration, technical assistance, outreach and training. For more information visit: http://www.ncsc.ncsu.edu. Twitter: @NCSolarCenter*

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**Rich Shaw**

**From:** Carla Banks
**Sent:** Tuesday, October 15, 2013 2:37 PM
**To:** Carla Banks
**Subject:** Press Release- ORANGE COUNTY RECYCLES MORE THAN 30 TONS OF OYSTER SHELLS

**Media Contact**
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Solid Waste Planner
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**FOR IMMEDIATE RELEASE**

## ORANGE COUNTY RECYCLES MORE THAN 30 TONS OF OYSTER SHELLS

**ORANGE COUNTY, NC** (October 15, 2013)—The Orange County Solid Waste Management Department partners with the North Carolina Division of Marine Fisheries to collect and send oyster shells back to the coast for reuse in building oyster beds. This year shells filled four dump truck loads with more than 133,000 oyster shells weighing more than 66,000 pounds.

The shells will be sent back to the coast from the stockpile accumulated at the Orange County Landfill over the past year. This is an increase from the 27 tons collected in 2012. The shells are used to replenish the oyster beds in a State program that started 10 years ago.

“As long as the Solid Waste Management Department can provide storage space at the landfill for the shells and the State can provide transportation back to the coast, Orange County will continue to accept oyster shells at no cost. It helps our local business community stay in compliance with the law and the program benefits both the economy and the environment,” said Gayle Wilson director of Orange County Solid Waste.

Most of the shells collected from the landfill this year came from two Orange County restaurants, Huey’s Restaurant and Oyster Bar in Mebane and Squids Oyster Bar in Chapel Hill. But any member of the public who lives or owns a business in Orange County may also bring oyster shells or other shells, such as clams and mussels to the landfill for recycling at no charge. The shells can be dropped off during operating hours from 7:00 a.m. – 3:00 p.m. on weekdays and from 8:00 a.m. – 12:00 p.m. on Saturdays.

The State tax credit of a dollar a bushel has been eliminated this year along with the formal oyster shell recycling program and most State support for the project. But it is still illegal to landfill oyster

shells and the State Division of Marine Fisheries has found short-term funds to continue to truck shells from public collection sites throughout the state back to the coast. Local support is strong.

“We are trying to help replenish the oyster population for North Carolina We will keep voluntarily doing it and the elimination of the tax credit will not stop us. We do not get a lot of oysters from North Carolina now and we hope this will help some,” said Gary Huey owner of Hueys’ Restaurant.

“Recycling these shells is just the right thing to do. We have made a commitment to sustainable practices and we will continue regardless of the loss of the tax credits. We truly appreciate that Orange County Landfill takes part and provides space for us to bring the shells,” said Greg Overbeck, co-owner and Marketing Director of the Chapel Hill Restaurant Group which includes Squids.


**Orange County equipment operator Tommy Scott loads oyster shells as part of the Division of Marine Fisheries project. Photo By: Paul Spire**

###

Regards,

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North Carolina League *of* Conservation Voters

# LEGISLATIVE SCORECARD 2013

*Turning environmental values into North Carolina priorities.*

# North Carolina League *of* Conservation Voters

**The North Carolina League of Conservation Voters (NCLCV) has worked for over 40 years for clean air and water, public health, and a beautiful North Carolina. We advocate for sound environmental policies at the state legislature, and work to hold our leaders accountable for their decisions. Through our affiliated political action committee, Conservation PAC, we help elect state legislators who understand that a healthy environment is critical to North Carolina's communities, economy, and quality of life. This Legislative Scorecard is intended to help you decide how well your legislators are representing you on the issues you care about.**

## *About the Scorecard*

This Scorecard records members' votes on selected bills from throughout the session. While it is not a comprehensive listing of all votes, the ones recorded here have been selected as the most significant votes cast on the bills and amendments with the greatest environmental impact of the session.

However, despite the importance of legislators' votes, the Scorecard cannot represent the full complexity of what it takes to be an environmental champion. Sponsorship of legislation and leadership in support or opposition to bills can be equally important. Furthermore, no single session perfectly captures the conservation voting record of a legislator. To better evaluate individuals' voting histories, we have included a column containing their lifetime NCLCV score, which averages their scores from all sessions served between 1999 (our first Scorecard) and the present. For more information and past Scorecards, visit nclcv.org.

## *Scorecard Content*

## *A message from our president…*

Dear Conservation Voter,

My name is Maria Kingery, and I am honored to serve as the new President of NCLCV. I'd like to begin by extending our entire organization's heartfelt thanks to my predecessor, Nina Szlosberg-Landis, for her amazing work and tireless passion for this organization. Under her leadership we have come far, and I am proud to continue her work – we still have much further to go.

I am excited about this opportunity to work with NCLCV because I believe that whatever our political views may be, and whether we consider ourselves environmentalists or not, we all want basically the same thing: security and the freedom to create a prosperous life. And while we may disagree about how to get there, I believe most of us understand that without clean air, clean water, and healthy land, neither are possible. Most of all, I believe that most of us truly want to do the right thing, and that with greater education, and deeper understanding, we can build a shared commitment to protecting the air, water, and land upon which we all rely.

Admittedly, we are starting from a difficult place. This year has been one of heartbreak in the environmental community. In the 2013 legislative session, our elected officials aggressively and short-sightedly rolled back regulations put in place to protect our natural resources. All of the significant environmental legislation drafted or passed this session was meant to undermine the strong protections that were enacted to ensure that North Carolina remains an exceptional place to live, visit, and do business. Therefore, this year we have another record for the number of zero scores earned by our legislators. Disheartening, indeed.

It doesn't have to be this way. North Carolina has a proud history of making balanced decisions and respecting that clean air, clean water, and beautiful landscapes are precious resources that serve a vital role in attracting people and businesses to our great state. North Carolina has been a leader in smart environmental policy in the Southeast for years, and we can be again with strong leadership from our elected officials.

We need leaders who understand that we don't have to choose between economic prosperity and our natural resources. We need leaders who understand that both are required to maintain North Carolina's exceptional quality of life. Most of all, we need leaders who are committed to making responsible decisions that honor and protect what makes North Carolina a truly great place to live, work, and play – a thriving economy and a healthy environment.

NCLCV's Legislative Scorecard is meant to inform you about the environmental performance of our state's leaders. It is important that we hold all of our elected officials accountable, so this year we have included information on the Governor of North Carolina for the first time. Scoring an individual based on broad actions rather than individual votes presents unique challenges, but as the state's chief executive, the governor's record deserves careful attention. I am proud of the work our staff has done to create our first gubernatorial scorecard, although I am disappointed by the grade earned by Governor McCrory. We stand ready to assist the Governor, and any of our elected officials, who would seek our support in improving their performance. That, after all, is our ultimate goal: to ensure that clean air, clean water, and healthy land are a priority for our elected officials and that they make smart, informed environmental decisions.

We all have a role in educating and creating greater understanding among our elected officials. Voting and communicating with them are two of the most important things we can do to protect the environment. Please take the time to review this scorecard to see how our legislators and the governor voted and stood on environmental issues. Then call them, write letters, and stop by their district or Raleigh offices with your thoughts on their actions. Whether you are pleased or disappointed with your local officials, they need to hear your voice so that future votes will be made with conservation issues in mind.

On behalf of everyone involved with NCLCV, and on behalf of the environment we work so hard to protect, I thank you for your support. Please share this report with others, and remember: who we elect matters.

With hope for the future,

Maria Kingery

Maria Kingery

North Carolina League *of*
CONSERVATION VOTERS

# *The 2013 Long Session: The Big Picture*

**The 2013 legislative session was a challenging time for the environment, which saw a constant onslaught of bad bills from both the House and the Senate. In previous years, many pro-conservation bills have been put forward, but during this session the environment was continuously on defense. NCLCV admires the fortitude of the pro-conservation legislators who fervently battled these environmentally destructive pieces of legislation.**

## Anti-Regulatory Agenda

A common theme in the 2013 General Assembly was an aggressive attack on the existing programs and rules that have protected North Carolina's environment and public health. Historically, North Carolina's responsible approach to environmental regulation has both constrained polluters and put North Carolina at the top of 'best places to do business' rankings. In 2013, numerous bills were introduced that threaten our public health and environment by weakening or removing crucial pollution control rules. In addition, critical oversight commissions and boards have been dissolved or restructured in unprecedented ways, allowing the current administration to remove the experienced members from those boards who have made them effective. These oversight commissions have historically been comprised of diverse members from the technical and scientific community, business and industry, and local government to ensure a balanced approach to environmental protection. By removing that balance, the General Assembly is threatening both our economy and the quality of life for future generations. In fact, these rollbacks are already having an effect: a recent CNBC ranking has dropped North Carolina from 4th to 12th in the overall rankings for "America's Top States for Business," with the score dragging us down being our Quality of Life.

## The Rush to Frack

Last year, the legislature authorized the Mining and Energy Commission (MEC) to develop a regulatory program for oil and gas development which includes the use of hydraulic fracturing (also known as fracking). This process uses horizontal drilling to inject highly pressurized water and chemicals underground to create fractures in the rock that allow for the extraction of natural gas. This year's General Assembly seemed to be in an irrational rush to allow fracking to occur: Multiple bills were introduced to allow permits to be issued even before the rules regulating the process are completed. Legislators also attempted to bar the MEC from exercising some of its regulatory authority, such as setting rules governing the disclosure of fracking chemicals, and instead to set those rules themselves.

During the last hours of session, some in the General Assembly made a last-ditch effort to further encourage fracking at the expense of the environment by adding sections to an unrelated bill, SB 127, "Economic Development Modifications." The new provisions in SB 127 would have forced the MEC to make fracking rules before October 1, 2014, whether or not that gave them enough time to fully study the issues and decide upon a reasonable conclusion. The bill would also have allowed fracking permits to be issued beginning on July 1, 2015 without the need for prior legislative approval. The final change in this bill would set severance tax rates on fracking but forbid local governments from levying their own similar taxes. (Severance taxes are imposed when resources are taken from the ground and moved out of the area; by forbidding local governments from levying these taxes, the General Assembly would allow certain counties and regions to be stripped of some of their most valuable natural resources without receiving compensation.) Fortunately, House members opposed SB 127 and it did not pass this session, but it is likely that this bill will be resurrected in 2014. There are many uncertainties and risks involved with fracking, and the reserves of natural gas in North Carolina are likely small. By rushing into fracking, the legislature is risking our natural resources and public health for potentially limited economic benefit.

## Ignoring Science

The General Assembly has long used non-partisan science, based on the consensus of people educated in the field, as a

vital tool to craft environmental policy. For some reason, however, many legislators are ignoring well-established scientific evidence and drafting bills based purely on ideology that often contradicts significant scientific findings. After an embarrassing 2012 session that created a four-year moratorium on any action to establish a state standard for sea-level rise, the legislature continues to ignore this severe threat to North Carolina's coastal environment and economy. Another example of the legislature ignoring science is the attempt to repeal the Jordan Lake water quality rules, which were established through an extensive, science-backed stakeholder development process. These rules are crucial to the quality of Jordan Lake, an important drinking water and recreational resource for many North Carolinians. Science is an invaluable tool, and should be an integral part in environmental policymaking.

## Underfunding Natural Resources

Every two years the legislature passes a budget that allocates money to many important programs. This year, many of the state's environmental programs have been drastically altered or underfunded. Programs affected include the Clean Water Management Trust Fund, the Wildlife Resource Commission, and the Department of Environment and Natural Resources. As an added slap-in-the-face to many conservation-minded North Carolinians, the budget also imposes an extra $100 fee to the annual registration fees on electric vehicles.

While the recession has kept our economy from growing and budgets are necessarily tighter, the General Assembly has aggressively undermined the infrastructure of environmental protection in North Carolina, often pitting environmental regulations against the economy. As continued rollbacks of environmental protections and dismantling of state agencies responsible for holding polluters accountable play out, the result will almost certainly be a damaged environment, lower quality of life, impaired public health, weakened economies, and fewer businesses locating here. Whether it's less tourism because we are drilling off the coast, depleted and polluted drinking water supplies from fracking or rolling back pollution reductions, or fewer breweries or bio-tech companies locating here because our water is not clean enough and our quality of life is lower: North Carolina has a lot to lose.


### Voting Against North Carolina

In a poll released by the Natural Resources Defense Council on July 15, 2013, North Carolinians overwhelmingly opposed fracking, weakening landfill regulations and allowing out-of-state garbage to come into the state, and overturning pollution limits upstream of Jordan Lake. In fact, more than 75% of North Carolinians say that current environmental standards are either "about right" or "too weak," as opposed to the only 13% that say they are "too strong." Lawmakers this session have attempted or succeeded in doing all of these things, raising the question of who they really represent. Over 70% of North Carolinians say they would have serious concerns about a legislator doing precisely what this General Assembly has done.

## The Positive Side

Despite an overall agenda designed to roll back the state's environmental policies and funding, NCLCV and a host of allies were able to achieve a significant win this session: protecting our renewable energy portfolio standard. This will allow North Carolina to continue to grow our economy and maintain a strong foothold for clean renewable energy in our state.

## Defeating the repeal of the Renewable Energy and Energy Efficiency Portfolio Standard

The defeat of HB 298 and its Senate counterpart, SB 365, was a great example of the General Assembly making an environmentally friendly decision by supporting clean energy. These bills would have repealed the state's Renewable Energy and Energy Efficiency Portfolio Standard (REPS), which requires utilities to generate at least 12.5% of their electricity from renewable sources by 2021. The rationale given by proponents of the legislation, that renewable energy has a negative economic impact, completely ignored the facts on the ground. Apart from bringing clean energy to our state, the REPS has also contributed approximately $1.7 billion in development to North Carolina, and created over 20,000 jobs. The REPS has also led to lower costs for consumers, as utilities avoid building new, costly, and dirty power plants. Fortunately for the environment and for the state, the REPS program survived the 2013 session thanks to a bipartisan group effort, and will continue to bring positive impacts to the state.

## Degradable Plastic Labeling

In order to minimize the risk of degradable products negatively impacting traditional plastic recycling, HB 315 requires degradable plastics to be clearly labeled. These products are designed to decompose over time, and can harm the quality and integrity of recycled products. North Carolina has a growing recycled plastics industry which brings added environmental benefits, such as less waste being dumped in landfills. This new law will allow for degradable products to properly decompose over time, and for the recycled plastic industry to continue to expand without threatening the quality of their products.

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**Many anti-conservation bills may still be active during next year's short session, and NCLCV will continue to fight against them if and when they resurface. With your help, future General Assemblies will begin to think more about the future of North Carolina's natural resources, and legislators will start making better decisions for the our environment.**

# VOTE DESCRIPTIONS

**The bill descriptions are based on the text of the legislation at the time the scored vote was cast. Subsequent amendments or changes in content in many cases have altered the substance of the bills, but we believe it is appropriate to describe exactly what the legislators were proposing and voting on at the time, rather than any changes which occurred after.**

## HOUSE VOTES

### [H1] HB 201 3rd Reading (Reinstate 2009 Energy Conservation Codes)

As introduced, this bill would have repealed the 2012 Energy Conservation Codes for both the commercial and residential sectors, and reinstated the weaker 2009 standards. Fortunately, the residential sector was eliminated from this bill in committee; however, the commercial provision remained. Improving energy conservation and efficiency in building construction is one of the easiest ways to lessen our environmental impacts and reduce energy consumption, especially in North Carolina, where coal produces a significant amount of our electricity. Unfortunately, this bill passed the House, although it has not yet been heard in the Senate. *Pro-conservation vote: NO.*

### [H2] HB 1011 2nd Reading (Government Reorg. and Efficiency Act)

In response to SB 10 failing in its first conference committee, the House passed its own similar bill in the form of House Bill 1011. Almost all of the negative environmental aspects of SB 10 remain, including the elimination and restructuring of many boards and commissions. Environmental boards negatively impacted include the Environmental Management Commission, the Coastal Resources Commission, and the Coastal Resources Advisory Council. This bill passed the House but was not heard in the Senate this session. Unfortunately, the Budget that passed included provisions removing current members with local and technical expertise, and years of experience, from the EMC, and the CRC. *Pro-conservation vote: NO.*

### [H3] SB 10 3rd Reading (Government Reorganization and Efficiency Act)

The House version of SB 10 had many of the same effects as the Senate version, such as eliminating several programs and restructuring various state commissions and boards. While the House version affects several new boards, they are not environmentally related. The House bill also lessened the effect of some of the restructuring, such as by allowing the Environmental Management Commission to have 15 members rather than the 13 in the original Senate version. However this is still fewer than the 19 that currently sit on the commission. The members of these commissions would also have slightly stricter qualifications than the Senate proposed, and some of the conflict of interest provisions would be added back in. The overall effect of the bill, however, would still be negative: It would eliminate the balance between environmental expertise, local representation, and business interests previously established on these commissions, prioritizing business and industry in managing the environment. The bill passed the House, but the conference report compromise failed. *Pro-conservation vote: NO.*

### [H4] SB 76 3rd Reading (Domestic Energy Jobs Act)

The House's "Domestic Energy Jobs Act" removed several of the troubling provisions in the original Senate version. For example, the House version no longer authorizes underground injection of wastewater, removes the prohibition of local governments from taxing any aspect of the oil and gas extraction, and leaves several important members on the Mining and Energy Commission in place. While we appreciated these moves, the bill itself still endangers the health and environment of North Carolina. With such a small amount of natural gas reserves, any potential jobs would likely be short-term and would likely be filled by experienced out-of-state workers. This bill rushes fracking and ignores future impacts. The bill also promotes off-shore drilling, which would have negative impacts on North Carolina's established tourism industry. The House passed this version of the bill, and ultimately the House and the Senate agreed to a version that will leave North Carolina vulnerable to the negative impacts of fracking. *Pro-conservation vote: NO.*

### [H5] SB 76 House Amendment 1

This proposed amendment, drafted by Representative Harrison, would have prohibited the issuance of permits for oil and gas exploration and development until the US EPA determined that hydraulic fracturing treatments have not contaminated drinking water in states that currently allow fracking. One of the more controversial aspects of fracking is whether or not the fracking fluid, which contains

many harmful chemicals, can migrate into drinking water sources. This proactive amendment would have allowed for more scientific research to occur on this subject before fracking could occur within North Carolina, but unfortunately it failed. *Pro-conservation vote: YES.*

### [H6] SB 112 2nd Reading (Create Jobs Through Regulatory Reform)

As originally introduced in the Senate, this bill was only three pages long and was called "Amend Environmental Laws 2013." The House amended the bill into a 27-page omnibus piece of legislation under the new name of "Create Jobs Through Regulatory Reform." Two of the new provisions included were of particular concern to the environmental community. First, the modified bill includes provisions from HB 74 that require the periodic review and expiration of existing rules. Any rule not reviewed during a ten year period would expire, which places an extraordinary burden on agencies, the Rules Review Commission, the regulated public, and other stakeholders. Second, the new version of the bill contains language originally found in SB 612 relating to local government preemption. Current law allows cities and counties to impose stricter environmental, health, or zoning regulations than the state or federal government. Under the proposed change, however, the local governments would be stripped of their power to enact stronger protections that better reflect local interests and unique natural resources. This bill passed the House, but has not been heard in its modified form in the Senate. *Pro-conservation vote: NO.*

### [H7] SB 112 House Amendment 10 Motion to Table

Amendment 10, by Representative Duane Hall, would have removed one of the most troubling provisions of SB 112 regarding local government preemption. The section bars the passage or enforcement of nearly all local environmental ordinances or rules that are stronger than minimum state or federal standards. The amendment would have allowed local governments to continue to set stronger local rules, but it was tabled (set aside without being considered) and not made a part of the bill. This score, on the vote not to consider a pro-conservation amendment, is included to emphasize how stridently legislators oppose environmental regulations. The motion passed, and the House did not vote on the pro-conservation amendment. *Pro-conservation vote: NO.*

### [H8] SB 515 2nd Reading (Jordan Lake Water Quality Act)

In 2009, a carefully negotiated agreement between local governments, developers, environmentalists, and others was approved to set pollution-control rules for Jordan Lake, the drinking water supply for over 300,000 residents. The House version of Senate Bill 515 delays the implementation of a number of these regulations regarding Jordan Lake and upstream contamination by three years. The bill also exempts certain utilities and airport facilities from being subject to riparian buffer rules. Riparian buffers are vegetative land bordering water that stabilize the soil and filter pollutants. DENR has said the preserving these buffers "is critical to protecting our water resources." Ultimately, SB 515 passed, ignoring years of stakeholder and public input, and once again delaying critical pollution control efforts, ensuring that we will spend more money to clean up three years' worth of additional pollution. *Pro-conservation vote: NO.*

### [H9] HB 74 Conference Report 2nd Reading (Regulatory Reform Act of 2013)

After some disagreement between the House and Senate as to just what this bill should contain, they appointed a conference committee to draft a final version, which was voted on in both chambers. The resulting legislation brings together a number of anti-conservation provisions found in other bills, including: allowing state regulations to expire if they do not undergo a costly and time-consuming review process every ten years; prohibiting local governments from making environmental laws stricter than those the state and federal governments impose unless adopted by a unanimous vote (an especially large issue for coastal areas which need stricter regulations to prevent erosion and damage to private property); removing or weakening many of the existing safeguards regarding landfills; and repealing the Mountain Resources Planning Act. This bill passed, putting many aspects of our environment and public health at risk. *Pro-conservation vote: NO.*

## SENATE VOTES

### [S1] HB 74 Conference Report 2nd Reading (Regulatory Reform Act of 2013)

See H9 description in the House Votes section. *Pro-conservation vote: NO.*

### [S2] SB10 2nd Reading (Government Reorganization and Efficiency Act)

This bill would eliminate and reorganize many different state commissions and boards, including several with environmental focuses. It would eliminate the Natural Heritage Area Designation Commission, the Sustainable Local Food Advisory Council, and the Legislative Commission on Global Climate Change. More importantly, it would reduce the number of members, some of the qualifications

# HOW TO READ THE SCORECARD

Nine House and ten Senate votes were scored. We included floor votes, motions, and amendments on particularly important bills. It is important to note which version of the bill was scored: Second readings are often more reflective than the third and final reading because members may vote their preference on second reading, but vote with the majority on third, when it is clear what the outcome will be. At the top of the Scorecard tables, you will see a number that correlates with the bill description. Legislators are listed alphabetically, with their votes during the 2013 session, their 2013 score, previous averages, and "lifetime" scores. "Lifetime Scores" start in 1999, when our first Legislative Scorecard was published. A "+" is a pro-conservation vote, a "–" is an anti-conservation vote, NV indicates a missed vote, which is counted as an anti-conservation vote. Excused absences and votes (E) are not scored. INC indicates members did not cast enough votes to score. N/A means no previous voting record.

| House | Party | District | County | H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 | H9 | 2013 Long Session | 2011-2012 Average | 2009-2010 Average | Lifetime Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pro Environmental Vote:** | | | | **No** | **No** | **No** | **Yes** | **No** | **No** | **No** | **No** | **No** | | | | |
| Adams | D | 58 | Guilford | + | + | + | + | + | + | + | + | + | 100 | 91 | 79 | 84 |
| Alexander | D | 107 | Mecklenburg | + | + | NV | + | + | + | - | + | + | 78 | 68 | 92 | 81 |
| Arp | R | 69 | Union | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Avila | R | 40 | Wake | - | - | - | - | - | - | - | - | - | 0 | 9 | 31 | 24 |
| Baskerville | D | 32 | Granville | + | + | + | E | E | + | + | + | + | 100 | NA | NA | 100 |
| Bell, J. | R | 10 | Craven | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Bell, L. | D | 21 | Duplin | - | + | + | + | + | - | + | + | + | 78 | 83 | 84 | 74 |
| Blackwell | R | 86 | Burke | - | + | - | - | - | - | - | + | - | 22 | 18 | 36 | 23 |
| Blust | R | 62 | Guilford | - | - | - | - | - | - | - | - | - | 0 | 13 | 45 | 39 |
| Boles, Jr. | R | 52 | Moore | - | - | - | - | - | - | - | - | - | 0 | 9 | 45 | 17 |
| Brandon, Jr. | D | 60 | Guilford | + | E | + | + | + | - | + | NV | - | 63 | 70 | NA | 68 |
| Brawley, C.R. | R | 95 | Iredell | - | - | - | E | E | - | - | - | - | 0 | NA | NA | 0 |
| Brawley, Jr., W. | R | 103 | Mecklenburg | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Brisson | D | 22 | Bladen | - | E | + | - | - | - | - | E | NV | 14 | 17 | 77 | 41 |
| Brody | R | 55 | Anson | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Brown, B. | R | 9 | Pitt | - | - | E | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Brown, R. | R | 81 | Davidson | - | - | - | - | - | - | - | - | + | 11 | 18 | NA | 13 |
| Bryan | R | 88 | Mecklenburg | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Bumgardner | R | 109 | Gaston | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Burr | R | 67 | Montgomery | - | - | - | - | - | - | - | - | - | 0 | 9 | 47 | 19 |
| Carney | D | 102 | Mecklenburg | + | + | + | + | + | - | + | - | + | 78 | 78 | 90 | 81 |
| Catlin | R | 20 | New Hanover | - | + | - | - | - | - | - | - | - | 11 | NA | NA | 11 |
| Cleveland | R | 14 | Onslow | - | - | - | - | - | - | - | E | E | 0 | 13 | 45 | 33 |
| Collins | R | 25 | Franklin | - | - | - | - | - | - | - | - | - | 0 | 14 | NA | 6 |
| Conrad | R | 74 | Forsyth | - | - | - | - | - | - | + | - | - | 11 | NA | NA | 11 |
| Cotham | D | 100 | Mecklenburg | - | E | + | E | E | - | + | - | + | 50 | 91 | 95 | 84 |
| Cunningham | D | 106 | Mecklenburg | + | + | + | E | E | + | + | + | + | 100 | NA | NA | 100 |
| Daughtry | R | 26 | Johnston | - | - | - | - | - | E | E | - | - | 0 | 13 | 69 | 40 |
| Davis, Jr. | R | 19 | New Hanover | - | - | - | - | - | + | - | - | - | 11 | NA | NA | 11 |
| Dixon | R | 4 | Duplin | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Dobson | R | 85 | Avery | - | + | - | - | - | - | - | - | - | 11 | NA | NA | 11 |
| Dollar | R | 36 | Wake | - | - | - | - | - | - | - | - | + | 11 | 13 | 64 | 43 |
| Earle | D | 101 | Mecklenburg | + | + | E | + | + | + | + | + | + | 100 | 83 | 64 | 78 |
| Elmore | R | 94 | Alleghany | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Faircloth, Jr. | R | 61 | Guilford | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 6 |
| Farmer-Butterfield | D | 24 | Pitt | + | + | + | E | + | + | + | + | + | 100 | 82 | 84 | 85 |
| Fisher | D | 114 | Buncombe | + | + | + | + | + | + | + | + | + | 100 | 92 | 100 | 94 |
| Floyd | D | 43 | Cumberland | - | + | + | + | + | - | + | - | - | 56 | 87 | 89 | 81 |

| House | Party | District | County | H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 | H9 | 2013 Long Session | 2011-2012 Average | 2009-2010 Average | Lifetime Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ford | R | 76 | Cabarrus | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Foushee | D | 50 | Durham | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Fulghum | R | 49 | Wake | - | - | - | E | E | - | - | - | - | 0 | NA | NA | 0 |
| Gill | D | 33 | Wake | + | + | + | + | + | + | + | + | + | 100 | 92 | 100 | 93 |
| Glazier | D | 44 | Cumberland | + | + | + | + | + | + | + | + | + | 100 | 96 | 100 | 96 |
| Goodman | D | 66 | Hoke | - | + | + | + | - | - | + | - | - | 44 | 79 | NA | 69 |
| Graham, C. | D | 47 | Robeson | + | + | + | + | + | E | E | + | + | 100 | 87 | NA | 90 |
| Graham, G. | D | 12 | Craven | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Hager | R | 112 | Burke | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Hall, D. | D | 11 | Wake | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Hall, L. | D | 29 | Durham | + | + | + | + | + | + | + | + | + | 100 | 96 | 100 | 97 |
| Hamilton | D | 18 | Brunswick | + | + | + | E | E | - | + | - | E | 67 | 67 | NA | 69 |
| Hanes, Jr. | D | 72 | Forsyth | + | + | + | E | E | + | + | - | + | 86 | NA | NA | 86 |
| Hardister | R | 59 | Guilford | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Harrison | D | 57 | Guilford | + | + | + | + | + | + | + | + | + | 100 | 100 | 100 | 100 |
| Hastings | R | 110 | Cleveland | - | - | - | E | E | - | - | - | - | 0 | 9 | NA | 7 |
| Holley | D | 38 | Wake | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Hollo | R | 73 | Alexander | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 30 |
| Holloway | R | 91 | Rockingham | - | - | - | + | + | - | - | - | - | 22 | 27 | 36 | 36 |
| Horn | R | 68 | Union | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Howard | R | 79 | Davie | - | - | - | - | - | - | - | E | - | 0 | 14 | 50 | 47 |
| Hurley | R | 70 | Randolph | - | - | - | E | - | - | - | - | - | 0 | 13 | 62 | 35 |
| Iler | R | 17 | Brunswick | - | - | - | - | - | - | - | - | E | 0 | 9 | 54 | 19 |
| Insko | D | 56 | Orange | + | + | + | + | + | E | E | + | + | 100 | 96 | 100 | 97 |
| Jackson | D | 39 | Wake | - | E | + | + | E | + | + | + | + | 86 | 86 | 86 | 86 |
| Jeter | R | 92 | Mecklenburg | - | - | - | - | - | - | - | - | + | 11 | NA | NA | 11 |
| Johnson | R | 83 | Cabarrus | - | - | - | - | - | - | - | - | - | 0 | 13 | 64 | 46 |
| Jones, Jr. | R | 65 | Caswell | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Jordan | R | 93 | Ashe | - | - | - | E | E | - | - | - | - | 0 | 18 | NA | 13 |
| Lambeth | R | 75 | Forsyth | - | - | - | - | - | - | - | E | - | 0 | NA | NA | 0 |
| Langdon, Jr. | R | 28 | Johnston | E | - | - | - | - | - | - | - | E | 0 | 17 | 45 | 34 |
| Lewis | R | 53 | Harnett | - | - | - | - | - | - | - | - | - | 0 | 9 | 45 | 38 |
| Lucas | D | 42 | Cumberland | + | + | + | + | + | - | + | + | - | 78 | 87 | 77 | 77 |
| Luebke | D | 30 | Durham | + | + | + | + | + | + | + | + | + | 100 | 96 | 100 | 99 |
| Malone | R | 35 | Wake | - | - | - | - | - | - | - | - | E | 0 | NA | NA | 0 |
| Martin, G. | D | 34 | Wake | NA | NA | NA | + | E | E | E | + | + | 100 | 96 | 100 | 96 |
| Martin, S. | R | 8 | Pitt | - | - | - | - | - | E | E | - | - | 0 | NA | NA | 0 |
| McElraft | R | 13 | Carteret | - | - | - | - | - | - | - | - | - | 0 | 9 | 53 | 28 |
| McGrady | R | 117 | Henderson | + | + | + | - | + | + | - | + | + | 78 | 75 | NA | 75 |
| McManus | D | 54 | Chatham | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| McNeill | R | 78 | Moore | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Michaux, Jr. | D | 31 | Durham | + | + | + | + | + | + | + | + | + | 100 | 83 | 73 | 81 |
| Millis | R | 16 | Onslow | - | - | - | - | - | - | - | - | - | 0 | 9 | 45 | 0 |
| Mobley | D | 5 | Bertie | E | + | + | + | + | + | + | + | + | 100 | 92 | 81 | 85 |
| Moffitt | R | 116 | Buncombe | - | - | - | E | - | - | - | - | - | 0 | 13 | NA | 10 |
| Moore, R. | D | 99 | Mecklenburg | + | E | + | E | E | - | + | - | + | 67 | 73 | NA | 72 |
| Moore, T. | R | 111 | Cleveland | - | - | - | - | - | - | - | - | - | 0 | 9 | 36 | 33 |
| Murry | R | 41 | Wake | - | - | - | E | E | - | - | E | + | 17 | 20 | NA | 19 |

| House | Party | District | County | H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 | H9 | 2013 Long Session | 2011-2012 Average | 2009-2010 Average | Lifetime Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pierce | D | 48 | Hoke | + | + | + | + | + | E | E | + | + | 100 | 92 | 79 | 81 |
| Pittman | R | 82 | Cabarrus | - | - | - | - | - | - | - | - | + | 11 | 0 | NA | 5 |
| Presnell | R | 118 | Haywood | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Queen | D | 119 | Haywood | + | + | + | + | + | - | + | + | + | 89 | NA | 76 | 82 |
| Ramsey | R | 115 | Buncombe | - | E | + | - | - | - | - | - | - | 13 | NA | NA | 13 |
| Richardson | D | 7 | Franklin | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Riddell | R | 64 | Alamance | E | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Ross, S. | R | 63 | Alamance | - | E | - | E | E | - | - | - | - | 0 | NA | NA | 0 |
| Saine | R | 97 | Lincoln | - | - | - | - | - | - | - | - | - | 0 | 0 | NA | 0 |
| Samuelson | R | 104 | Mecklenburg | - | - | - | - | - | - | - | - | + | 11 | 13 | 75 | 36 |
| Schaffer | R | 105 | Mecklenburg | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Setzer | R | 89 | Catawba | - | - | - | - | - | - | - | - | + | 11 | 13 | 36 | 37 |
| Shepard | R | 15 | Onslow | - | - | - | - | - | - | - | E | - | 0 | 9 | NA | 6 |
| Speciale | R | 3 | Beaufort | - | + | + | - | - | - | - | - | - | 22 | NA | NA | 22 |
| Stam | R | 37 | Wake | - | - | E | - | - | - | - | - | - | 0 | 13 | 42 | 43 |
| Starnes | R | 87 | Caldwell | - | - | - | - | - | - | - | - | - | 0 | 13 | 51 | 35 |
| Steinburg | R | 1 | Camden | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Stevens | R | 90 | Surry | E | - | - | - | - | - | - | E | E | 0 | 13 | 45 | 20 |
| Stone | R | 51 | Harnett | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 6 |
| Szoka | R | 45 | Cumberland | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Terry | D | 71 | Forsyth | + | + | + | + | + | + | + | + | + | 100 | NA | NA | 100 |
| Tillis | R | 98 | Mecklenburg | NV | NV | NV | NV | - | NV | NV | - | NV | 0 | INC | 53 | 26 |
| Tine | D | 6 | Beaufort | - | + | + | E | E | - | + | - | + | 57 | NA | NA | 57 |
| Tolson | D | 23 | Edgecombe | + | + | + | + | + | + | + | + | + | 100 | 83 | 75 | 81 |
| Torbett | R | 108 | Gaston | - | - | - | - | - | - | - | - | - | 0 | 13 | NA | 9 |
| Turner | R | 84 | Iredell | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Waddell | D | 46 | Bladen | - | + | + | E | E | - | + | - | + | 57 | NA | NA | 57 |
| Warren | R | 77 | Rowan | - | - | - | - | - | - | - | - | NV | 0 | 9 | NA | 6 |
| Wells | R | 96 | Catawba | + | - | - | E | E | - | - | - | - | 14 | NA | NA | 14 |
| West | R | 120 | Cherokee | - | - | - | - | - | - | - | - | - | 0 | 9 | 45 | 30 |
| Whitmire | R | 113 | Henderson | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Wilkins, Jr. | D | 2 | Granville | - | + | + | + | + | + | + | + | + | 89 | 70 | 70 | 72 |
| Wray | D | 27 | Halifax | + | + | E | + | + | + | + | + | E | 100 | 79 | 81 | 77 |
| Younts | R | 80 | Davidson | NA | NA | NA | NA | NA | NA | NA | - | - | 0 | NA | NA | 0 |

| Senate | Party | District | County | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | 2013 Long Session | 2011-2012 Average | 2009-2010 Average | Lifetime Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pro Environmental Vote:** | | | | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | | | | |
| Allran | R | 42 | Alexander | - | - | - | - | - | - | - | - | - | + | 10 | 9 | 68 | 55 |
| Apodaca | R | 48 | Buncombe | - | - | - | - | E | - | - | - | - | - | 0 | 4 | 67 | 40 |
| Barefoot | R | 18 | Franklin | - | - | - | + | - | - | - | - | - | - | 10 | NA | NA | 10 |
| Barringer | R | 17 | Wake | - | - | - | + | - | - | E | - | + | - | 22 | NA | NA | 22 |
| Berger | R | 26 | Guilford | - | - | - | - | - | - | - | - | - | - | 0 | 4 | 45 | 36 |

+ pro-conservation vote — anti-conservation vote NV missed vote counted as anti-conservation vote
E excused absences/votes are not scored INC members did not cast enough votes to score N/A no previous voting record

| Senate | Party | District | County | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | 2013 Long Session | 2011-2012 Average | 2009-2010 Average | Lifetime Score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bingham | R | 33 | Davidson | - | - | - | - | - | - | - | - | E | - | 0 | 33 | 82 | 55 |
| Blue | D | 14 | Wake | + | + | + | + | + | + | + | - | + | + | 90 | 80 | 82 | 84 |
| Brock | R | 34 | Davie | - | - | - | - | - | - | - | - | E | - | 0 | 4 | 40 | 33 |
| Brown | R | 6 | Jones | - | - | - | - | - | - | - | - | - | - | 0 | 9 | 47 | 30 |
| Brunstetter | R | 31 | Forsyth | - | - | - | - | - | - | - | - | - | - | 0 | 10 | 71 | 38 |
| Bryant | D | 4 | Halifax | + | E | + | + | + | + | + | + | + | + | 100 | 93 | 89 | 91 |
| Clark | D | 21 | Cumberland | + | - | - | + | + | + | - | - | + | + | 60 | NA | NA | 60 |
| Clodfelter | D | 37 | Mecklenburg | + | - | + | + | + | + | + | - | E | E | 75 | 63 | 83 | 77 |
| Cook | R | 1 | Beaufort | - | - | - | - | - | + | - | - | - | - | 10 | 14 | NA | 9 |
| Curtis | R | 44 | Gaston | - | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Daniel | R | 46 | Burke | - | - | - | - | - | - | - | - | - | + | 10 | 9 | NA | 9 |
| Davis, D. | D | 5 | Greene | + | + | + | + | - | + | E | - | + | + | 78 | NA | 83 | 81 |
| Davis, J. | R | 50 | Cherokee | - | - | - | - | - | - | - | - | E | - | 0 | 17 | NA | 10 |
| Ford | D | 38 | Mecklenburg | + | - | - | + | + | E | - | - | + | + | 56 | NA | NA | 56 |
| Goolsby | R | 9 | New Hanover | - | - | - | - | - | NV | - | - | - | - | 0 | 4 | NA | 3 |
| Graham | D | 40 | Mecklenburg | E | + | E | E | + | + | + | - | + | + | 86 | 71 | 82 | 78 |
| Gunn | R | 24 | Alamance | - | - | - | - | - | - | - | - | - | - | 0 | 4 | NA | 3 |
| Harrington | R | 43 | Gaston | - | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 6 |
| Hartsell | R | 36 | Cabarrus | - | E | - | - | - | - | + | - | E | - | 13 | 19 | 77 | 61 |
| Hise | R | 47 | Madison | - | - | - | - | - | - | - | - | - | + | 10 | 4 | NA | 6 |
| Hunt | R | 15 | Wake | - | - | - | + | - | + | - | - | + | - | 30 | 38 | 68 | 52 |
| Jackson | R | 10 | Duplin | - | - | - | - | - | - | - | - | - | - | 0 | 14 | NA | 9 |
| Jenkins | D | 3 | Bertie | + | - | E | E | - | E | E | - | E | E | 25 | 36 | 80 | 66 |
| Kinnaird | D | 23 | Chatham | + | + | + | + | + | + | + | - | + | + | 90 | 88 | 94 | 95 |
| McKissick | D | 20 | Durham | + | + | + | + | + | + | + | - | + | + | 90 | 65 | 64 | 75 |
| McLaurin | D | 25 | Hanson | + | - | - | + | - | + | - | - | - | E | 33 | NA | NA | 33 |
| Meredith | R | 19 | Cumberland | - | - | E | E | - | + | - | - | - | - | 13 | 23 | NA | 20 |
| Nesbitt | D | 49 | Buncombe | + | + | + | + | + | + | + | - | + | + | 90 | 69 | 76 | 77 |
| Newton | R | 11 | Johnston | - | - | - | - | - | - | - | - | - | + | 10 | 4 | NA | 6 |
| Parmon | D | 32 | Forsyth | + | + | + | + | + | + | + | - | + | + | 90 | 96 | 62 | 79 |
| Pate | R | 7 | Lenoir | - | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 36 |
| Rabin | R | 12 | Harnett | - | - | - | - | - | + | - | - | - | - | 10 | NA | NA | 10 |
| Rabon | R | 8 | Bladen | - | - | - | - | - | - | - | - | - | - | 0 | 4 | NA | 3 |
| Randleman | R | 30 | Stokes | - | - | - | - | - | - | - | - | - | - | 0 | 13 | 50 | 21 |
| Robinson | D | 28 | Guilford | + | + | + | - | + | E | E | - | + | + | 75 | 50 | NA | 57 |
| Rucho | R | 39 | Mecklenburg | - | - | - | - | - | - | - | - | - | - | 0 | 8 | 44 | 33 |
| Sanderson | R | 2 | Carteret | - | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 6 |
| Soucek | R | 45 | Alleghany | - | - | - | - | - | - | - | - | - | - | 0 | 4 | NA | 3 |
| Stein | D | 16 | Wake | + | + | + | + | + | + | + | - | + | + | 90 | 74 | 95 | 84 |
| Tarte | R | 41 | Mecklenburg | - | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Tillman | R | 29 | Moore | - | - | - | - | - | - | - | - | E | - | 0 | 5 | 55 | 39 |
| Tucker | R | 35 | Union | - | - | - | - | - | - | - | - | - | - | 0 | 9 | NA | 6 |
| Wade | R | 27 | Guilford | - | - | - | - | - | - | - | - | - | - | 0 | NA | NA | 0 |
| Walters | D | 13 | Columbus | + | - | - | - | - | + | - | E | E | E | 29 | 19 | 63 | 31 |
| Woodard | D | 22 | Caswell | + | + | + | + | E | + | + | - | + | + | 89 | NA | NA | 89 |

**+** pro-conservation vote **–** anti-conservation vote **NV** missed vote counted as anti-conservation vote
**E** excused absences/votes are not scored **INC** members did not cast enough votes to score **N/A** no previous voting record

for membership, and a large amount of experience on critical programs responsible for environmental protections, including the Coastal Resources Commission, the Coastal Resources Advisory Council, the Environmental Management Commission, and the Wildlife Resources Commission. Ultimately, this bill would eliminate the balance between environmental expertise, local representation, and business interests previously established on these commissions, prioritizing business and industry in managing the environment. This bill passed both chambers in different forms, but the first conference report to resolve the differences failed in the House. Unfortunately, the Budget that passed included similar provisions removing from the EMC and CRC current members with local and technical expertise, and years of experience. *Pro-conservation vote: NO.*

### [S3] SB 76 2nd Reading (Domestic Energy Jobs Act)

Although fracking has technically been legal in North Carolina for about a year, there has been a hold on permitting companies to engage in the environmentally destructive practice. This moratorium was put in place to allow the Mining and Energy Commission to develop a regulatory scheme for the process. This version of Senate Bill 76 would have allowed permits to be issued beginning on March 1, 2015, leaving only five months for the regulatory rules to be analyzed and modified after they are first released. This bill would have made other changes to the regulatory scheme set up in 2012, including removing the State Geologist from the Mining and Energy Commission, lifting the cap on the amount of fracking that may occur so that it is no longer limited by North Carolina's energy needs, and allowing the underground injection of fracking wastewater, which could contaminate drinking water supplies. While the Senate passed this very damaging version of SB 76, the House improved upon it. The final bill that passed, however, still does not do enough to protect our state from the damaging impacts of fracking. *Pro-conservation vote: NO.*

### [S4] SB 151 2nd Reading (Coastal Policy Reform Act of 2013)

The most important and damaging provision of Senate Bill 151 is the section that would have removed a number of the current limitations on terminal groins: large barriers erected on barrier islands in order to prevent sand from eroding and shrinking the beach. A pilot program for terminal groins was set up in 2011, allowing for four permits to be granted with strict funding, necessity, and insurance requirements. This bill would have removed all of these limitations, before even one of the initial four in the pilot program has been completed. Under this legislation, there would be no limit to the number of permits that can be issued; no requirement that funding come from voter-approved sources; no requirement that funding be secured for long-term maintenance of the groin or the restoration of damaged private property or the environment; and no requirement that the groin be necessary to stop imminent erosion that other, less harmful, methods cannot mitigate. Although the House made improvements to the Senate version, this anti-conservation bill did eventually pass. *Pro-conservation vote: NO.*

### [S5] SB 515 2nd Reading (Jordan Lake Water Quality Act)

The Senate version of Senate Bill 515 would have repealed all current rules and statutes pertaining to upstream pollution control of Jordan Lake and created a subcommittee consisting entirely of Senators and Representatives to recommend legislation and rules focused on treating Jordan Lake itself, rather than on reducing upstream pollution before it enters the Lake. This legislation had three extremely problematic flaws. The first would be the sudden repeal of rules and regulations with no replacement rules ready to take effect. The subcommittee would not be required to report until sometime during the 2014 legislative session, which would potentially leave Jordan Lake entirely unregulated for more than a year. Second, the subcommittee would consist entirely of elected officials rather than scientists or others with technical expertise. When dealing with environmental issues, scientific expertise should be reflected on the committee itself, rather than relying on outside sources for all technical expertise. Third, the requirement that the recommendations consider treating Jordan Lake directly rather than limiting upstream pollution would simply perpetuate the problem. Without preventing upstream pollution from flowing into Jordan Lake, clean-up of the Lake would likely have to continue indefinitely. Allowing scientists to develop new proposals dealing with upstream contamination, while keeping the current rules in place until the new ones are ready to be implemented, is a much safer and environmentally-friendly path to follow. While this damaging Senate version did not pass the House, a version delaying clean-up of Jordan Lake did (see H8 in House Vote Description). *Pro-conservation vote: NO.*

### [S6] SB 612 2nd Reading (Regulatory Reform Act of 2013)

Senate Bill 612 would modify a number of sections of existing law, all dealing with environmental issues. Significant changes would include prohibiting cities and counties from imposing stricter environmental regulations than the state or the Federal Government have set, and

setting up a "fast-track" approval process for stormwater management system permits and erosion and sedimentation control plans. The first change would create uniform environmental regulations across the state, but at the lowest common denominator. No longer would local residents be able to protect their natural resources as they see fit—they could only do so to the extent that the General Assembly or Congress allows in the entire state or country. The second change would prohibit employees of plan reviewing agencies from requiring modifications to any proposal involving engineering if the proposal was filed by a professional engineer and the employee does not have that level of specialized training. This section allows engineers filing for permits a high level of impunity and lessens the usefulness and scope of the review process. This bill passed the Senate, but was not heard in the House, though many of its damaging components were added to other bills. *Pro-conservation vote: NO.*

### [S7] SB 328 2nd Reading (Solid Waste Management Reform Act of 2013)

Even though North Carolina has enough landfill capacity for decades to come, the Solid Waste Management Reform Act of 2013 seeks to create more landfills within the state. This bill would encourage local governments to import trash from out of state sources, which could cause North Carolina to become the entire nation's dumping ground for solid waste. The bill would also remove the minimum financial assurance required to cover potential damage from these landfills. The legislation would drastically reduce or eliminate the buffer zone required between landfills and many types of critical natural areas, such as state parks, scenic rivers, and wildlife refuges. It also would eliminate the ability of DENR to deny permits if the solid waste facilities would damage these areas and would drastically weaken regulations regarding environmental review and toxic leachate discharge. This bill would have profound negative impacts on the state North Carolina. This bill passed the Senate, but was not heard in the House; however, many of the damaging provisions were unfortunately inserted into HB 74, which passed both chambers (see House Vote Descriptions). *Pro-conservation vote: NO.*

### [S8] HB 94 2nd Reading (Amend Environmental Laws 2013)

This bill was originally four pages long when it made its way through the House, but the Senate increased it to 43 pages and put in a slew of worrisome new provisions. In particular, fracking companies would not be required to alert DENR to the chemicals they pump into the ground, instead claiming "trade secret" protection for this potentially dangerous mixture. The bill would also cause major damage to North Carolina's surface waters, as some of the new language called for the repeal of protective buffer rules. Groundwater, too, would be in danger of contamination, due to the elimination of the current 500 foot buffer required around waste disposal systems. House Bill 94 would be destructive to North Carolinians' private property and dangerous to our health, rolling back a number of the sound environmental policies that we've fought for over the years. This bill passed in the Senate and was not heard in the House in its modified form. *Pro-conservation vote: NO.*

### [S9] SB 32 2nd Reading (Periodic Review and Expiration of Rules)

Senate Bill 32 would cause each and every "permanent" regulatory rule to expire after ten years. Agencies would be required to go through the full elaborate rule-making process annually for every rule set to expire that year, a process that takes both time and money. Some rules may even slip through the bureaucratic cracks, causing important regulations to lapse even though the agency and the voters agree they should be in place. This legislation would be a long-game play to eliminate beneficial regulatory structures protecting our water, air, and mountains. This bill did not receive a final vote in the Senate. *Pro-conservation vote: NO.*

### [S10] HB 938 2nd Reading (Clarify Wetland Permitting)

A number of times throughout the session, legislators targeted wetlands by attempting to exempt them from many environmental regulations. On the last day of session this trend continued, as the Senate rolled out and passed a new version of House Bill 938. This bill would exempt wetlands that "are not waters of the United States" from water quality permit requirements. This equivocal language would have a tremendous impact on North Carolina's wetlands, as many of them are isolated and would not be considered "waters of the United States." These water bodies provide essential functions that benefit both people and nature, by doing things such as filtering water and helping control floods. By compromising the integrity of these wetlands, we could severely alter the natural processes in our beautiful state. This bill passed the Senate, but thankfully did not come to a vote in the House this session. *Pro-conservation vote: NO.*

## Growing Polarization by the Numbers

Our scorecard analysis of the 2013 session revealed the continuing trend of polarized voting on environmental issues. This year the score gap between Republican and Democratic averages was at an all-time high. The Senate had a gap of 69% between party averages, while the House had a gap of 83%. As recently as 2007 and 2008, these numbers were only around 20%, but they have skyrocketed since.

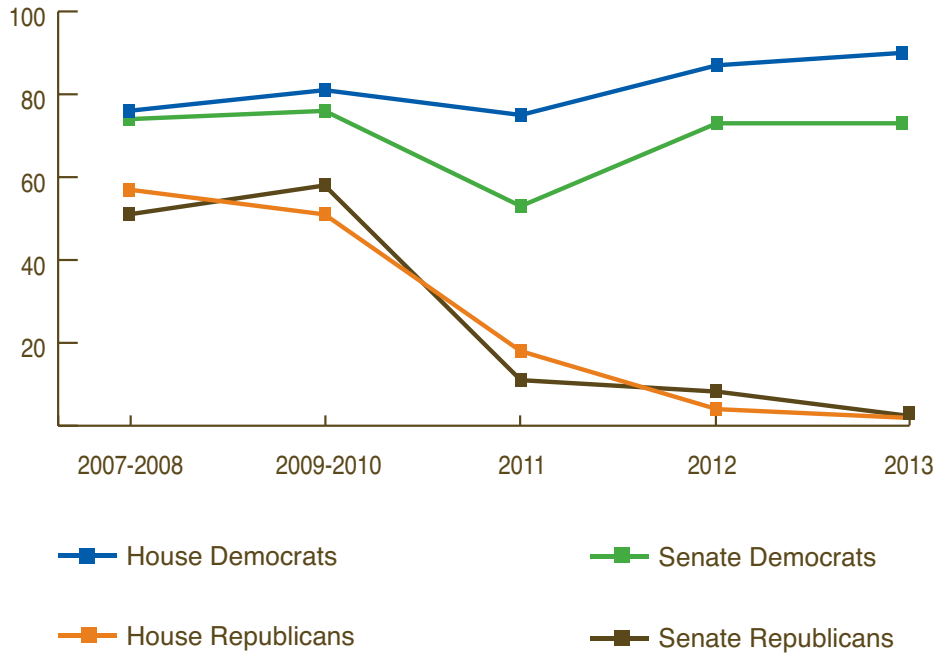
The other continuing trend that can be seen in the 2013 scorecard is a drop in average scores. While we applaud the 28 members who earned a perfect score, over 52% could not even muster a 10%. Over the past four years, our averages have been cut in half. It is easy to be overwhelmed by these numbers, but we have a chance to improve them, as elections are right around the corner. Please do your part, and vote for future members that will support North Carolina's natural resources.

**Key Numbers**
Number of Representatives: 120
Number of Senators: 50
10% and Below: 52%
90% and Above: 16%
Total Zeros: 82
Total Hundreds: 27

### AVERAGE PARTY SCORES

| | 2007-2008 Average | 2009-2010 Average | 2011 Long Session | 2012 Short Session | 2013 Long Session |
|---|---|---|---|---|---|
| House | | | | | |
| Republicans | 57% | 51% | 18% | 7% | 4% |
| Democrats | 76% | 81% | 75% | 86% | 87% |
| **Total House** | **67%** | **67%** | **43%** | **42%** | **34%** |
| Senate | | | | | |
| Republicans | 51% | 58% | 11% | 12% | 4% |
| Democrats | 74% | 76% | 53% | 73% | 73% |
| **Total Senate** | **66%** | **69%** | **27%** | **35%** | **28%** |

### AVERAGE SCORES OVER TIME



# *Governor McCrory's Early Term Progress Report*

While Pat McCrory has only been Governor for less than a year, his actions already leave us concerned for the future of North Carolina's natural resources, economy, and public health. Governor McCrory's positions on conservation-related legislation have been mixed. However, both his administrative appointments and proposed budget indicate indifference to the environment at best, and outright hostility at worst.

The Governor does not vote on specific legislation. His grades are based on what bills he has signed into law, what he has spoken about in public, and other executive actions he has taken.

Governor McCrory has much room to improve his positions on conservation issues and move North Carolina in a positive direction. We encourage Governor McCrory to rethink his energy platform and to focus more on proven clean and renewable technologies, to carefully review all legislation which would affect the health and beauty of our natural resources, and to understand that a strong economy and natural resource protection go hand in hand. The grades we give today are indicative of the Governor's performance thus far. We hope to see more positive results in the future.

**Overall Grade** **Grade: D-**

## Clean Air and Energy — Grade: C

Entering office promising an "all of the above" energy platform, Governor McCrory has kept his word. He has publicly supported renewable energy such as offshore wind and solar, declared June to be solar energy month, and attended the ribbon cutting event of a new biomass production facility. With five major clean energy projects primarily focusing on solar technology, North Carolina was ranked 4th for clean energy jobs by Environmental Entrepreneurs during the first quarter of 2013. McCrory also signed HB 484 into law, which establishes a permitting program for the siting and operation of wind power.

While we appreciate the governor's support of clean energy, we cannot ignore the fact that he also supports expanded reliance on coal, hydraulic fracturing, and offshore drilling. These practices could threaten North Carolina's precious water and air resources, our exceptional tourism industry, and our leading role in the renewable energy sector.

At the end of the 2013 session, the Governor signed SB 76 into law, which promotes fracking and the exploration of offshore oil. North Carolina's coast has always been a popular tourist destination, but now could be threatened by oil tankers, platforms, and spills. As Governor McCrory continues to serve the state, we hope that he turns more attention toward clean energy instead of dirty fossil fuels. June may have been "solar energy month," but McCrory's other actions demonstrate his willingness to let 2013 be "dirty energy year."

## Budget — Grade Range: F

With cuts to many important programs, Governor McCrory's proposed budget completely ignored the need to protect and conserve North Carolina's natural resources. The Clean Water Management Trust Fund (CWMTF), which had an authorized funding level of $100 million annually at its peak, was set at only $6.75 million for 2013-2014 and zeroed out thereafter. Money in the CWMTF has, in the past, been used to improve key water quality functions, such as land acquisition near important drinking water sources and local water and sewer upgrades. While the final budget that was signed into law allocated $10.4 million to the CWMTF for 2013-2014, this is still far from where it should be.

Other programs that received significant budget reductions under the Governor's proposed budget were the Natural Heritage Trust Fund, the Biofuels Center, and the Parks and Recreation Trust Fund. The Department of Environment and Natural Resources (DENR) has had its budget slashed by 40% compared to 2009 levels, and 24 vacant positions in the Department of Agriculture and 26 vacant positions in the Wildlife Resources Commission will be eliminated rather than be filled by people devoted to protecting the environment.

These are just a few of the assaults on North Carolina's critical natural resource programs that Governor McCrory's proposed budget would have brought. Unfortunately, the budget that was signed into law had a similar theme and underfunded many key environmental programs.

## Water Resources — Grade: D

Governor McCrory's first term began on a high note in terms of water resource management with the signing of HB 396, the "Private Well Water Education Act." This law directs the Commission for Public Health to adopt rules governing the sampling and testing of existing private wells. It also requires local health departments to provide information about drinking water standards and types of water quality testing to citizens constructing new drinking water wells. Unfortunately, water-related legislation ran downhill from there.

As the session wrapped up, the General Assembly rushed through several bills that will have negative impacts on North Carolina's water, and Governor McCrory signed them all into law. SB 515, "Jordan Lake Water Quality Act," delays crucial rules that were developed to improve the water quality of Jordan Lake, as well as weakens several riparian buffer rules.

Instead of relying on these carefully crafted rules, the budget earmarks over $1.65 million to an unproven technology that is only intended for small water impoundments, and focuses on cleaning up pollution rather than pollution prevention. This bill threatens the quality of drinking water that supplies hundreds of thousands of North Carolinians.

The General Assembly also sent SB 151 to the Governor, which encourages environmentally destructive terminal groins on the coast, and HB 74, which threatens the quality of our groundwater by allowing contamination to occur within a wider compliance boundary from contaminated sites. Finally, the Governor's proposed budget slashed the funding of several water related programs, and his support of expanded fossil fuels use threatens the quality of water across the entire state.

## Appointments — Grade: F

Governor McCrory's administrative appointments include a number of controversial and questionable choices, but most importantly his appointment of John Skvarla as Secretary of the Department of Environment and Natural Resources.

DENR, as the state agency responsible for protecting North Carolina's environment and natural resources, should be led by a proven leader of strong environmental values, but Secretary Skvarla is proving himself to be irresponsible in that role. One of Skvarla's first acts as Secretary was to rewrite the mission statement of DENR, fundamentally changing its role. DENR was previously 'conserving and protecting North Carolina's natural resources and maintaining a healthy environment that benefits the health and well-being of North Carolinians.' Under Skvarla and Governor McCrory, DENR's new mission is about "customer service" for the regulated industry. The mission also prioritizes "cost-benefit analysis" which rarely adequately values the long-term benefits of environmental systems, and emphasizes that DENR's decisions should reflect science that contains a diversity of opinion—essentially revising the very definition of science based in knowledge and experimentation, to "opinion" and "perspective."

Skvarla has also been open about his skepticism towards climate change, and has indicated he may believe that fossil fuels are renewable resources. With North Carolina's coasts severely vulnerable to rising sea levels, and the overwhelming scientific consensus that climate change is occurring, DENR's leader should be doing all that he can to mitigate these impacts, not questioning basic scientific facts.

Skvarla also claims that DENR is not changing or relaxing environmental regulations, but merely helping businesses and the regulated community to navigate the rules. But an action taken by the Division of Water Quality (now Division of Water Resources) this summer clearly refutes this. In an unprecedented move regarding a controversial water supply reservoir in Cleveland County, the Division simply waived a state permit that says the project won't hurt water quality.

Other appointments made by Governor McCrory also reveal a lack of support for North Carolina's citizens and a lack of understanding of the value of our natural resources. Art Pope, a former State Representative, was appointed to the powerful position of State Budget Director. Pope has given millions of dollars in contributions to conservative think tanks that are aggressively anti-environmental. Key priorities of these groups include: working to deny the overwhelming scientific consensus that climate change is happening, working to defeat the Renewable Energy Portfolio Standard that has brought thousands of jobs to our state, and working to undermine most of our state's regulations that protect our citizens and natural resources. Christopher Ayers was appointed to head the Public Staff of the North Carolina Utilities Commission, a position charged with representing the interest of ratepayers. Ayers, however, comes to this position after working as a lawyer representing the very same electric, water, and wastewater public utilities that are regulated by that commission.

These appointments, and others, seem to reflect a strong anti-regulatory theme that has the potential, and has proven to undermine the investment North Carolina has made in sound environmental policies that serve the citizens of North Carolina.

### APPENDIX

**Clean Air and Energy: C**
- "All of the above" energy platform
- Publicly supports renewable energy such as offshore wind and solar
- Declared June to be solar energy month
- Attended the ribbon cutting event of a new biomass production facility
- North Carolina was ranked 4th for clean energy jobs by Environmental Entrepreneurs during the first quarter of 2013.
- Signed HB 484 into law
- Publicly supports expanded reliance on coal, hydraulic fracturing, and offshore drilling.
- Signed SB 76 into law

**Budget: F**
- The Clean Water Management Trust Fund set at only $6.75 million for 2013–14 and zeroed out thereafter.
- Significant reductions in the Natural Heritage Trust Fund, the Biofuels Center, and the Parks and Recreation Trust Fund.
- The Department of Environment and Natural Resources had their budget slashed by 40% compared to 2009 levels, and 24 vacant positions in the Department of Agriculture and 26 vacant positions in the Wildlife Resources Commission will be eliminated rather than be filled by people devoted to protecting the environment

**Water Resources: D**
- Signed HB 396 into law
- Proposed budget slashes the funding of several water related programs
- Support of fossil fuels threatens the quality of water across the entire state.
- Signed SB 515 into law
- Signed SB 151 into law
- Signed HB 74 into law

**Appointments: F**
- John Skvarla as Secretary of DENR
- Art Pope as State Budget Direct
- Christopher Ayers as Head of Public Staff of the North Carolina Utilities Commission

# *The 2013 Green Tie Award Winners*

**NCLCV hosts an annual Green Tie Awards Dinner to honor legislators who prioritize the environment when making difficult decisions and community leaders who bring environmental issues to light. The 2013 Green Tie Awards winners are:**

### 2013 Defender of the Environment – Representative Deborah Ross

With a 100% rating on the NCLCV scorecard in seven of the past ten years and a 94% lifetime score, Representative Ross has been a strong ally of the environmental movement. This year, Representative Ross opposed legislation which would have reversed four years of progress toward energy conservation and clean energy, and supported legislation preventing manufacturers from deceiving customers about the biodegradability of their products. Representative Ross has consistently and fervently stood against bad environmental legislation and has committed herself to defending our communities from the environmental degradation pushed by the pollution lobby. We are sad to see Representative Ross retire from her seat.

### 2013 Senator of the Year – Senator Dan Blue

As one of only three senators to earn a perfect score last year, and with a lifetime rating of 85 percent, Senator Blue is proving himself to be as environmentally conscious a Senator as he was a Representative. Despite overwhelming opposition in the Senate this year, Senator Blue voted to protect both the Piedmont region and the Coastal environments. By opposing legislation that would repeal all upstream pollution rules in the waters that feed Jordan Lake, Senator Blue showed his concern for both his native Wake County and the health of the state's waterways generally. By voting against legislation which would open up the entire coast to terminal groins, causing damage to the environment and hurting local voters who would no longer have a chance to vote against being saddled with years of debt, Senator Blue demonstrated an understanding of the delicate nature of our coasts and the importance of government accountability to voters.

### 2013 Representative of the Year – Representative Susan Fisher

During her decade representing Buncombe County in the NC House, Representative Susan Fisher has consistently voted in favor of the environment, with a lifetime score of a 94, and 100% in 2012. This session she introduced great bills promoting energy efficiency, discouraging mountaintop removal, and enhancing the conservation tax credit. She also supported the environment by voting against bills that would roll back energy conservation codes, regionalize public utilities, and weaken sustainable building standards.

### 2013 Catalyst Award – Sue Sturgis, The Institute for Southern Studies

Ms. Sturgis is the Editorial Director and Co-Editor for the Institute for Southern Studies. Over the years, Sue has done a tremendous job educating the public about environmental issues. In this new political landscape, we know that we need more voices speaking out in support of the environment and we need our decision-makers to understand that citizens and voters are watching them. Our citizens in turn must understand how the decisions made in Raleigh impact our daily lives and the environmental values we hold dear. Through Sue's media coverage, she has taken exceptional action to bring the public's attention to actions that are threatening North Carolina's environment and quality of life. Sue has published stories on fracking in North Carolina, on the attempt to end North Carolina's renewable energy program, and on the BP oil spill.

## *Now that you know the score… take action!*

***Help us hold legislators accountable.*** **Thank legislators who stood up for sound environmental policies. If they had a low score, let your elected officials know what you think about their votes. You can find out who represents you at: www.ncga.state.nc.us/representation/WhoRepresentsMe.html.**

***Find out where your candidates for local, state, and federal office stand on these issues.*** **Use the Scorecard to make informed decisions about which candidates deserve your support in the upcoming election.**

***Become a member of NCLCV today!*** You can help turn environmental values into North Carolina priorities by becoming a member of NCLCV today at nclcv.org.

## *Who we are…*



North Carolina League *of*
CONSERVATION VOTERS

North Carolina League *of*
CONSERVATION VOTERS

# 2013 LEGISLATIVE SCORECARD

North Carolina League of Conservation Voters
PO Box 12671 Raleigh, NC 27605

919.839.0006 I nclcv.org

*For membership information, please visit…* NCLCV.ORG

Nation of Change

# Radioactive Water from Fracking Found in Pennsylvania Creek According to Duke Study

By Laura Beans

A **Duke University study** published Wednesday in the journal *Environmental Science and Technology,*found dangerously high levels of radiation in a creek near a drilling wastewater treatment facility in Pennsylvania.

The study, *Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania*, was conducted over a period of two years from the summer of 2010 to the fall of 2012 and analyzed water samples discharged downstream of the Josephine Brine Treatment Facility into Blacklick Creek in the Allegheny River watershed, according to **StateImpact**, a project of National Public Radio. Sediment found in the creek contained levels of radium that were 200 times greater than normal levels, along with high levels of salts like chloride and bromide in the surface water.

These elements are naturally occurring and released during the **fracking** process. Radioactive brine, known as "flowback," is typically shipped to centers like the Josephine Brine Treatment Facility or **injected into wells**.

"The recent Duke University study that found increased levels of radiation in a Pennsylvania creek linked to liquid waste from oil and gas drilling should serve as a wakeup call to Governor Kasich," said **Food & Water Watch** Ohio organizer Alison Auciello. "It should also make him think twice about accepting waste from oil and gas drilling operations in other states."

Last year, more than 14 million barrels of toxic waste from oil and gas drilling were **injected into the ground** in Ohio's Class II disposal wells, with more than half of the wastewater coming from out-of-state. These injection wells, essential to the fracking industry, pose a **series of threats** to groundwater supplies and human health, and have been linked to **increased seismic activity**.

"What's particularly alarming about the study's finding for Ohio is that the waste from Pennsylvania's oil and gas drillers that isn't being adequately treated in Pennsylvania is being imported into our state for injection, with little to no testing for radioactivity," continued Auciello.

"The **Ban Injection Wells** coalition in Ohio has been instrumental in getting legislation introduced in the state House and Senate that would not only ban oil and gas waste injection wells, it would the stop discharge of the waste coming to treatment plants not equipped to treat radioactivity," said Auciello. "The Buckeye State should not be used as a dumping ground for drilling waste from any state. This legislation should be passed immediately to protect current and future generations of Ohioans."

Oct-Nov-Dec 2013
Issue Number P.4.13

# North Carolina Forest Service

An agency of the N.C. Department of Agriculture & Consumer Services

# Piedmont Region BMP Newsletter Update

## BMP Focus: As Winter Approaches...

**Rehabilitating and stabilizing exposed soil during the winter is more difficult. Grass won't grow very well in the cold weather.**

**In this time of year, it is critical to use alternative methods to establish groundcover for preventing sedimentation and controlling soil erosion on logging jobs. This is especially true on steep slopes and nearby to streams or other waterways.**

*{ Continued on Page 2 }*

**Inside this issue:**



### UPCOMING EVENTS

OCT.22 @ Pittsboro: Selling Timber in Today's Market. Contact Chatham County Cooperative Extension: 919-542-8202.

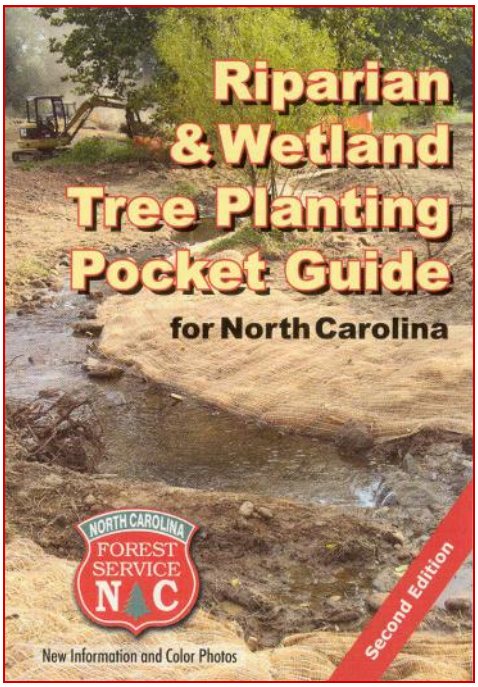
OCT.24 @ Raleigh: Sediment, Erosion and Turbidity Control Field Day Workshop. Contact NCSU Soil Science Dept. 919-513-1678.

NOV.6 @ Raleigh ; and DEC.12 @ Hickory: Erosion & Sediment Control Planning and Design Workshop. Contact NC-WRRI: 919-515-2815.

**Got Christmas Tree Fever?**

Visit the online North Carolina General Store at www.ncagr.gov, and find a North Carolina-grown Christmas tree near you (look in *Nursery & Gardening*)

## HAVE YOU SEEN ME?




**This pocket guide was last printed in 2008. We are seeking feedback to determine if we need to reprint more copies, because our inventory is nearly depleted. Let us know if you think this is a valuable reference that we should continue to provide, and how many copies you think you would need.**
**Email us your advice at forestry.npsunit@ncagr.gov.**

# BMP Focus: As Winter Approaches…

**Some other ways to establish groundcover and stabilize bare soil:**

- **During the logging work, apply, mat-down, and work-in leftover tree limbs, tops, slash, and laps on sloping sections of skid trails and stream crossing approachways on skid trails.**
- **If you operate a wood chipper, cover the critical bare soil areas with a thick layer of wood chips before leaving.**
- **Apply a thick layer of wheat straw that covers the bare soil.**
- **Unroll and stake down coir (coconut fiber) matting, excelsior matting, or other natural fiber matting. These are examples of "rolled erosion control products" that work especially well on stream crossing approachways, along disturbed stream or ditch banks, and within roadside ditches.**

**In 2010, the N.C. Forest Service produced a 30-minute video showing how to install silt fence and erosion control matting. If you want a DVD copy, send us an email with your name and address: forestry.npsunit@ncagr.gov. Quantities are limited.**

**This logging road has been closed-out and wheat straw applied as a mulch cover. When grass seed is applied, you need to allow some sunlight to reach the soil.**

**But during the winter, if no grass seed is applied, you should cover all bare soil with straw, mulch, or other material.**

**Photo taken in central North Carolina, August 2013.**

**Erosion control matting is shown in the two above photos of the same site. Left photo was taken immediately after BMP work was completed. Right photo shows the same site, a few months later. This is a good example of "BMP stacking", or using multiple BMP tools to achieve the desired solution. In this case, (1) a turnout was installed, (2) erosion control matting was applied, (3) rock check dams were installed, and (4) grass seed and straw were spread.**

## Don't let winter rains wash away your BMP investment! Use BMPs early & often. Remember *Risk Management*

**This skid trail stream crossing has issues:**

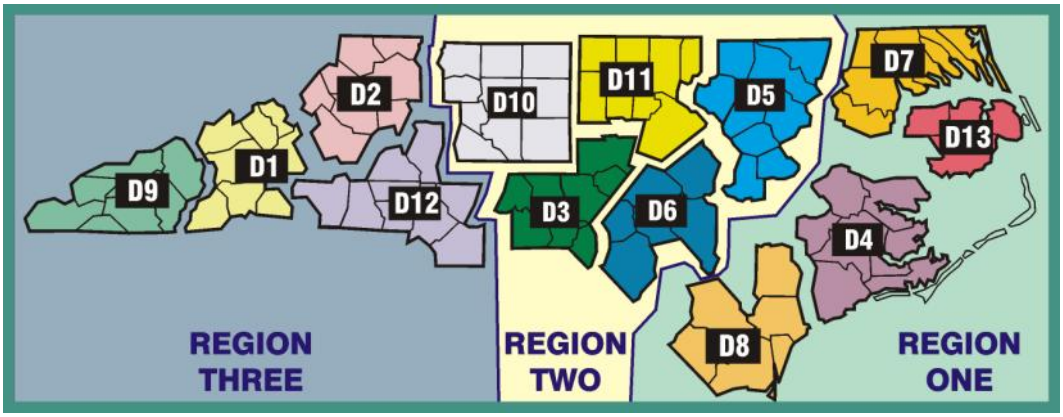
**The exposed soil on the streambanks would be an ideal location to install a rolled erosion control matting to prevent sedimentation from washing into this stream.**

**An attempt was made to cover the ruts on the skid trail, but more work should have been done to stabilize this approachway.**

**Think Before You Cross: Is This Stream Crossing Really Needed?**

# North Carolina Forest Service

**Forestry Nonpoint Source Branch**
**1616 Mail Service Center. Raleigh, NC. 27699-1616**




## District Office BMP Contacts

Northwest Piedmont: D-10
Lexington: 336-956-2111
Keith Money, Water Quality Forester

North Central Piedmont: D-11
Hillsborough: 919-732-8105
John McBryde, Water Quality Forester

Northeast Piedmont: D-5
Rocky Mount: 252-442-1626
Aaron Levine, Water Quality Forester

Western Sandhills: D-3
Rockingham: 910-997-9220
Matt Vincett, Water Quality Forester

Eastern Sandhills: D-6
Fayetteville: 910-437-2620
Roger Hart, Assistant District Forester

Piedmont Region Office: R-2
Jordan Lake: 919-542-1515
Mark Bost, Assistant Regional Forester for Forest Management

***Surf The Web***

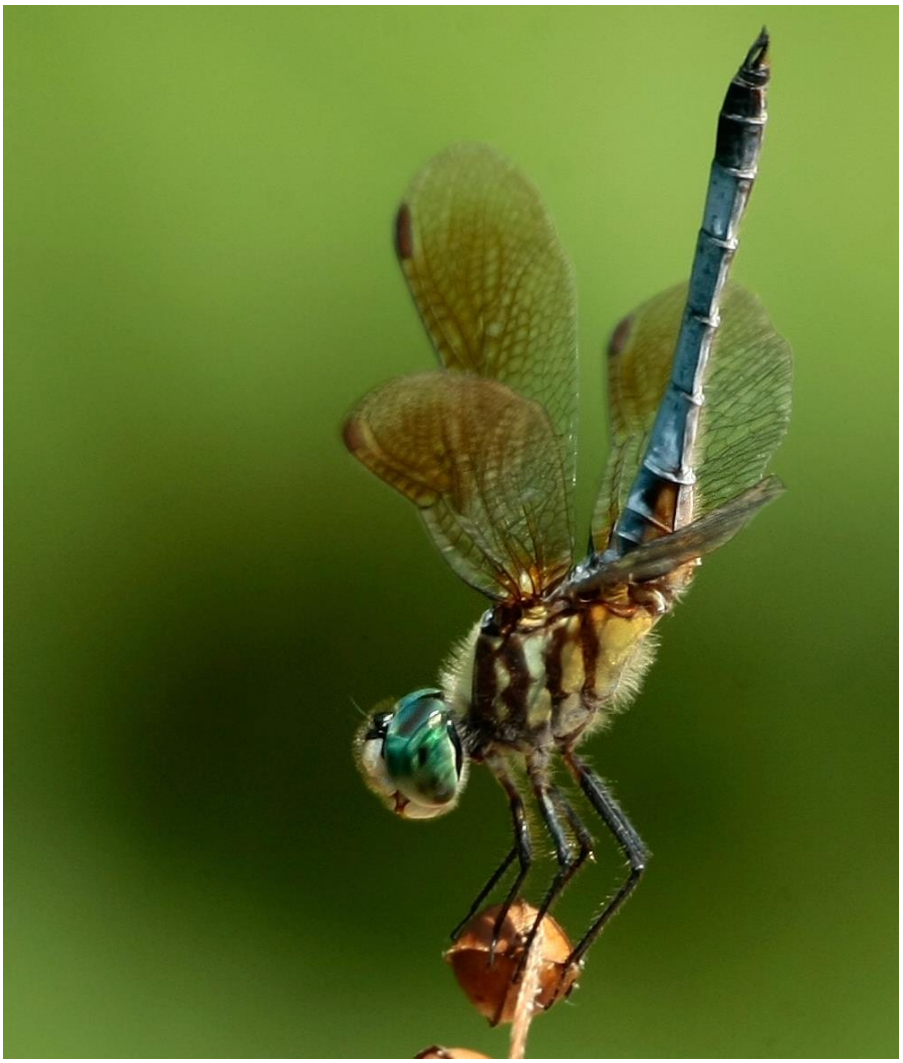
*Manage and Protect Your Forest - www.ncforestservice.gov*
*NCDA&CS Agricultural Services - www.ncagr.gov*
*Keep Your Home Safe From Wildfire - www.ncfirewise.org*
*Go Out and Learn in the Forest - www.ncesf.org*
*Locate NC-Grown Farm and Forestry Products - www.ncfarmfresh.com*

## Let's Play a Game: What's Wrong With This Picture?

**See how many potential BMP problems you can identify in this photo.**
**(No, this is not the same photo used in the previous edition. Get the point?).**

ANSWER:
This sloping skid trail has exposed, rutted soil with no groundcover, or effort to install erosion control BMPs (waterbars, turnouts).
Think about how much soil erosion will occur when a heavy rain hits this skid trail. Look at all of the leftover slash and laps around the cut-over… could some of that material been applied, run-over, and worked-in to cover this skid trail?
This photo was taken in central NC in August 2013.

# 2013 Nature of Orange Photography Contest Winners



**1st Place Adult**

**Dragonfly**

**Darren Strickland**

**2nd Place Adult—Magnolia View Farms in the Snow**

**Pringle Teetor**

**3rd Place Adult—Cecropia Moth**

**Statler Gilfillen**

# 2013 Nature of Orange Photography Contest Winners

## 1st Place Youth — Flight

## Kirby Lau

2nd Place Youth—Summer Showers

Kirby Lau

3rd Place Youth—At Eno River

Katerina Gilfillen

**Attachment**

# CFE Committee Priorities

(Updated October 2013)

## Air and Energy Resources Committee

(David Neal, Jan Sassaman, May Becker, Tom O'Dwyer, Gary Saunders, Lucy Adams, Terri Buckner)

1. Recommend a variety of strategies to the BOCC that would encourage energy efficiency in new construction and existing buildings, and recommend requirements for preserving Renewable Energy sites on new land development.

2. Create a countywide composting initiative that would help reduce the disposal of organic material in landfill.

3. Examine solid waste issues and collaborate with the Solid Waste Advisory Board (SWAB) on charting a course for the future with a focus on conservation and energy reduction.

4. Research and recommend appropriate use of biofuels and look into UNC's planned use of wood to replace coal at its cogeneration plant.

5. Assist in evaluating the County's carbon footprint as follow-up to the 2005 GHG inventory.

6. Help implement the County's goal of Environmental Responsibility in County Government.

7. Monitor upcoming statewide air quality standards ($O_3$ 75 ppb in 8-hour period; Hg 85%-90% control; PM < 2.5 µm), which could require additional controls on emissions from private and public sources.

## Water and Biological Resources Committee

(Peter Cada, Loren Hintz, David Welch, Susie Enoch, Steve Niezgoda, Jeanette O'Connor, Donna Lee Jones)

1. Develop and implement a monitoring plan and associated Quality Assurance Protection Plan (QAPP) for more frequent monitoring at existing State sampling locations; identify and initiate monitoring at other locations to support State water quality objectives under the Clean Water Act. Collaborate with other entities that may support these efforts (e.g., Eno River Association).

2. Explore and pursue funding sources to increase funding for the County's groundwater observation well network program (Orange Well Net).

3. Initiate efforts to create a detailed Water Budget for Orange County.

4. Revitalize effort to eliminate use of herbicides to manage vegetation in utility right of ways.

5. Help implement the development of a comprehensive conservation plan.

6. Educate the public about ways to promote biodiversity.