

AGENDA

Commission for the Environment February 9, 2015 7:30 p.m.

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

-
- | <u>Time</u> | <u>Item</u> | <u>Title</u> |
|-------------|-------------|--|
| 7:30 | I. | Call to Order |
| 7:32 | II. | Additions or Changes to Agenda |
| 7:35 | III. | Approval of Minutes – January 12 (Attachment 1) |
| 7:40 | IV. | Welcome New Member CFE members will welcome Tom Eisenhart who was appointed January 22. An updated roster of CFE members is provided. (Attachment 2) |
| 7:45 | V. | Composting of Food Waste Solid Waste Management staff will provide an update on the County's efforts to increase the composting of food waste and removing it from the solid waste stream. (Attachment 3) |
| 8:10 | VI. | Hydrilla in the Eno River Tom Davis will update the CFE on problems associated with hydrilla in the Eno River, and plans to conduct a two-year trial herbicide treatment. He will ask CFE members to help with public outreach, including an upcoming public information meeting. (Attachments 4-5) |
| 8:30 | VII. | Public Outreach CFE members will continue discussing ways to convey information from State of Environment report to elected officials, schools, and general public. Each committee will identify two initial topics to begin the effort using a combination of print/electronic media. (Attachment 6) |
| 8:45 | VIII. | Committee Meetings The CFE will break out into its standing committees (Air and Energy, Land, Water) to begin working on the committees' newly-identified priority tasks. A list of the committee tasks and a copy of the CFE's proposal for a Renewable Energy and Efficiency Work Group are provided for reference (Attachments 7-8) |
| 9:15 | IV. | Updates and Information Items Staff and/or CFE members will provide updates on the following items: <ul style="list-style-type: none">➤ Earth Evening – April 24 (Hillsborough)➤ County delivers recycling roll cars to rural service area (Attachment 9)➤ County to install additional electric vehicle charging stations (Attachment 10)➤ Hillsborough historic district eases process for solar panels (Attachment 11)➤ Leaks persist at coal ash ponds (Attachment 12)➤ OWASA annual report to Orange County (Attachment 13)➤ NC Botanical Garden hires new director (Attachment 14)➤ Covering parking lots with solar panels (Attachment 15)➤ The social cost of carbon due to climate change (Attachment 16)➤ Cities setting targets to reduce greenhouse gas emissions (Attachment 17) |
| 9:30 | V. | Adjournment <i>Next meeting:</i> March 9 (Richard Witted Meeting Facility - Hillsborough) |

CFE Meeting Ground Rules *(Adopted 9/12/11)*

1. Keep to agenda topic under discussion
2. Share relevant information
3. One person speaks at a time after recognition by the Chair
4. Everyone is invited to participate in discussions / no one person should dominate discussions
5. Strive to reach consensus first before voting

Activities the CFE expects to carry out in 2015:

- Continue to update the Orange County State of the Environment 2014 report
- Convene an Energy Task Force (or equivalent work group) to improve the County's ability to foster local sustainable energy production and energy efficiency strategies
- Recommend ways to reduce the County's "carbon footprint" and implement the County's Environmental Responsibility Goal
- Help with public outreach and management efforts related to hydrilla in Eno River
- Help initiate the development of a comprehensive conservation plan for Orange Co
- Collaborate with NC Botanical Garden and others to identify significant roadside habitat for native plants; ask NCDOT and other utilities to protect those roadside habitats [authorized by BOCC June 2012]
- Co-sponsor the annual DEAPR photography contest (*The Nature of Orange*)
- Help plan for and participate in DEAPR's annual Earth Day event

Concerns or emerging issues the CFE has identified for 2015:

- The CFE will continue to advocate for an expansion of the County's commercial food waste pickup and composting services to reduce food waste in the solid waste stream
- The CFE remains interested in developing incentives for increasing energy efficiency in new construction [January 2012 memo to Planning Board]
- The CFE will strive to learn more about environmental justice matters and incorporate relevant information and considerations in the State of the Environment 2014 report
- The CFE will follow closely the Solid Waste Advisory Group's discussions of how to improve the handling and disposal of Orange County's solid waste, and will advocate for better long-term solutions
- The CFE will continue to advocate for increased efforts to gather information related to water resources in Orange County and will continue to increase public awareness and understanding of water supply sources, related concerns, and what steps can be undertaken to maintain or improve the quantity and quality of Orange County water supply resources
- The CFE will continue to address, as appropriate, the critical environmental issues for Orange County as enumerated on page 3 of the 2014 State of the Environment report, which include potential adverse effects from a) invasive, non-native, plant and animal species; b) reductions in State-led collection of water resources data; c) potential drilling for natural gas in the Deep River basin; d) urban sprawl; and CFE support for e) the responsible deployment of clean and appropriately-sited renewable energy and reductions in energy use to help fight climate change

**Orange County
Commission for the Environment**

DRAFT Meeting Summary

January 12, 2015

Richard Whitted Meeting Facility, Hillsborough

PRESENT: Jan Sassaman (Chair), May Becker, Peter Cada, Loren Hintz, Donna Lee Jones, David Neal, Steve Niezgod, Bill Newby, Jeanette O'Connor, Rebecca Ray, Gary Saunders, Sheila Thomas-Ambat, Lydia Wegman, and David Welch

ABSENT: None

STAFF: Rich Shaw, Tom Davis, Brennan Bouma

- I. **Call to Order** – Sassaman called the meeting to order at 7:35 pm.
- II. **Additions or Changes to Agenda** – There were none.
- III. **Minutes** – Sassaman asked for a motion on the December 8 meeting summary. Becker offered a correction to a sentence on Page 2. Wegman motioned to approve as amended; seconded by Hintz. Approved unanimously. Sassaman asked staff to draft a response to the BOCC indicating the CFE is exploring ways to address social justice issues in the State of the Environment report and perhaps also recommending the BOCC add a consideration of social justice in the CFE's overall charge.
- IV. **Committee Meetings** – Sassaman asked CFE members to break into committees and continue prioritizing issues and work items for 2015. Each of the standing committees met for about 45 minutes (Air and Energy, Water, and Land resources committees).
- V. **Committee Reports** – Representatives from each committee reported on what they have prioritized as issues to work on in 2015.

Neal spoke on behalf of the Air and Energy Resources Committee, which prioritized its work items as follows:

- 1) Update the greenhouse gas emissions inventory, but first determine whether it will be feasible and worthwhile to perform a complete update of the 2005 inventory.
- 2) Encourage the County to implement a rebate for permit fees for green construction.
- 3) Educate county residents about climate change, alternative energy sources and efficiency, and steps to reduce their (and the county's) carbon footprint.
- 4) Partner with Piedmont Electric Membership Corporation to take advantage of USDA program for low-interest loans for energy efficient upgrades for its members/owners.
- 5) Proceed with creation of the planned Renewable Energy and Efficiency Work (RENEW) Group (utilizing the current CFE / Air & Energy Committee structure).

Hintz asked why the committee felt it needed to assess whether to conduct a complete update of the greenhouse gas emissions inventory, because he said any additional baseline data would be valuable. Cada agreed that the update would be valuable. Neal said the group wants to make sure any recommended measures would be implemented; for that reason they recommend some sort of cost-benefit analysis. Also, they want to

make sure any new inventory could be measured against the 2005 baseline data. Saunders noted that so much of the software technology has changed in the ten years since the initial inventory. We may not want to “drill down” to the same level of detail, but rather focus on more high-impact measures.

Hintz reported on the Land Resources Committee priorities as follows:

- 1) Help initiate the development of a comprehensive conservation plan for Orange County to be used by the Lands Legacy program and other land conservation programs to protect natural areas and wildlife habitat. Consider ways to ensure conservation land is distributed equitably throughout the county so that everyone has reasonable access to enjoy these areas.
- 2) Help educate homeowners and businesses on reasons to choose regionally native species for landscaping. Educate the public about ways to promote biodiversity in the home landscape.
- 3) Renew collaboration with NC Botanical Garden and others to identify significant roadside habitat for native plants; then asking NCDOT and other utilities to eliminate the use of herbicides to manage vegetation in those special roadside habitats.
- 4) Advocate for including land conservation (i.e., support for Lands Legacy program) as part of the planned bond package for 2016; then take the lead in educating the public about why protected space and natural areas are important for Orange County.

Hintz also reported that the committee recommends the CFE continue to co-sponsor the annual DEAPR photography contest (The Nature of Orange), help plan for and participate in DEAPR’s annual Earth Day event, and continue to update the State of the Environment 2014. He also said the committee identified the following issues for public outreach efforts: native species, land conservation, and composting food waste.

Cada reported on the priorities that were identified by the Water Resources Committee:

- 1) Public education about invasive species of concern, their extents/locations, and what steps can be taken to address them.
- 2) Increase the collection of data for surface and ground water quality (also increase public education so that it might lead to more funding for data collection).
- 3) Increase public education of our water supply, and what steps can be taken to improve/maintain quality and quantity of water supplies into the future.

Cada noted that efforts for each of these topics include a public education component.

- VI. **Public Outreach – SOE Report** – The CFE discusses various ways of conveying information from the State of the Environment report to the general public. Shaw noted that the information on various topics (such as fracking, invasive species, etc.) could be reformatted for different venues.

Wegman said her committee discussed preparing articles for printing in the News of Orange County and the Chapel Hill News. Niezgodna pointed out that it’s also important to post information to the social media, and as an example he has established a Facebook page for the CFE and will name O’Connor as manager of the page, which will allow to her post new entries on behalf of the CFE. Ray agreed that electronic media is important for getting out this information.

Wegman and Cada suggested the CFE use a combination of printed and electronic media, being mindful of the many segments of the community that use one over the

other. O'Connor suggested that some of the articles also be translated into Spanish. Sassaman, Hintz, and Ray noted that some of the church and civic organizations might be willing to help spread the information to their members. Sassaman said the Interfaith Council is one such organization that operates in southern Orange County.

Staff was asked to find out whether the County's IT department can formulate web information for mobile devices. Also, to find out if there is an opportunity to include information as inserts in the County tax information that is sent to households and businesses in January and September. Thomas-Ambat also suggested looking at the public water/sewer utility bills from OWASA and the Town of Hillsborough.

Sassaman asked Wegman to work with staff and members of each committee to identify the initial topics for the CFE to focus on for this public outreach effort.

- VII. **Updates and Information Items** – Information on the following subjects was provided and selected items were summarized by staff: a) County to purchase roll carts for rural recycling, b) prospects for fracking in NC, c) coal ash toxicity, d) relative rates of ozone production by different car types, e) The Nature of Orange photo contest 2015, and f) OWASA's consideration of ending its program of applying biosolids to farmland.
- VIII. **Adjournment** – Niezgoda motioned to adjourn the meeting; seconded by Wegman. The motion was approved unanimously. Sassaman adjourned at approximately 9:15 pm.

Summary by Rich Shaw, DEAPR Staff

Orange County COMMISSION FOR THE ENVIRONMENT

(updated January 2015)

| NAME OF MEMBER HOME ADDRESS/TELEPHONE | POS # | DATE OF APPOINTMENT COMMITTEE (Representation) | TERM ENDS | BUSINESS TELEPHONE E-MAIL | TOWNSHIP OF RESIDENCE |
|--|--|---|--------------|---|--------------------------|
| May Becker 511 Cotton Street Chapel Hill, NC 27516 | #1 | 9/21/10 & 11/6/14 Air & Energy Resources (At Large) | 12/31/17 | 919-969-7439 tomatocutter@yahoo.com | Chapel Hill |
| Peter Cada 420 Coach House Lane Hillsborough, NC 27278 | #10 | 9/21/10 & 11/6/14 Water Resources (At Large) | 12/31/17 | 919-485-2071 peter.cada@tetrattech.com | Eno |
| Thomas Eisenhart 605 Jones Ferry Road, Apt TT15 Carrboro, NC 27510 | #6 | 1/22/15 (At Large) | 12/31/16 | 919-360-7468 tomeisenhart@gmail.com | Chapel Hill |
| Loren Hintz 804 Kings Mill Rd. Chapel Hill, NC 27517 | #4 | 1/27/09 Land Resources (Biological Resources) | 12/31/16 | 919-933-8987 ldhintz@bellsouth.net | Chapel Hill |
| Donna Lee Jones 3035 Carriage Trail Hillsborough, NC 27278 | #5 | 5/21/13 Water Resources (Water Resources) | 12/31/15 | 919-541-5251 donnaleejones13@hotmail.com | Eno |
| David Neal 323 West Queen Street Hillsborough, NC 27278 | #13 | 9/21/10 Air & Energy Resources (At Large) | 12/31/15 | 919-732-2156 David.L.Neal@gmail.com | Hillsborough |
| William Newby 2821 Becketts Ridge Road Hillsborough, NC 27278 | #2 | 5/20/14 Air & Energy Resources (Air Quality) | 12/31/16 | 919-541-5296 newby.william@epa.gov | Hillsborough |
| Jeanette O'Connor 117 S Peak Dr. Carrboro, NC 27510 | #9 | 5/21/13 & 11/6/14 Land Resources (At Large) | 12/31/17 | 703-678-6893 jeanette.oconnor@gmail.com | Chapel Hill |
| Rebecca Ray 5617 Jomali Drive Durham, NC 27705 | #15 | 11/19/13 Water Resources (At Large) | 12/31/15 | 919-383-0685 rebecca.ray@nc.rr.com | Eno |
| Jan Sassaman (Chair) 201 Bolinwood Drive Chapel Hill, NC 27514 | #7 | 12/13/11 Air & Energy Resources (At Large) | 12/31/16 | 919-933-1609 jan.sassaman@gmail.com | Chapel Hill |
| Gary Saunders 103 Woodshire Lane Chapel Hill, NC 27514 | #12 | 1/27/09 Air & Energy Resources (Engineer) | 12/31/15 | 919-707-8413 gary.saunders@ncdenr.gov | Chapel Hill |
| Sheila Thomas-Ambat 103 Hunter Hill Place Chapel Hill, NC 27517 | #8 | 11/6/14 Water Resources (At Large) | 12/31/16 | 919-225-4744 staemail@yahoo.com | Chapel Hill |
| Lydia Wegman (Vice Chair) 5704 Cascade Drive Chapel Hill, NC 27514 | #3 | 11/19/13 & 11/6/14 Land Resources (At Large) | 12/31/17 | 919-886-8775 lnwegman@gmail.com | Chapel Hill |
| David Welch 20 East Drive Chapel Hill, NC 27516 | #11 | 9/21/10 & 11/6/14 Land Resources (At Large) | 12/31/17 | 919-406-2101 davwelch@hotmail.com | Chapel Hill |
| VACANT | #14 | (At Large) | 12/31/15 | | |
| David Stancil Rich Shaw Tom Davis Brennan Bouma | 245-2522 245-2514 245-2513 245-2626 | Director, Dept. of Environment, Agriculture, Parks & Rec. Land Conservation Manager Water Resources Coordinator Sustainability Coordinator | | dstancil@orangecountync.gov rshaw@orangecountync.gov tdavis@orangecountync.gov bbouma@orangecountync.gov | |

From the Solid Waste Management Department webpage:

Commercial Food Waste Collection

Orange County Solid Waste Management operates an Organics Recycling Program that diverts about 1,500 tons of food waste and other compostable organic material from landfill disposal each year. Collection and composting service is performed by our contractor, Brooks Contracting. This program accepts source-separated organic materials such as kitchen and produce or meat department prep waste, post-consumer plate waste, and other compostable organic materials from local restaurants, grocery stores, institutions and food service establishments for composting. The finished compost is available to purchase locally at the Orange County Landfill and Southern States in Carrboro.

Home Composting

Why Compost? Composting is recycling! Composting is the natural process that decomposes yard waste and food waste to make a brown, crumbly soil additive that enhances the health of your lawn and gardens. Adding finished compost to soil improves soil texture, helps soil retain moisture, reduces run-off, and naturally increases nutrient content to help sustain healthy plants. Healthier plants are more resistant to pests and disease.

Diverting organic waste from the Orange County Landfill for composting conserves precious landfill space and reduces production of methane from anaerobic waste decomposition in the landfill. Twenty percent of Orange County's waste is food waste.

Anaerobic decomposition of organic waste such as food waste and yard waste in landfills is the #1 producer of methane gas in the United States. When not controlled and simply vented to the atmosphere, methane gas is the most potent of all the greenhouse gases contributing twenty-five times as much to climate change as carbon dioxide.

Home composting also saves the energy used to run waste collection trucks, conserves water in the garden by helping soils retain moisture, and reduces the need for chemical pesticides and fertilizers - all of which save money - and the environment wins as well.

To learn more about the benefits and the process of composting, visit the Outdoor Demonstration Sites in Orange County:

- Orange County Solid Waste Management Office 1207 Eubanks Rd. Chapel Hill
- Community Center (behind the rose garden) on S. Estes Drive in Chapel Hill

Orange County Solid Waste Management provides compost demonstrations several times a year the Outdoor Composting Demonstration Sites. Contact (919) 968-2788 or recycling@orangecountync.gov to find out more about indoor composting using worms or outdoor composting demonstrations.

If your neighborhood, civic group, garden group, or faith-based organization is interested in learning how to compost, you can arrange a class with OC Solid Waste Management staff at one of the demonstration sites or at your location. We also offer assistance in starting a composting program on site.

Web Sites

<http://www.mastercomposter.com/purpose/compost.html>
<http://your.kingcounty.gov/solidwaste/composting-soils/index.asp>
<http://www.cityfarmer.org/homecompost4.html>
<http://www.howtocompost.org/>

How to Compost

There are as many different ways to compost as there are people who compost!

There are four basic ingredients needed to compost: Oxygen, Water, Carbon ("Brown material such as wood chips, brown leaves, or shredded newspaper), and Nitrogen ("Green" wet waste such as grass clippings, or fruit and vegetable scraps from your kitchen). If you have these ingredients, you can compost at your home, office, or school.

For more information on composting methods, visit:

<http://www.mastercomposter.com>

<http://www.ciwmb.ca.gov/Organics/HomeCompost/>

<http://www.oldgrowth.org/compost/home.html>

Many people prefer a tidy structure in which to place their organic waste, whether it be a commercially available composting bin or a home-made one. Building a loose pile of leaves, food waste, grasses and brush or digging a hole in the ground to bury the materials are time-honored composting methods as well. Each method has its pros and cons, depending on one's living situation and one's composting goals.

Orange County Solid Waste Management sells compost bins known as the "Earth Machine" for \$50 at the administrative office, 1207 Eubanks Rd. Chapel Hill, Monday - Friday 8:00-5:00. For more information on commercially available composting units visit:

[Earth Machine](#)

<http://www.mastercomposter.com>

<http://www.composters.com>

Composting is not limited to the outdoors. **Indoor composting** using red worms is an efficient method to convert organic waste into wonderful rich compost too, good for houseplants as well as outdoor landscapes and gardens.

For more information on composting with worms, visit:

<http://www.ciwmb.ca.gov/Vermi/>

<http://www.mastercomposter.com/worm/index.html>

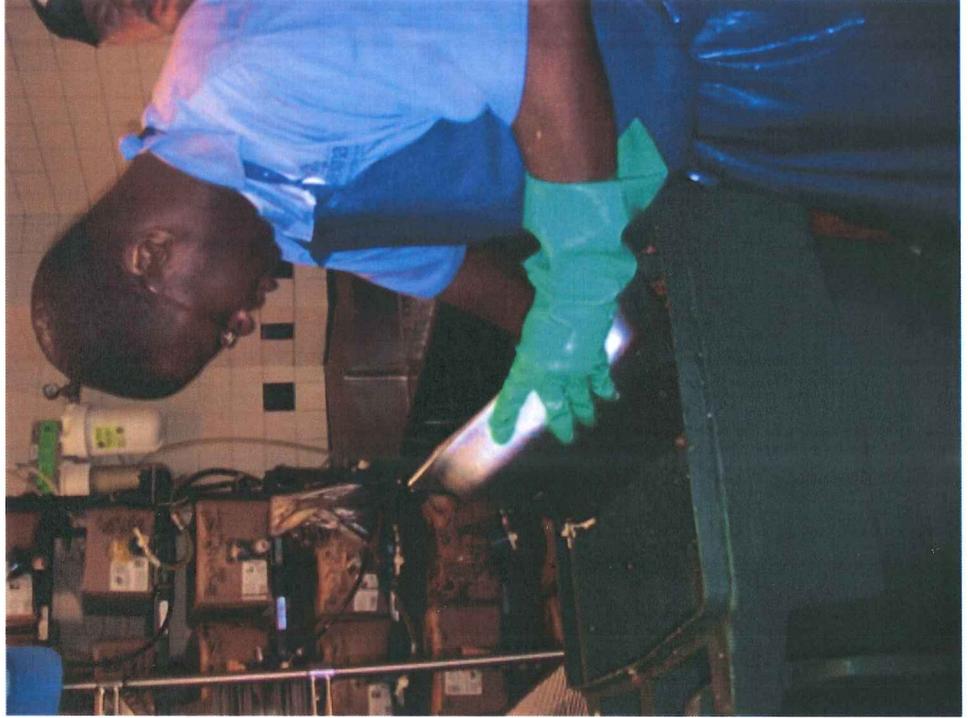
<http://www.wormwoman.com/acatalog/index.html>

The links listed on this page by no means encompass the wealth of composting resources on the World Wide Web. Sources listed here do not represent endorsement of one information resource over the other.



Food Waste

During FY 2013-2014, UNC composted 649 tons of food waste.





THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Brooks Contractors



UNC has composted over
10 million pounds of food
waste since the program
began in 2000.



From the North Carolina Sustainability Connection:

Chapel Hill/Carrboro Schools Divert 32,940 Pounds of Trash from Landfill



Credit: Chapel Hill-Carrboro City Schools

Dan Schnitzer's job is to prove that sustainability pays off for Chapel Hill-Carrboro City schools. So far, the numbers are adding up.

A district-wide composting and waste education effort, funded by savings from more efficient dumpster use, has led to these impressive results since the school year's start ten weeks ago:

- 19 bags of lunch trash generated daily by 15 schools, down from 155 last year
- 32,940 pounds of waste diverted from the landfill
- 12.5 metric tons of carbon dioxide emissions prevented
- 2.5 metric tons of carbon dioxide emissions absorbed through creation of compost
- 87 percent reduction in cafeteria landfill waste

When Schnitzer began his role as the school district's first full-time sustainability coordinator last November, a transition from styrofoam to compostable cafeteria trays was already underway with assistance from an organization called [Every Tray Counts](#). This year, all elementary and middle schools became involved, with 8,000 students separating compostable, recyclable, and landfill waste every day in cafeterias across the district.

The transition was an incredibly collaborative process between parents, teachers, students, custodians, food service staff and composting companies, says Schnitzer. Volunteers contributed more than 500 hours during the first two weeks of the school year to get the project off the ground.

Schnitzer has been able to position the composting program as self-sustaining by funding it through cost-savings from a reduction of trash removal inefficiencies.

“We did a dumpster audit to look at how we can be more efficient and saw that we were literally throwing away money,” he says. Like other businesses, schools pay every time a dumpster is picked up. The audit showed that, over a period of weeks, many dumpsters were picked up partially empty. By looking at patterns of use and strategically switching the days of removal, they reduced the number of weekly pick-ups at many schools from three to two, and removed some dumpsters from service altogether. The money saved in the trash line item of the budget was then freed up for compostable waste programming.

Schnitzer, with a graduate degree in Environmental Management and Sustainability, spent six years helping manage an environmental charter school in Chicago. This background, as well as his experience directing an overnight summer camp, taught him about the challenges schools face in balancing priorities with financial, education, and environmental impacts. He looks for ways to save money and then leverage that savings in smarter ways.

“That’s the perspective I bring to this job: an understanding that there are competing pressures and priorities in the district,” says Schnitzer. “Part of the challenge is that changes don’t always benefit everyone. Sometimes things are less convenient or take more time and work.” He tries to figure out what motivates people and frame sustainability in those terms. “It takes a leap of faith to invest money upfront with a spreadsheet for later gain,” says Schnitzer.

While other NC school districts, like Granville County for example, have recycling coordinators, Schnitzer’s role is unique in breadth of reach across the school system. He engages with food service employees, facilities management, teachers, parents, school garden coordinators, custodial staff, and others as project partners.

Schnitzer’s next plans for the school district will target improvement of light and energy use through LED upgrades and better efficiency. “We’re working hard to optimize what we have, by making sure time schedules are set and running properly, and by looking at usage patterns in different areas of the buildings.”

Educational opportunities are even more important than the immediate environmental gains of sustainability initiatives in schools, says Schnitzer. “Parents and teachers are not tangential. If we’re not teaching the kids these lessons, then we’re missing 90 percent of the impact.”

While science class provides a clear opportunity to teach about environmental topics like waste and conservation, lessons of sustainability can be relevant across the curriculum through reading assignments, tasks, and exercises framed around these issues. For example, Schnitzer had the chance to discuss waste management with a graphics design class that created art for the district’s sustainability logo and signage for the composting initiative.

“I believe an entire school curriculum can be built at any grade level around a school garden” says Schnitzer. “Sustainability issues affect everyone.”

Hydrilla in the Eno River Watershed

Hydrilla verticillata (hydrilla) is an invasive submerged aquatic weed that is native to Asia. It grows quickly, reproduces easily and can infest water bodies. Hydrilla is regulated by the Federal and many State governments. This highly invasive plant is illegal to transport, grow or sell. Hydrilla has been identified as the biggest threat to the natural resources of Eno River State Park because it has the potential to negatively impact fish communities, out compete native aquatic vegetation, as well as impede swimming, boating and fishing activities. Hydrilla has also been linked to Avian Vacuolar Myelinopathy (AVM), a syndrome that is fatal for waterfowl, including birds of prey such as Bald Eagles that feed on AVM-affected waterfowl. If management steps are not undertaken, hydrilla is likely to spread further downstream in the Eno River and into Falls Lake and beyond, negatively impacting additional important natural resources and recreational activities.

History of Hydrilla in the Eno River Watershed

- Hydrilla was first found in Lake Orange in the early 1990's.
- Hydrilla was first documented in the Eno River State Park in 2005.
- The West Fork Eno Reservoir was first confirmed to contain hydrilla in 2009.
- A survey conducted in 2013 found approximately 25 miles of the Eno River contained hydrilla. Heavy infestation was present in nearly 15 miles of the river.
- In 2014, Arrowhead Lake was found to be infested. Hydrilla has also been found repeatedly in Corporation Lake.

What can be done about Hydrilla in the Eno River?

The Eno River Hydrilla Management Task Force, a group of Federal, State, and local government representatives, has been working since 2007 to evaluate and address this situation. The options available for addressing the infestation of the Eno River are limited to "no action", physical removal, biological control, and the use of EPA-approved herbicides. The Task Force is working to finalize a two year pilot study to evaluate the use of EPA-approved herbicide to manage hydrilla within a section of the Eno River.

April 29, 2015 Public Information Open House 6:00 pm

A Public Information Open House will be held on **April 29, 2015 at 6:00 pm** to allow interested members of the public to learn more about the proposed two-year pilot study for management of hydrilla in the Eno River. This meeting will be held in **Conference Room 230 in the Whitted Building at 300 West Tryon Street** in Hillsborough, 27278. Directions are available on-line at: <http://server2.co.orange.nc.us/servicelocator/default.aspx?LocationID=19>

Further information: Task Force Web Site???????

<http://www.ncwater.org/?page=72/>

<http://www.weedscience.ncsu.edu/aquaticweeds/default.asp>

Contacts:

Rob Emens, NCDENR, DWR, Aquatic Weed Control Program rob.emens@ncdenr.gov

Dr. Rob Richardson, Assistant Professor of Crop Science, NCSU rob_richardson@ncsu.edu

The News of Orange County

TOWN ENVIRONMENT

Town to join trial treatment of invasive plant

BY ERIN WEEKS

News of Orange editor
e.weeks@newsfororange.com

Hillsborough will face the battle against hydrilla in the Eno River head-on, partnering with other agencies to conduct a two-year trial treatment to eradicate the invasive plant.

The project will involve putting chemicals—approved for both water quality and environmental safety—in the river just downstream of the water treatment plant.

Town board members heard an update at their Monday, Jan. 26, work session, looking at the variety of possibilities a statewide task force had already ruled out to combat the hydrilla and walking through the different concerns involved with chemicals.

“It is kind of a monster out there,” Stormwater Manager Terry Hackett said. “It is an invasive aquatic weed that is regulated both at the state and federal level, so entities have to do something about it.”

Hydrilla originally came over from Asia as an accessory in fish tanks.

“It was brought over for aquariums,” Hackett said. “People liked it with aquariums, and flush your dead fish

down the toilet along with hydrilla, well guess what? It reproduces both from fragmentation stolens and tubers, and the tubers—little seedpods, if you will—can actually remain viable in the sediment up to six years. It’s a pretty hardy plant.”

Inspections first found hydrilla in the Eno River in 2005, but recordings of the plant in Lake Orange date back to the ’90s. Hydrilla showed up in Hillsborough’s reservoir in 2009.

“I know there’s a pond east of Lake Orange that has it, has several acres in it, so it’s a watershed-wide problem,” Hackett said. “But it’s relatively rare in moving systems. There’s not a lot of rivers that have hydrilla. The Eno is somewhat unique just because of the flashy nature; it gets low in the summer when the growing season for this stuff is at its peak.”

Kudzu of the river

Hydrilla has several ramifications for ecosystems, including a disease that can infect water fowl—and by extension other birds—that eat or come in contact with it. But the plant also out-competes native vegetation, which can endanger the habitats of a host of living things,

including the state-endangered panhandle pebble snail and the Roanoke bass, a species of concern.

“Recreation potentials, Eno River State Park considers this their No. 1 issue because you can’t swim in it,” Hackett said. “You can’t boat in it; you can’t wade in it. It’s just a mess, and it’s aesthetically unpleasing. And so it really hurts them. More importantly for the general populous, it can clog our water intake. That can become problematic, a lot of maintenance.”

The stormwater manger also said the patches of weed can cause issues for water quality.

“As the plant dies, that organic matter goes downstream, and it’s just additional organic matter in the system,” he said. “It really just throws the whole ecosystem out of balance, and so that’s how I tie it back to water quality—that and it does use a lot of oxygen as it grows.”

Trial and error

Knowing hydrilla had become a problem, various groups have tried different ways to combat the weed. Eno River State Park staff tackled the issue with manual labor, trying

see HYDRILLA page 13

HYDRILLA

CONTINUED FROM FRONT

to remove it by hand a few years back.

"Not only was it way too much work, you just continue to break off the pieces," Hackett said. "And the pieces float down stream, and they can reattach and grow. So not the best."

Other areas—including Hillsborough's West Fork

GET INVOLVED

To learn more about the issue of hydrilla in the Eno River and the proposed plan to combat it with herbicides, come to a meeting in the Whitted Building on Wednesday, April 29, at 6 p.m. Experts will give a presentation and be available to answer questions.

Eno Reservoir—have used grass carp to get rid of hydrilla. But while that method has worked wonders in a lake-type environment, Hackett said it wouldn't work in the river.

"In a reservoir situation like West Fork, putting in the sterile grass carp is the best thing because we're managing it

as a water tank, if you will," he said. "... The truth is that in the river system where there's so many things going on, even a few grass carp—if they would stay put—they would eat everything, and we'd lose habitat that we're trying to protect. So not the best option for moving systems."

The Wildlife Resource Commission did test the idea last summer, putting 25 tagged grass carp into the river, but—as predicted—the fish moved too much to be effective.

Herbicide

The solution the statewide task force and state experts have settled on is herbicide, pumping chemicals into the river on an electronic pulse. The group decided to conduct a two-year trial first in Hillsborough with a close monitoring system before applying it to the rest of the watershed.

"I don't think anybody has tried these herbicide treatments in a moving system," Hackett said. "That's what's new about this and why we don't start rolling

it out watershed-wide. ... We're looking at putting chemicals in the river, and that's what it boils down to. But the good thing is we're going about this in the proper way."

An environmental assessment—which includes a toxicity study conducted by N.C. State University looking at the affects on both humans and plants and animals—is going through internal review at the N.C. Department of Natural Resources. Once through there, which Hackett estimated would be in three to four weeks, it will become a public document and the two-year trial will start. Monitoring will continue throughout the process.

Though the Hillsborough water plant conducted a jar study to test how the chemicals would affect drinking water—and the results came back clean—Hackett said the injection site would be downriver of the plant. The test will cost the town about \$5,000 a year, spreading the \$75,000 in annual costs among six other stakeholders.

"I think it's worth trying because the financial implications of not managing this could really mushroom," Hackett said.

Potential hazards

Hackett said that while the public perception of putting chemicals in the river will more than likely be a negative one, experts have said it won't have any real effect. The concentration is five parts per billion, a very small number, he said.

"At that concentration, it's safe for contact so for swimming, fishing, wading kids—that's not going to be a problem," he said. "The only thing that it does talk about at this concentration is irrigation for food crops."

Local soil and water staff have said that no farming operations in the area draw water from the Eno, but Hackett said they couldn't rule out potential families using the river for family gardens.

"That will be part of our outreach," he said.

Board members agreed that public education would be necessary going forward.

"I hope that we're prepared when the questions start arriving," board member Brian Lowen said. "When people start hearing about chemicals, we need to be prepared as elected officials to tell our residents that it's been proven that this is not going to adversely affect their drinking water."

**ORANGE COUNTY
DEPARTMENT OF ENVIRONMENT, AGRICULTURE,
PARKS AND RECREATION**

MEMORANDUM

To: Commission for the Environment
From: Rich Shaw
Date: February 4, 2015
Subject: Public Outreach and the State of the Environment Report 2014

In January the CFE discussed various ways of conveying information from the State of the Environment report to the general public.

CFE members discuss how information on various topics (such as fracking, invasive species, energy conservation, etc.) can be reformatted for a combination of printed and electronic media, including the DEAPR/CFE webpage, newspaper articles, handouts for street fairs/exhibits, and posting on social media (such as the new CFE Facebook page created by Steve Niezgoda!). Articles could also be sent to church and civic organizations that might be willing to help spread information to their members. Some articles could be translated into Spanish.

Each committee was asked to identify topics from the SOE report for CFE members to work with the Staff on reformatting the information for other forms of printed and electronic media. In some cases, the information may need to be revised or condensed. In some cases, we may need to improve the graphics or find better photographs.

The following is my understanding of the topics identified thus far:

Land Resources Committee:

- Invasive plants / Choosing native species (SOE pp. 43 – 44)
- Land conservation (SOE pp. 25 – 30)
- Composting food waste (SOE pp. 37 – 42)

Water Resources Committee:

- Potential effects of fracking in Orange County (SOE pp. 71 – 72)
- Invasive aquatic plants, such as Hydrilla (SOE pp. 69 – 70)
- Water supply (SOE pp. 47 – 54)

Air and Energy Resources Committee:

- Climate change (SOE pp. ii – iii; 9 – 10; 13 – 14)
- Alternative energy sources and efficiency (SOE pp. 19 – 22)
- Reducing your carbon footprint (SOE pp. 7 – 8; 15 – 18)

CFE Committee Priorities

(as of February 2015)

Air and Energy Resources Committee

(May Becker, David Neal, Bill Newby, Gary Saunders, and Jan Sassaman)

1. GHG Emissions Inventory - Update the County 2005 greenhouse gas emissions inventory. (First determine whether it will be feasible & worthwhile to perform a complete update.)
2. Green Building – Help County implement a rebate on permit fees for green construction.
3. Climate Change - Educate county residents about climate change, alternative energy sources and efficiency, and steps to reduce their (and the county's) carbon footprint.
4. Energy Efficiency - Partner with Piedmont Electric Membership Corp. to take advantage of USDA program for low-interest loans for energy efficient upgrades for its members/owners.
5. RENEW Group – Proceed with the creation of the planned Renewable Energy and Efficiency Work Group (utilizing the current CFE / Air & Energy Committee structure).

Water Resources Committee

(Peter Cada, Donna Lee Jones, Rebecca Ray, Sheila Thomas-Ambat)

1. Invasive Species – Educate the public about invasive species of concern, their extents/ locations, and what steps can be taken to address them.
2. Surface and Ground Water Quality - Increase the collection of data for surface and ground water quality; increase public education so it might lead to more funding for data collection.
3. Water Supply - Increase public education of our water supply, and what steps can be taken to improve/maintain quality and quantity of water supplies into the future.

Land Resources Committee

(Loren Hintz, Jeanette O'Connor, Lydia Wegman, and David Welch)

1. Comprehensive Conservation Plan - Initiate development of a comprehensive conservation plan for Orange County, to be used by Lands Legacy program and others to protect natural areas and wildlife habitat. Consider ways to ensure conservation land is distributed equitably throughout the county so that everyone has reasonable access to enjoy these areas.
2. Native Plant Habitats - Renew collaboration with NC Botanical Garden and others to identify significant roadside habitat for native plants; then ask NCDOT and other utilities to eliminate the use of herbicides to manage vegetation in those special roadside habitats.
3. Native Landscaping - Educate the public (homeowners/businesses) on reasons to choosing a diversity of regionally native species for landscaping and other ways to promote biodiversity in the home landscape.
4. 2016 Bond Package - Advocate for including land conservation (i.e., support for Lands Legacy program) as part of the planned bond package for 2016; take the lead in educating the public about why protected space and natural areas are important for Orange County.

**ORANGE COUNTY
COMMISSION FOR THE ENVIRONMENT**

MEMORANDUM

To: Board of County Commissioners

From: David Neal, Chair, Orange County Commission for the Environment

Date: January 22, 2013

Re: Proposal for a Renewable Energy and Efficiency Work Group Convened by the CFE

Goal #1 of the 2030 Orange County Comprehensive Plan, Natural and Cultural Resources Element: *Energy conservation, sustainable use of non-polluting renewable energy resources, efficient use of non-renewable energy resources, and clean air* (Page 6-9).

The BOCC requested that the Orange County Commission for the Environment (CFE) propose a response to the August 8, 2012 letter from Jim Warren of NC WARN. The CFE recommends convening a standing work group that would support energy efficiency, renewable energy, and related sustainable development strategies in Orange County. This Renewable Energy and Efficiency Work Group (RENEW Group) would be charged with bringing public and private stakeholders together to develop policies and initiatives that promote sustainable economic development, energy efficiency, and renewable energy in Orange County. The CFE would, in turn, bring vetted proposals from the RENEW Group to the BOCC for consideration.

As it presently operates, the CFE has an Air and Energy Committee. The present committee would act as a host and liaison with the CFE for the work group and would convene meetings, workshops, and other activities of the RENEW Group. The work group would consist of CFE members, representatives of municipal and county planning boards and staff, municipal and county sustainability staff or committee members, and any BOCC who might wish to participate. The RENEW Group would host individual public workshops and forums with emphasis on specific topics such as:

- Reducing energy use in existing buildings and new construction
- Maximizing the production and use of renewable and clean energy
- Reducing carbon emissions in transportation
- Promoting strategies for offsetting carbon emissions
- Eliminating or altering existing policies or code provisions that hinder any of the above at the county level

Reducing our collective carbon emissions should be a high priority for Orange County. Global climate change is accelerating at a rate exceeding scientific projections, exacerbating drought, storms, and flooding with devastating effects. Climate scientists agree that society must make dramatic changes in the way we source and use energy in the next several years. The consequences of inaction threaten to be drastic.

The RENEW Group would provide an opportunity for Orange County to promote forward-thinking local policies with the cooperation of local government representatives, private businesses, and environmental groups. With collaboration and input from a variety of experts, municipal and county staff, elected officials, and other stakeholders, we can find creative ways to lower our carbon footprint while also giving a boost to our local economy. By coming together at a central point to share information and coordinating action, we can avoid the pitfalls of working in isolation. Finally, the RENEW Group would enhance information sharing and communication with the deployment of an Orange County Green webpage.

The CFE unanimously approved this proposal and requests the BOCC's consideration and endorsement of CFE's convening a Renewable Energy and Efficiency Work Group.

Rich Shaw

From: Carla Banks
Sent: Tuesday, January 27, 2015 4:13 PM
To: Carla Banks
Subject: Press Release- ORANGE COUNTY DELIVERS ROLL CARTS TO RURAL RECYCLING SERVICE AREA



Media Contact:

Gayle Wilson, Director
Orange County Solid Waste Management
Phone: 919.968.2788
recycling@orangecountync.gov

FOR IMMEDIATE RELEASE

ORANGE COUNTY DELIVERS ROLL CARTS TO RURAL RECYCLING SERVICE AREA

ORANGE COUNTY, NC (January 27, 2015)—Orange County Solid Waste is delivering recycling roll carts to residents currently residing in the unincorporated or rural portion of the county that receives bi-weekly curbside recycling collection.

Approximately 7,000 blue recycling roll carts with black lids are being delivered to residents who had previously requested a cart. Delivery started on Friday, January 23. It is anticipated all carts will be delivered by the end of February, weather dependent.

Residents may start using their new roll cart as soon as they receive them, on their next scheduled recycling day, at their usual recycling location. Each cart will have a full color brochure tied to the handle containing detailed instructions about proper material preparation, cart placement as well as information regarding other solid waste programs and services.

Residents who receive a cart can either keep their 18-gallon orange recycling bins for household use, or recycle the bins by dropping them off at one of the five Solid Waste Convenience Centers located throughout Orange County. Some bins will be repurposed for reuse in area schools or available to residents upon request.

Please note we are offering 95-gallon roll carts as an OPTION for curbside recycling in the rural curbside service area only. Rural residents who want to use the orange bins for bi-weekly curbside recycling can and should continue to use their bins at the curb as normal. Carts will only be delivered to those who have requested a cart.

Rules and Regulations

If a residence has a cart at the curb, only the cart will be collected, not a mix of bins and carts at a household, or any materials left on the ground. Carts must also be at the curb or edge of the road, prior to 7:00 a.m. on the scheduled collection day; allow three feet between the cart and other objects, such as trees or mailboxes; and must have the cart opening facing the street. The cart lid will have three large arrows on it helping to guide how to properly place it at the curb.

Using a cart for curbside recycling will help to increase collection efficiency, increase collection capacity, reduce litter, and be safer for our drivers.

Residents in the current service area who would like to request a new roll cart for bi-weekly rural curbside collection or for more information, please call Orange County Solid Waste at 919.968.2788.



Photo Caption: Roll carts being delivered to Orange County rural recycling service area

###

Regards,

Carla Banks

Director of Public Affairs
Orange County Government
200 S. Cameron Street
Hillsborough, NC 27278

Office: 919.245.2302
Mobile: 919.475.6650
www.orangecountync.gov



**ORANGE COUNTY
BOARD OF COMMISSIONERS**

ACTION AGENDA ITEM ABSTRACT

Meeting Date: January 22, 2015

**Action Agenda
Item No.** 6-k

SUBJECT: Right-of-Way Agreements for Duke Energy for the Provision of Electrical Service to Electric Vehicle Charging Stations

DEPARTMENT: Asset Management Services

PUBLIC HEARING: (Y/N)

No

ATTACHMENT(S):

1. April 15, 2014 BOCC Abstract & Attachments
2. Brightfield Licensing Agreement
3. Right-of- Way Agreement – 501 W. Franklin
4. Right-of-Way Agreement – 144 E. Margaret Lane

INFORMATION CONTACT:

Alan Dorman, 919-245-2627
Jeff Thompson, 919-245-2658

PURPOSE: To approve and authorize the Chair to sign Right-of-Way Agreements with Duke Energy for the purpose of providing electrical service to Brightfield electric vehicle charging stations to be built next to the Skills Development Center and the Farmers Market Pavilion.

BACKGROUND: On April 15, 2014 the Board approved a licensing agreement with Brightfield Transportation Solutions (“Brightfield”) for the purpose of building two electric vehicle charging stations, one located at the Skills Development Center and the second near the Farmers Market Pavilion (see Attachments 1 and 2, original abstract and Brightfield licensing agreement).

Both stations will include a DC Fast Charger and two “Level 2” chargers. When the stations are completed, there will be no cost for residents to use the “level 2” chargers and an \$8 charge to use the DC Fast Charger. Both sites will require Duke Energy to provide new electrical service. Since the electricity meters for these stations will be the responsibility of Brightfield according to the Licensing Agreement, Duke Energy requires that the County enter into Right-of-Way Agreements with Duke Energy so that the service may be provided and maintained.

FINANCIAL IMPACT: None.

RECOMMENDATION(S): The Manager recommends that the Board approve and authorize the Chair to sign the Right-of-Way Agreements with Duke Energy for the purpose of providing electrical service to Brightfield electric vehicle charging stations to be built next to the Skills Development Center and the Farmers Market Pavilion.

**ORANGE COUNTY
BOARD OF COMMISSIONERS**

ACTION AGENDA ITEM ABSTRACT

Meeting Date: April 15, 2014

**Action Agenda
Item No.** 7-c

SUBJECT: DC Fast Charger Electric Vehicle Station Licensing Agreement with Brightfield Transportation Solutions

DEPARTMENT: Asset Management Services,
Department of Environment,
Agriculture, Parks &
Recreation, County Attorney

PUBLIC HEARING: (Y/N)

| |
|----|
| No |
|----|

ATTACHMENT(S):

- 1) Site Locator
- 2) Typical Installation Illustrative
- 3) Licensing Agreement

INFORMATION CONTACT:

Jeff Thompson, 919-245-2658
David Stancil, 919-245-2522
John Roberts, 919-245-2318

PURPOSE: To consider:

- 1) Approving a Licensing Agreement and associated Easements granted to Brightfield Transportation Solutions for electric vehicle "DC Fast Charger" fueling station construction and operations at The Justice Facility parking lot in Hillsborough, NC and the Skills Development Center parking lot in Chapel Hill, NC;
- 2) authorizing the Chair to sign all necessary documents upon final review of the County Attorney.

BACKGROUND: Orange County is a leader in North Carolina (among both the public and private sectors) in developing and offering for use electric vehicle charging stations to its residents and stakeholders.

In 2011 the Board of County Commissioners authorized staff to secure an \$83,540 grant with the United States Department of Energy and its Carolina Blue Skies & Green Jobs Initiative for the installation of 16 "Level 2" electric vehicle charging stations. These funds were accepted in November 2011, and the 16 stations were successfully installed in 2012. Attachment 1, "Site Locator", illustrates where these charging stations are installed and publicly available. The Agenda Abstract for the November 15, 2011 grant acceptance and installation authorization can be found at <http://www.co.orange.nc.us/OCCLERKS/111115.htm> - see Item 5-i.

The installations of these charging stations have seen significant growth in use and popularity as plug-in electric vehicles become more mainstream and popular with consumers. This growth in use is a significant objective of the grant. Because of this demonstrated success and growth,

assisted by Orange County's vision and leadership, the Carolina Blue Skies Initiative suggested that Orange County be considered for private sector partnership with Brightfield Transportation Solutions ("Brightfield") for the licensing agreement where Brightfield would finance, install and operate two "DC Fast Charger" electric vehicle stations - one near the Eno River Farmers Market in Hillsborough, NC, and one near the Chapel Hill/Orange County Visitors Center and Orange County Skills Development Center in Chapel Hill, NC. The existing "Level 2" stations will provide a complete electric vehicle charge in approximately 6 to eight hours, depending on the charging system of the vehicle. The DC Fast Charger station technology allows for a full re-charge in approximately 30 minutes to one hour. This technology will allow for owners of electric vehicles to visit areas for much shorter time frames to receive a full charge - something that is appealing to most electric vehicle owners, especially those visiting and spending dollars within Orange County.

The County's proposed contribution to this initiative is only the conveyance of a utility easement for the locations of the property. Brightfield will permit, design, install, and own the facilities and will charge a nominal fee for the charging service. Brightfield will offer the County and its local government partners (Chapel Hill, Carrboro, Hillsborough, Orange County Schools and Chapel Hill-Carrboro City Schools, and OWASA) a discount to these charging services should these entities invest in the plug-in electric vehicles now and into the future.

The Agreement stipulates the parking areas as not exclusive to electric vehicles; however, they would be include signage as electric vehicle charging areas.

The licensing arrangement proposes a nine year term upon the final commissioning of the stations, with a mutually agreed option for a five year renewal period of the license and/or a mutually agreed buyout provision of the stations at the end of the license term. The full proposed licensing agreement is provided at Attachment 3.

If the licensing agreement is approved, the Board of County Commissioners will be presented the utility easements for approval after Brightfield secures all of the necessary regulatory approvals for the development.

FINANCIAL IMPACT: There is no cost to the County for this licensing agreement. Should the County exercise its mutually agreed buyout option at the end of the term, the County would purchase the facilities for a negotiated fair market value at that time.

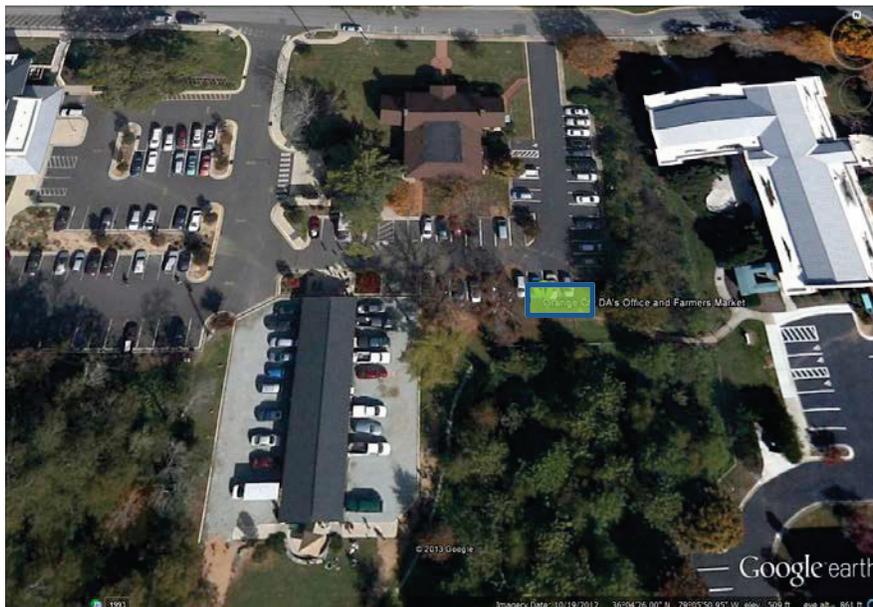
RECOMMENDATION(S): The Manager recommends that the Board:

- 1) approve a Licensing Agreement and grant the associated Easements to Brightfields Transportation Services, LLC for electric vehicle "DC Fast Charger" fueling station construction and operations at The Justice Facility parking lot in Hillsborough, NC and the Skills Development Center parking lot in Chapel Hill, NC;
- 2) authorize the Chair to sign all necessary documents upon final review of the County Attorney.

Attachment 1

Site Locator

Justice Facility Parking Area - 106 East Margaret St



Skills Development/Visitors Center - 501 W Franklin St



Typical Brightfield Station Illustration



Hillsborough Historic District Commission Eases Solar Panel Installation Process

1/27/2015



The Hillsborough Historic District Commission has simplified the process for installing solar panels within the historic district.

Installing solar panels in the Hillsborough Historic District just got easier.

The Hillsborough Historic District Commission has simplified the process for installing photovoltaic solar collecting panels by classifying such installations as a “minor work” when they cannot be seen from the street.

Hillsborough Commissioner Jenn Weaver is pleased with the commission’s decision. “It is perfectly in keeping with the need to preserve the character of the Historic District while promoting alternative energy in the age of climate change,” she said. “Streamlining the solar panel approval process is a way the town can support alternative energy, and I’m so grateful to our staff and HDC volunteers for having the wisdom to come up with this solution.”

Classifying solar panel installations as a less substantial exterior work expedites the review process by eliminating the need for review by the Historic District Commission. The commission approved the following addition to the Minor Works list in the Hillsborough Historic District Design Guidelines:

37. Installation/alteration/removal of low profile, photovoltaic, solar panels, skylights, ventilators, and mechanical equipment or communications equipment when placed on roof slopes that are not visible from the public right-of-way and in locations that do not compromise the architectural integrity of a building.

The change allows town staff now to review solar panel applications, which formerly were processed as Certificate of Appropriateness applications requiring full review by the commission. Commission reviews often can take one to two months.

About 25 individuals from within the Historic District already have contacted the town about an interest in installing solar panels following initiation last fall of the Solarize Hillsborough program — a grassroots initiative that organized Hillsborough and Orange County neighborhoods together for group discounts on solar panel installations.

Town staff generally can review and approve minor work permits within three business days. A \$10 fee is required for staff review of minor work.

Leaks persist at ash ponds

Duke Energy reported 200 seeps at 14 plants in North Carolina

By BRUCE HENDERSON
bhenderson@charlotteobserver.com

A year after a spectacular spill into the Dan River, Duke Energy's North Carolina ash ponds are apparently still leaking more than 3 million gallons a day near rivers and lakes.

In filings to state regulators in December, Duke reported 200 seeps at its 14 coal-fired power plants. Duke says it's not clear whether all of them come from ash ponds.

Seeps at two power plants, Asheville and Lee in Wayne County, each leak nearly 1 million gallons a day, the reports show. Some release toxic elements at levels far higher than state standards view as safe.

The seeps are illegal, the state has said – but not for long.

Legislation that became law last September gives Duke two options. One is to stop the leaks. The second – which Duke and the Department of Environment and Natural Resources plan to choose – is to include the seeps in wastewater discharge permits.

The seeps will be incorporated into new or modified permits for

each of the 14 plants this year, said DENR water-quality permitting chief Jeff Poupart. Duke is supposed to report new seeps as they're found.

The Southern Environmental Law Center, which has sued Duke over ash pollution, says it will challenge the legality of such permits.

"Duke has been openly leaking for years. Now they're asking DENR to give them amnesty," said senior attorney Frank Holleman. "Can you imagine us allowing any municipality or county in the state to permit a wastewater treatment plant that leaks in multiple ways?"

State officials say the seeps are

insignificant compared with the tens of millions of gallons a day that permits already allow Duke to discharge from its ash ponds.

Power plants sluice ash and water into the ponds, where the ash settles to the bottom and water drains to rivers or lakes.

The ash pond at Duke's Allen power plant on Lake Wylie releases 18.6 million gallons of water a day. Seeps add 15,100 gallons daily, Duke reported.

But seeps at the Asheville plant account for nearly 20 percent of the 4.6 million gallons a day it discharges. The February 2014 spill

SEE LEAKS, PAGE 3C

LEAKS

CONTINUED FROM PAGE 1C

into the Dan River dumped an estimated 27 million gallons of water.

"Our objective is to include seeps in the permits so we can follow the appropriate monitoring protocol or next steps regulators prescribe," Duke spokeswoman Erin Culbert said.

Arsenic, which at high concentrations can cause cancer, appeared in seeps at six power plants at levels up to 140 times the state safety standard. Elevated levels of selenium, an element that can kill or deform fish and birds, showed up in seeps at two plants.

Regulators assess power plant discharges, and will evaluate the seeps, by their "reasonable potential" to contaminate rivers or lakes. Discharge permits set limits on contaminants that might become problems.

Combined, the Duke seeps are "large, but when you compare them to the amount the plant is discharging, it wouldn't trip any reasonable-potential analysis," Poupart said.

Possible risks

DENR will apply special standards for four pollutants that pose potential risks: arsenic, mercury, selenium and nitrate. Duke would have to stop or capture the seepage that breaks those standards.

None of the seeps at the first three power plants analyzed – Riverbend, Allen or Marshall on Lake Norman – broke the limits, said state engineer Sergei Chernikov.

DENR consulted with the Environmental Protection Agency on the seeps, officials said. The EPA asked the state to include a safety benchmark intended to flag high pollution levels.

Culbert said state analyses

of Duke's ash pond discharges have typically found minimal impacts to the rivers and lakes they flow into.

Holleman, the environmental lawyer, said that argument ignores the cumulative effects over time of low levels of pollutants.

Duke University scientists have found that arsenic from the Riverbend power plant sank into the sediment of Mountain Island Lake, Charlotte's main water supply. But in some conditions, they learned, the toxic metal can be stirred back into the water.

Holleman said DENR and legislators are granting Duke a favor that other businesses don't get.

"We don't allow anybody else to get away with polluting our rivers because they say the rivers are so big it will just go away," he said.

Henderson: 704-358-5051

Twitter: @bhender



ORANGE WATER AND SEWER AUTHORITY

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

January 16, 2015

Chair Earl McKee
Orange County Board of Commissioners
PO Box 8181
Hillsborough, NC 27278

Dear Chair McKee:

We are pleased to submit this report on our services and initiatives in 2014 for your February 3, 2015 meeting. I request a couple of minutes to make brief comments about our work and will be available to receive feedback and answer questions.

Preliminary engineering study for sewers in Historic Rogers Road Area

OWASA entered an interlocal agreement with Orange County in June 2014 to do a preliminary engineering study for extending sewers in the Historic Rogers Road Area. In the summer and fall of 2014, we worked with the Jackson Center to inform residents about plans for the study and to get permission from 57 owners to go on their land to gather information needed for the study.

Our consultant, URS Corporation (URS), is checking the topography at several locations, getting soil samples and checking the location of underground utilities in the study area. URS will use the information to evaluate the potential routes for sewers and update the preliminary estimate of costs (initial preliminary estimate was about \$5.8 million). Our consultant's overall preliminary engineering report is on schedule for completion in March 2015.

To keep the project moving, our staff is working with County staff to draft a new interlocal agreement for the next phase of the project including design, bidding, permitting and installation of sewers. We understand the importance of this project and we will continue to work with County staff to provide our assistance.

Biosolids Management

We are conducting a two-part study of biosolids management. The first part, which staff recently completed, was a comparison of the social, financial, and environmental performance of land application of liquid biosolids versus dewatering all of our biosolids for recycling at a private compost facility. A copy of staff's report is [here](#).

On January 8, 2015, after receiving comments from several citizens including several Orange County farmers participating in our program, we agreed to continue recycling liquid biosolids on farmland through 2015, and continue recycling about half of our biosolids through composting of dewatered biosolids.

Later this year, staff will evaluate additional options for further optimizing our biosolids management. We will continue to keep our stakeholders informed and to solicit their feedback.

Rates and financial management

In June 2014, for the third consecutive year, we adopted a budget with no increase in monthly rates for water, sewer or reclaimed water services.

We are meeting all of our financial performance objectives and continue to have excellent credit ratings. Our recent refinancing of \$25 million in bonds will save our customers about \$2.5 million over the next 17 years. A news release on this topic is [here](#).

Affordability outreach

As part of our service affordability efforts, in the spring of 2014 we initiated an Affordability Outreach Pilot Project to engage the community/target groups with information about how to reduce OWASA bills. We have been working with representatives from more than a dozen local social service and housing agencies on this initiative, and are very appreciative of Orange County staff's participation in this important effort. Work to date has included:

- revising OWASA processes to help customers avoid service disconnection for non-payment while the customer is seeking financial aid;
- giving the agencies water conservation/bill reduction information for their clients; and
- reviewing water use at several affordable housing locations to identify cost-effective opportunities to reduce bills, including conducting field audits at selected properties.

We have completed 19 water use audits in support of this effort, and we have been pleased to see a relatively high percentage of low-flush and high-efficiency toilets installed in several older residences we have visited. We believe that in many of those homes, water leaks and behavioral practices are key factors contributing to high water use and high OWASA bills for those customers.

Care to Share Customer Assistance Program

On August 28, 2014, we changed the name of our customer assistance program to Care to Share as recommended by an inter-agency work group. The change is part of an initiative to increase donations to the program, which helps OWASA customers when they are unable to pay a water/sewer bill.

We are working on graphics for new Care to Share webpages. In 2015, we will implement a marketing plan for Care to Share and will seek assistance from and collaboration with organizations including local governments. Care to Share is funded with donations because we cannot use OWASA revenues to fund or promote Care to Share.

Energy Management

We recently completed major energy efficiency improvements at our Mason Farm Wastewater Treatment Plant (WWTP), which accounts for about 60% of our total use of electricity. Those improvements have resulted in about a 30% reduction in electricity use at the WWTP, thereby enabling us to save more than \$120,000 a year while also reducing the greenhouse gas emissions associated with our energy use. We featured this project in our latest issue of the *Blue Thumb* (our customer newsletter), which is [here](#).

We will soon be developing an Energy Management Plan, which is Strategic Initiative #5 of our Strategic Plan. That plan will guide our future energy management, energy efficiency, and renewable energy decisions, actions, and investments. We will keep you updated and seek your feedback as we proceed with this important effort.

Long-Range Water Supply Plan and Jordan Lake access

We will update OWASA's 2010 Long-Range Water Supply Plan. One of the first steps of this process will be to update our water demand projections. OWASA will work with our local governments and UNC staff to incorporate their growth projections into the analysis.

On November 14, 2014, we applied to the NC Division of Water Resources to retain our Jordan Lake allocation of about 5 million gallons per day (for use in extended droughts and operational emergencies). The NC Environmental Management Commission may decide on allocation requests in November 2015.

On November 13, 2014, we received information from OWASA staff on options to access our Jordan Lake allocation. Staff will incorporate this information in the draft update to our Long-Range Water Supply Plan.

Advanced Metering Infrastructure (AMI)

In accord with our Strategic Plan, we will in coming months evaluate the feasibility of implementing AMI technology, which uses radio equipment and meters which can be read automatically to give customers and OWASA detailed information about individual customers' water use including indications of a potential water leak. Community engagement will be an important part of our process, but we agreed on November 13, 2014 to defer the engagement process until we receive the results of the feasibility study in 2016.

Forestry Management

In accord with the Federal permit for the Cane Creek Reservoir, we are implementing a forestry management plan provided by the NC Wildlife Resources Commission for our 490 acre Cane Creek mitigation tract. From August through November 2014, our contractor carried out the plan on 407 acres of the tract (the remaining acres had been previously managed). The management included no cut areas around streams and at property boundaries near occupied homes on 151 acres, thinning on 201 acres and final harvest on 43 acres. Small hardwood

openings were done on the other 12 acres where the best oak and hickory trees were left to help regenerate those areas.

In 2015 we plan to reshape the road and logging decks to ensure proper drainage away from the streams on site and to seed them with a wildlife friendly mix. We will also spot treat a hardwood stand to encourage the development of oak and hickory trees.

The NC Forest Service (NCFS) is monitoring water quality on the mitigation land. The NCFS and US Forest Service will use the data to evaluate the effectiveness of forestry best management practices.

Strategic Planning

Following a public engagement process to solicit and carefully consider feedback, the OWASA Board adopted a new Strategic Plan on March 13, 2014 for Fiscal Years 2014 through 2017 with seven initiatives:

1. Provide reliable and high quality supply of water for the next 50 years
2. Engage the community
3. Implement a new customer billing and financial management system (if justified)
4. Adopt financial management policies and budget decision processes to ensure affordable services and fiscal sustainability
5. Implement an Energy Management Plan
6. Implement Advanced Metering Infrastructure
7. Develop a plan and policy framework for long-term management and disposition of OWASA lands

A copy of our Strategic Plan is [here](#).

We would be happy to provide you greater detail on any of our initiatives or to arrange a tour of our facilities. Just let Ed Kerwin, Executive Director (ekerwin@owasa.org or 919-537-2411) or me know.

Sincerely,



John A. Young, Chair
OWASA Board of Directors

- c: Mayor Lydia Lavelle, Town of Carrboro
Mayor Mark Kleinschmidt, Town of Chapel Hill
Ms. Bonnie Hammersley, Orange County Manager
Mr. Roger L. Stancil, Chapel Hill Town Manager
Mr. David Andrews, Carrboro Town Manager
OWASA Board of Directors
Ed Kerwin, OWASA Executive Director

Texas botanist next garden director

NCBG's emphasis on preservation was an attraction

From staff reports

CHAPEL HILL The N.C. Botanical Garden announced this week the appointment of Damon Waitt as its next director, starting April 13.



Waitts

Currently, Waitt is the senior director and botanist at the Lady Bird Johnson Wildflower Center in Austin, Texas, one of the country's most effective advocates for native plants, according to a news release. Waitt supervises the center's gardens and natural areas in addition to spearheading invasive species initiatives, education programs and con-

servation efforts.

"Damon brings with him extensive knowledge and experience in leading and managing a conservation-focused botanical garden that is very similar in values and mission to the North Carolina Botanical Garden," said Carol Tresolini, vice provost for academic initiatives at UNC-Chapel Hill.

Waitt was attracted to the NCBG's focus on conservation.

"I would not have any interest in a botanic garden that was strictly for show," he said. "I am also drawn to the way UNC has always embraced the garden and values its contribution to teaching, research, and public service."

Waitt also looks forward to working with the people at the NCBG. "The passion for and commitment to the garden exhibited by staff,

volunteers, the Botanical Garden Foundation and university is truly exceptional," said Waitt.

"The staff and the Botanical Garden Foundation are excited about the experience and enthusiasm Damon brings with him," said Jonathan Howes, interim director. "We are also looking forward to having a full-time director at the Garden."

Waitt will be the NCBG's third director, following Peter White's return to academics full-time on Jan. 1.

Waitt has a Ph.D. in botany from the University of Texas in Austin, an M.S. in botany from Louisiana State University Baton Rouge, and a B.S. in biology from Tulane University. Waitt serves on the Invasive Species Advisory Committee for the National Invasive Species Council, is founder of the Texas Invasive Plant

Details

The N.C. Botanical Garden, at 100 Old Mason Farm Road in Chapel Hill, is open seven days a week and admission is free. Information at <http://ncbg.unc.edu>

and Pest Council, and is past chair of the National Association of Exotic Pest Plant Councils.

The NCBG, part of the University of North Carolina, is a 1,000-acre assemblage of display gardens and natural areas. It is nationally known as a center for the study, display, interpretation and conservation of plants. Through its educational, recreational, therapeutic horticulture and research programs, it extends opportunities for connection with nature to people of all abilities and backgrounds.

The Best Idea in a Long Time: Covering Parking Lots with Solar Panels



Parking lot featuring solar power panels to shade cars and provide power.

America is a nation of pavement. According to research conducted by the Lawrence Berkeley National Laboratory, most cities' surfaces are 35 to 50 percent composed of the stuff. And 40 percent of that pavement is parking lots. That has a large effect: Asphalt and concrete absorb the sun's energy, retaining heat — and contributing to the “urban heat island effect,” in which cities are hotter than the surrounding areas.

So what if there were a way to cut down on that heat, cool down the cars that park in these lots, power up those parked cars that are electric vehicles (like Teslas), and generate a lot of energy to boot? It sounds great, and there is actually a technology that does all of this — solar carports.

It's just what it sounds like — covering up a parking lot with solar panels, which are elevated above the ground so that cars park in the shade beneath a canopy of photovoltaics. Depending of course on the size of the array, you can generate a lot of power. For instance, one vast solar carport installation at Rutgers University is 28 acres in size and produces 8 megawatts of power, or about enough energy to power 1,000 homes.

Solar carports have many benefits, ranging from aesthetics (yes, the things look very cool) to subtler factors. Like this: Not having to return to a hot car after spending three hours at the mall or a sporting event in the summer. In fact, according to the Environmental Protection Agency and Department of Energy, being able to park in the shade in the summer is actually a substantial contributor to increased vehicle fuel efficiency, because it saves having to cool your car back up by cranking the air conditioner.

So what's the downside here? And why aren't solar parking lots to be found pretty much everywhere you turn?

In a word, the problem is cost.

"It's the most expensive type of system to build," says Chase Weir of TruSolar, which rates solar projects based on financial riskiness. "A lot more engineering, a whole lot more steel, more labor, and therefore, it's a relatively small percentage [of solar power]...but it is growing, and the cost to install a solar canopy today is less than the cost to install a rooftop just a few years ago."

Still, there aren't all that many right now. According to Scott Moskowitz of GTM Research, which released a study of the sector last year, by the end of 2014 there were an estimated 600 megawatts (or 2.5 billion dollars) worth of solar canopies installed in the U.S. In energy terms, though, 600 megawatts isn't a very big number. Just consider: The Hoover Dam has a capacity of more than 2,000 megawatts, the world's biggest coal plant is close to 6,000 megawatts, and even the world's largest solar plant is 550 megawatts.

So at least for now, the market remains relatively niche. The carports seem to be particularly popular with large companies, which can afford them and where they can provide an impressive display at their corporate campuses. Thus, they've been installed by Munich RE, Dow Jones & Co., and Staples, among others.

They've also been used to adorn hotels, such as one just unveiled at the Phoenician, a luxury hotel in Scottsdale, Arizona:



A solar array now sits atop a parking structure at The Phoenician in Scottsdale, Ariz., on Jan. 14, 2015. The project is the first of several planned as a result of a partnership between Starwood Hotels & Resorts Worldwide, Inc. and NRG

Energy and was unveiled on Jan. 14, 2015. The project will feature 2,000 photovoltaic solar panels totaling nearly 600 kilowatts. (Photo by Rick Scuteri/Invision for NRG Re New/AP Images)

And then there are other large-scale installers: One of the best known solar carports is at the Washington Redskins' FedEx Field, where a gigantic solar array covering 841 parking spaces is able to generate enough power to cover "20 percent of the stadium's power needs on game days and all of its power on non-game days," according to Clark Construction, which installed it.

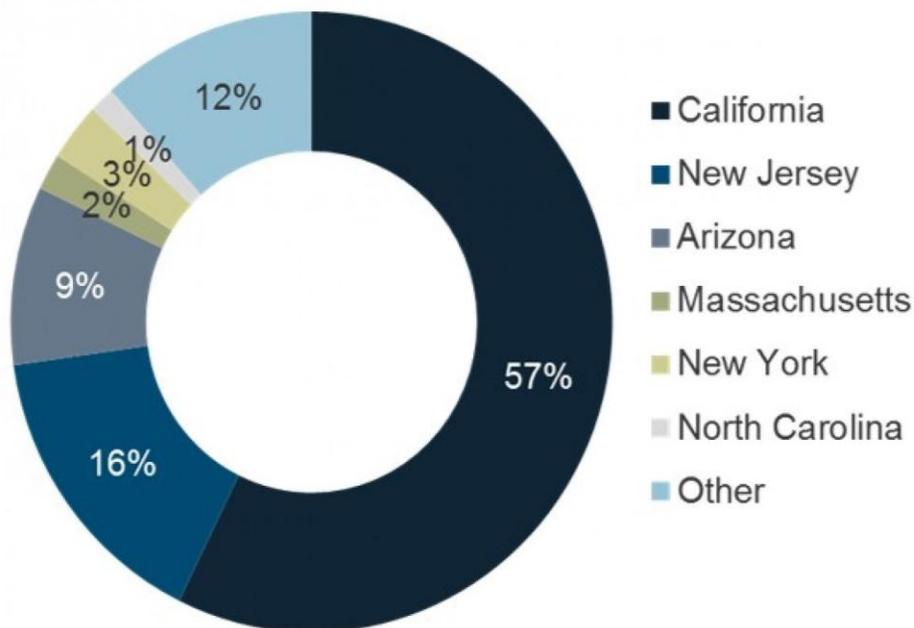
Laurence Mackler, who founded the solar carport installer Solaire Generation, says his company has now installed 50 megawatts worth of carports nationwide and has seen costs steadily decline over time. But he also emphasizes that there's still a financial problem — one that has limited the growth of solar carports significantly.

"Everyone says to me, that's a great idea, why doesn't everyone do it," says Mackler of solar carports. "And I have to say, well, because the economics work in certain states."

That conclusion was reaffirmed by a 2014 market research report on solar carports by GTM Research, which found that they are mainly springing up in Arizona, New Jersey, Maryland, Massachusetts, and New York and most of all California, which is more than half of the total market. For the most part, the report notes, that's because these states offer an array of state financial incentives to support their development.

Here's a figure demonstrating as much from GTM Research:

Top 6 Carport Markets - Total Installations, 2010-2014E

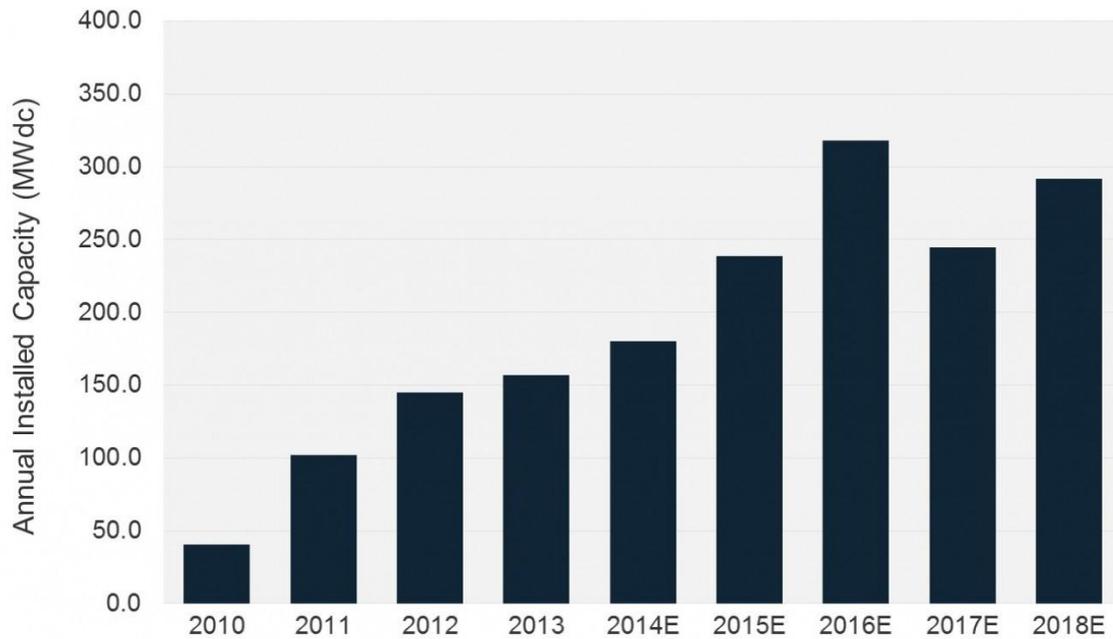


Credit: GTM Research.

“Because carport projects are more expensive, they have a generally higher reliance on state level incentives,” says report co-author Scott Moskowitz, a solar analyst with GTM Research. “So the markets in which those exist, there is going to be a higher concentration of carports.”

Clearly, the most important state is California, where according to GTM Research, solar carports have been supported both by the California Solar Initiative and also by the Division of the State Architect, which oversees construction on many public buildings. Moskowitz says that as costs of installation continue to decline, he does expect the solar carport market to expand into other states, too.

Here are his projections for growth through 2018:



Solar carport installation forecast through 2018. Source: [GTM Research](#)

So in sum: Putting solar atop pavements, with cooled down cars sandwiched in between, sounds like an energy no brainer. Maybe in the future, it'll also be a financial one.



Chris Mooney reports on science and the environment.

POLICY: Researchers say the social cost of carbon will be 6 times the Obama administration's estimate

Evan Lehmann, E&E reporter

Published: Tuesday, January 13, 2015

Climate change could have much larger impacts on the economy than the U.S. government is anticipating, according to an analysis released yesterday that suggests the social cost of carbon should be six times higher.

A paper by two Stanford University researchers argues that the true cost of releasing greenhouse gases is about \$220 a ton because rising temperatures could badly hinder a nation's economic growth over decades or centuries. The Obama administration estimates that the social cost of carbon is \$37 a ton.

The paper, published yesterday in the journal *Nature Climate Change*, adds to a growing number of voices calling for improvements to the complicated process of establishing the cost estimate, which is used to measure the benefits of regulations. A dozen federal agencies set the price using three computer models that project emission rates, economic activity and climate damages.

The Stanford paper bases its findings on prior research showing that the economic health of a country suffers during periods of high temperatures. Heat can harm agricultural and industrial output, while increasing political instability. In that way, the Stanford analysis subscribes to emerging calls among experts to incorporate new observations into the trio of models that date back to the 1990s.

"The social cost of carbon is almost certainly larger of what's being used so far," said co-author Frances Moore, a doctoral candidate at Stanford's School of Earth Sciences.

In a key departure from the government's analysis, the [paper](#) uses the previous empirical research to assert that climate impacts could damage a nation's economic growth rate over time, rather than just harassing its year-to-year economic output.

That could mean that nations face permanent malfunctions, like economic declines in labor, capital and technology from severe weather and other "temperature shocks." The authors say these bigger impacts have a "compounding effect" that is more damaging to the economy than temporary strains from heat on agricultural output and more expensive air conditioning costs.

"So the economy is kind of permanently lower," Moore said. "If you have repeated shocks, in that

these really big effects over time."

It's an 'overestimate'

The social cost of carbon is used in the cost-benefit analysis of some federal regulations. If the impact of emissions is deemed expensive for society, it could justify more aggressive policies to reduce their release by industry. Opponents of climate action criticized the Obama administration for raising the social cost of carbon in 2013 by almost 50 percent.

William Pizer, a Duke University professor and former Obama administration official who has worked on the estimate, applauded the Stanford researchers for applying updated observations into their carbon estimates. He and several other former Obama advisers say the administration should improve its use of updated science when establishing the price.

But Pizer also questioned the methodology of the Stanford analysis. The empirical research it relied on tracked short-term temperature spikes and their impacts on nations' economies -- not long-term trends that might show permanent economic reductions.

"To me, it just seems like it has to be an overestimate," Pizer said of the Stanford result of \$220.

"I think it's great they're doing this," he added. "I just think this is another data point that someone needs to weigh as they're trying to figure out what the right social cost of carbon is. But this isn't like a definitive new answer."

Moore acknowledged the uncertainties in her research. For example, she noted that there's not enough evidence to know if climate change will continue to have outsized impacts on poorer countries or if as their economies grow they'll be able to adapt and decrease their damage.

A grimmer outcome consists of "biophysical temperature thresholds" -- the idea that the heat will prevent large economic advances. Both scenarios effect the speed and aggressiveness with which emissions should be reduced -- and the price of their social cost of carbon.

Moore hopes the new research will help inform the administration that a larger spectrum of damages should be considered when establishing the monetary estimate.

ClimateWire is written and produced by the staff of E&E Publishing, LLC. It is designed to provide comprehensive, daily coverage of all aspects of climate change issues. From international agreements on carbon emissions to alternative energy technologies to state and federal GHG programs, ClimateWire plugs readers into the information they need to stay abreast of this sprawling, complex issue.

E&E Publishing, LLC
122 C St. NW, Ste. 722, Wash., D.C. 20001
Phone: 202-628-6500 Fax: 202-737-5299
www.eenews.net



SWITCHBOARD

Natural Resources Defense Council Staff Blog

Brendan Guy's Blog

Counting Up Cities' Energy Savings and Climate Commitments



Posted January 9, 2015

Share |

8+1 0

Like 230

If you're driving your car in suburban Copenhagen, the newly installed LED streetlights will brighten as you approach, then dim once you pass. If you're riding your bike, sensors embedded in those lights will soon tell you the fastest route home.

This is just one example of the [energy-saving measures the city is installing](#) into a growing network of smart sensors embedded in streetlights, all part of Copenhagen's effort to become the first carbon-neutral capital by 2025.

Over the next three years, cities worldwide are expected to replace [50 million aging streetlights](#) with LEDs, which use 85 percent less energy than traditional bulbs and last far longer. [Hundreds of cities](#) are also following Copenhagen's lead in smart technology, installing sensory networks in streetlights that will be able to deliver information on traffic congestion, trash cans that need to be emptied and other city services.



Local efforts like these are impressive, but how much will they actually contribute to the global effort to reduce our carbon footprint?

If all cities took aggressive new efforts to reduce energy use, by 2050 they could reduce greenhouse gas emissions by the equivalent of half of annual global coal use, according to a [report issued by Michael Bloomberg](#), UN Special Envoy for Cities and Climate Change, and the C40 Cities Climate Leadership Group, representing 70 megacities.

Issued at the United Nation's Climate Summit in September, the report said those savings far exceeded what national policies and actions are on track to achieve-- amounting to an additional 3.7 gigatons of CO₂ reduced annually by 2030. Yet "cities are rarely included in national action plans," Special Envoy Bloomberg [said](#). As a result, cities' actions have rarely figured in the international agreements drawn up at climate summits.

In essence, cities could help nations bridge the gap between nationally promised emissions reductions and the actions needed to prevent global temperature rise, according to the report's calculations. To achieve those goals, cities would have to move aggressively, issuing new energy efficiency standards for buildings, appliances and lighting, as well as promoting efficient public transit and increased waste recycling.

Another [report issued by C40](#) found that 228 city governments, representing 436 million people, have already set targets for reducing greenhouse gas emissions. If they meet these targets, they will cumulatively save 13 gigatons of CO₂ by 2050--equivalent to what China and India together emit in a year.

And targets matter. Cities that have announced climate commitments report [three times as many activities](#) aimed at reducing emissions than cities without targets.

That's just one sign that mayors around the world are taking seriously their growing role in the fight against climate change. By 2050, more than 70 percent of the world's population is expected to live in cities.

"What happens in our cities drives the globe; climate change is the best expression of that," said [Rio de Janeiro Mayor Eduardo Paes](#), the new leader of C40, addressing fellow mayors in Johannesburg in February.

And he pointed out that most mayors have another motivation for acting: They see green growth as a way to improve their town's quality of life. "Cutting carbon emissions and increasing resilience makes people's lives better; it means improving mobility and environmental quality," as well as fostering innovation, he said. "Caring about the environment means caring about the people."

Yet with all this varied activity around the globe, a serious stumbling block has remained: Finding a uniform way to measure and report the ultimate effect on greenhouse gases. The varying methods used by cities have raised serious questions about data quality and made it difficult to estimate the total impact.

Now there's a practical solution. Last month, C40 and ICLEI-Local Governments for Sustainability--representing 1,000 local governments worldwide--released the first widely endorsed method for measuring and reporting reductions in greenhouse gas emissions. It was launched at the Lima climate change conference--a prelude to the final conference set for December 2015 in Paris to reach a new global climate agreement.

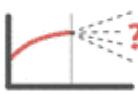
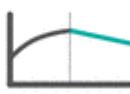
The method, Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC), uses the same accounting principles established by the eminent roster of scientists on the Intergovernmental Panel on Climate Change.

Over 100 cities worldwide are now using beta versions of the new method to measure their emissions, according to ICLEI. Those 100 cities are home to more than 170 million people, and represent a carbon footprint comparable to Brazil's entire emissions.



Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC)

GPC, the world's most widely-endorsed GHG accounting and reporting standard for cities, enables local leaders to build more effective climate strategies and track the performance of actions already underway.

| WITHOUT GPC | WITH GPC |
|--|--|
| Different types of measurements  | One measurement  |
| Account for only a portion of emissions  | Consistently account for all emissions  |
| Unclear if climate targets will be met  | Emissions trajectory well understood  |
| Incomplete data limits investment  | Good data drives investment  |
| Unable to relate to national climate action  | Can measure city's contribution to national climate efforts  |

LEARN MORE: Access GPC online at <http://www.ghgprotocol.org/city-accounting>







This new uniform measurement system also underpins the global Compact of Mayors. Launched at the September Climate Summit in New York, the compact is an agreement by mayors to reduce their cities' emissions and vulnerability to climate change, and to track progress in a consistent way.

The Compact, the world's largest cooperative effort among cities to reduce emissions, has adopted the new measurement protocol as part of its core goals--to raise the ambition of reduction targets and improve the quality of greenhouse gas reporting--city leaders announced in Lima. Using this method, cities can report emissions through the Compact's designated central database, the carbonn Climate Registry (cCR), as well as other repositories of data. Bristol just became the [500th city to report to the climate registry](#).

Already some cities have been using the new measurement system as a guide towards more effective carbon reduction efforts. After conducting inventories of its greenhouse gases for 2005 and 2012 as part of the new protocol's pilot program, Rio de Janeiro used the results to initiate a series of projects in low-carbon transport, waste management, forestry, and energy efficiency.

At its [Lima launch](#) last month, UN envoy Bloomberg called the new standardized measurement system "a critical component of the Compact." He added, "It will help cities see what climate strategies are working, better target their resources, and hold themselves accountable for results."

"Cities have shown that green growth is not utopia," [Rio Mayor Paes has said](#). Documenting the strides they've made will add to the mounting evidence that this is no utopian vision.

[Share](#) |  |  8+1 |  0 | [Like](#)  230

© Natural Resources Defense Council