

# AGENDA

## Commission for the Environment January 12, 2015 7:30 p.m.

Richard Whitted Meeting Facility (Room 250)  
300 West Tryon Street, Hillsborough

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<b><u>Time</u></b>	<b><u>Item</u></b>	<b><u>Title</u></b>
<b>7:30</b>	<b>I.</b>	<b>Call to Order</b>
<b>7:32</b>	<b>II.</b>	<b>Additions or Changes to Agenda</b>
<b>7:35</b>	<b>III.</b>	<b>Approval of Minutes – December 8</b> (Attachment 1)
<b>7:40</b>	<b>IV.</b>	<b>Committee Meetings</b> Following initial direction from the Chair, the CFE will break out into its standing committees (Air and Energy, Land, Water Resources) to continue prioritizing issues as assigned. (Attachment 2)
<b>8:15</b>	<b>V.</b>	<b>Committee Reports</b> The committees will report on what they have prioritized as issues to work on in 2015
<b>8:45</b>	<b>VI.</b>	<b>Public Outreach – SOE Report</b> The CFE will discuss ways of conveying information from the State of the Environment report to the general public. The information on various topics (such as fracking, invasive species, etc.) could be reformatted for different venues. (Attachment 3)
<b>9:15</b>	<b>VII.</b>	<b>Updates and Information Items</b> Staff and/or CFE members will provide updates on the following items: <ul style="list-style-type: none"><li>➤ County to purchase rollcarts for rural recycling (Attachment 4)</li><li>➤ Prospects for fracking in North Carolina (Attachments 5-6)</li><li>➤ Coal ash toxicity (Attachment 7)</li><li>➤ Relative rates of ozone production by different car types (Attachment 8)</li><li>➤ The Nature of Orange photo contest 2015 (Attachment 9)</li><li>➤ OWASA draft biosolids management report (Pt. 1) (Attachment 10): <a href="http://www.owasa.org/biosolids-recycling-program">http://www.owasa.org/biosolids-recycling-program</a> <a href="http://www.owasa.org/Data/Sites/1/media/whatWeDo/wastewater/2014-12-19_draft-biosolids-report---p1-final.pdf">http://www.owasa.org/Data/Sites/1/media/whatWeDo/wastewater/2014-12-19_draft-biosolids-report---p1-final.pdf</a></li></ul>
<b>9:30</b>	<b>IX.</b>	<b>Adjournment</b> <i>Next meeting:</i> February 9 (Solid Waste Admin. Building – Chapel Hill)

## CFE Meeting Ground Rules

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

**Orange County  
Commission for the Environment**

**DRAFT Meeting Summary**

**December 8, 2014**

**Orange County Solid Waste Administration Building, Chapel Hill**

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

ABSENT: Rebecca Ray

STAFF: Rich Shaw, Tom Davis, Brennan Bouma

GUEST: Thomas Eisenhart

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- 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 November 10 meeting summary. Hintz motioned to approve as written; seconded by Wegman. Approved unanimously.
- IV. **Introduction of New CFE Member and Staff** – Sassaman welcomed new CFE member Sheila Thomas-Ambat, and Brennan Bouma, Orange County's new Sustainability Coordinator. Sassaman asked both to introduce themselves and to describe some of their background and interests, which they did. CFE members introduced themselves.
- V. **2015 Meeting Calendar** – The CFE approved its meeting calendar for 2015.
- VI. **Potential action items from CFE/BOCC dinner meeting** – Sassaman asked CFE members to review the list of subjects that were raised and discussed during the October 14 dinner meeting with the board of county commissioners (BOCC). He referred members to Attachments 5 and 6 in the meeting materials.

Niezgod observed that the BOCC seemed receptive and interested in the recommendations put forward by the CFE. Other members agreed.

Wegman noted Commissioner Gordon's recommendation that the CFE help educate the public on the pros and cons of hydraulic fracturing, or "fracking." Becker noted the CFE and BOCC adopted resolutions concerning fracking in 2012. Davis noted the CFE summarized the fracking issues in its State of the Environment report. Sassaman suggested the CFE use new modes of communication to help educate citizens about this and other issues in the SOE report, such as an electronic newsletter and news articles. He recommended sending this issue to the Water Resources Committee for consideration. Hintz said this is not a high-priority issue for the CFE and Orange County.

Wegman noted Commissioner Dorosin's interest in the CFE re-examining environmental issues from a social justice viewpoint, including his example of overlaying groundwater contamination maps with basic census data.

Neal recommended some sort of response to the BOCC indicating the CFE appreciates that feedback and is exploring adding a consideration of social justice in the CFE's overall charge from the BOCC.

Hintz noted some of the issues raised are in the purview of other advisory boards, such as the Solid Waste Advisory Group (SWAG), the Orange Unified Transportation Board, and Planning Board. O'Connor agreed, adding she does not believe the BOCC will pay attention to what the CFE recommends on matters of solid waste and food composting until the SWAG has had an opportunity to consider and discuss. Sassaman noted the CFE only recommended that it would monitor these issues and support the SWAG.

Hintz suggested the issue of increasing the County's composting of food waste may be something the CFE should continue to push prior to it being addressed by the SWAG. Sassaman noted that when he served on the former Solid Waste Advisory Board they spent a lot of time on this issue. He agreed there ought to be an increase in volume of food waste collection and composting. Becker suggested recommending that the County establish a County composting facility. Sassaman noted that the current process of collecting food waste, trucking it to Chatham County, and then bringing back the finished product, is inefficient, however establishing a County facility is would require land, machinery, and staff. Sassaman asked that this matter be considered by the Land Resources Committee.

Sassaman asked that these and other matters raised by the CFE and BOCC be discussed by the committees when they meet later on the agenda.

- VII. **Updates and Information Items** – Information on the following subjects was provided and selected items were summarized by staff: a) CFE Annual Report and Work Plan (2014-15), b) Orange County resolution on climate change, c) potential for solar energy at County-owned buildings, d) Orange Well Net, e) Chapel Hill's new incentives for green construction, f) Chapel Hill/Carrboro Schools diverting trash from landfill, g) improvements at the Mason Farm Wastewater Treatment Plant, h) Carrboro's Energy and Climate Protection Task Force, i) Orange County adopts parks and rec master plan, j) Duke Energy's plans for removing coal ash from four NC sites, k) Dan River spill damage, l) the USEPA proposes lower ozone standard, and m) the proposed new rules for the permitting of hydraulic fracturing in NC.
- VIII. **Committee Meetings** – The CFE broke out into its standing committees (Air and Energy Resources, Land Resources, and Water Resources) to initiate discussions of issues assigned to each committee. Sassaman asked each committee to prioritize the issues that it would like to work on in 2015 and to identify one spokesperson for reporting back to the full CFE in January and to send its list of prioritized issues to the staff.
- IX. **Adjournment** – Sassaman adjourned the meeting following the committee discussions, at approximately 9:20 pm.

Summary by Rich Shaw, DEAPR Staff

# Orange County COMMISSION FOR THE ENVIRONMENT

(updated December 2014)

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
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
Steven Niezgoda 524 Patriot's Pointe Dr. Hillsborough, NC 27278	#14	5/21/13 Land Resources (At Large)	12/31/15	716-998-1490 steve.niezgoda@gmail.com	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	#6	(At Large)	12/31/16		
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	

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

**MEMORANDUM**

**To:** Commission for the Environment  
**From:** Rich Shaw  
**Date:** January 8, 2015  
**Subject:** Public Outreach and the State of the Environment Report 2014

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The State of the Environment report 2014 includes information on a variety of important topics of interest to the residents of Orange County. Conveying that information to people (including elected officials) may require a combination of approaches as was suggested by Jan Sassaman and others.

The information on various topics (such as fracking, invasive species, energy conservation, etc.) could be reformatted for posting on the DEAPR webpage, a proposed new DEAPR electronic newsletter, newspaper articles, and handouts for street fairs/exhibits, etc.

One idea for the upcoming meeting is for each committee to choose two topics from the SOE report and for CFE members to work with the Staff on reformatting the information for presentation in another 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.

I think this effort could result in a much better way of sharing information from the SOE report and from the CFE in general.

**ORANGE COUNTY  
BOARD OF COMMISSIONERS**

**ACTION AGENDA ITEM ABSTRACT**  
**Meeting Date:** December 9, 2014

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

**SUBJECT:** Approval of Purchase of Roll Carts for Rural Roadside Recycling Program

**DEPARTMENT:** Solid Waste Management

**PUBLIC HEARING:** (Y/N)

No

**ATTACHMENT(S):**

Bid Sheet  
BOCC Information Item – September 4,  
2014

**INFORMATION CONTACT:**

Gayle Wilson, 919-968-2885  
Clarence Grier, 919-245-2453

**PURPOSE:** To authorize the purchase of 7,600 95-gallon roll carts for the rural roadside recycling collection program.

**BACKGROUND:** Orange County has been discussing the implementation of roll carts in the rural roadside program for several years, but has experienced continuing delays to proceeding due at least in part to recycling program funding uncertainty. The Board of County Commissioners (BOCC) ultimately appropriated funds in the Fiscal 2014/15 budget for the purchase of approximately 7,000 roll carts with the intention of implementing the carts in the fall of 2014.

The BOCC directed staff to determine in advance how many rural program service area residents wished to receive a roll cart prior to finalizing a purchase recommendation for the Board's consideration. The BOCC further indicated that should the number of affirmative resident responses in the current service area not utilize the budgeted quantity of roll carts, staff could consider surveying the previously proposed service expansion area to solicit interest in roll carts up to the authorized quantity.

In September 2014 Solid Waste staff provided an information item update (attached) of the proposed implementation plan for rural roll carts that outlined the process by which the current service area would be surveyed for interest in receiving a roll cart. Staff also provided a timeline by which a recommendation would be brought to the BOCC for purchase authorization and ultimately, distribution of the carts to residents.

In September 2014 a mailing was distributed to all residents (approx. 14,500) in the existing rural roadside service area. A second mailing was distributed to all of the non-respondents to the first mailing. As of November 14, 2014, staff had received 7,541 responses by mail, phone, email or answers via the on-line survey to order carts (6,841); or alternatively to indicate that they did not want a cart (700). Responses continue to trickle in.

Based on the 6,841 responses to date, plus an estimated 10% additional residents who did not respond to date for whatever reason that staff anticipates will desire a cart, staff believes the County can expect at least 7,525 carts will be requested by the time of delivery or soon thereafter, once the carts become visible along the roadways. Additionally, staff believes a small stock (75) should be on hand in the event of new construction or to replace lost, stolen or damaged carts. Additional carts will not be available unless or until they are approved in the FY-2015/16 budget. Therefore staff is proposing the purchase of 7,600 roll carts at this time.

The 95-gallon rural roll carts will be virtually identical to the roll carts previously distributed in the Towns with the exception that they will have black lids rather than blue lids. Those who did not opt for carts may continue to use their bins roadside or carry recycling to the convenience centers or drop-off sites.

If the proposed cart purchase is approved, the carts will be ordered with delivery to residents expected during the month of February and residents may start using the carts upon delivery. The distribution schedule will be partly weather dependent, but should be completed by early March. Residents may keep the orange bins for personal use or recycle them at any Solid Waste Convenience Center. Members of the public who have not yet ordered a cart but are eligible (located in the existing service area) and interested can contact the Solid Waste Department, 919-968-2788 or [recycling@orangecountync.gov](mailto:recycling@orangecountync.gov).

Staff anticipates that the carts will result in increased recycling, greater collection efficiency and fewer worker injuries with more automated collection and less manual stooping to collect from bins. The first three months of in-Town recycling using the blue roll carts resulted in a 29 percent increase in tons of recyclables collected at the curb.

**FINANCIAL IMPACT:** The BOCC appropriated \$378,000 for 7,000 roll carts in the FY-2014/15 budget based on an estimated cost of \$54/each, including distribution. These funds were to be borrowed from the solid waste enterprise fund reserve at a 2.5% rate over five years. A \$75,000 grant (reimbursable) from North Carolina Department of Environment & Natural Resources is still expected to fund a portion of the rural cart cost.

The current cost of the carts is \$58.44 or \$444,144 total, including distribution and a mold label on the lid. The increase is a result of an increase in the cost of resin; the purchase of fewer carts than for the urban program and obtaining less of a volume discount; higher costs for cart distribution in rural areas as opposed to in-town' and the mold label on the lid as opposed to decals used for the urban roll carts.

North Carolina General Statute (NCGS) 143-129(e) (3) allows local governments to make purchases through a competitive bidding group purchasing program, which is a formally organized program that offers competitively obtained purchasing services at discount prices to two or more public agencies. The HGACBuy is a cooperative purchasing group that meets the requirements of NCGS 143-129(e) (3). The specific contract number is HGACBuy Contract #GC01-13.

The \$66,144 budget increase is proposed to be funded by increasing the amount borrowed from the solid waste enterprise fund reserve.

**RECOMMENDATION(S):** The Manager recommends that the Board authorized the purchase of 7,600 95-gallon roll carts from Rerhig Pacific at a total cost of \$444,144, to be borrowed from the solid waste enterprise fund reserve over five year period at a 2.5% interest rate.

# FRACKING

CONTINUED FROM PAGE 1A

"I wouldn't even want to touch this without \$20 million in the bank," Spiro said.

North Carolina has another disadvantage: Unlike the Marcellus, Bakken and other giant shale gas deposits that span multiple states, North Carolina's Sanford sub-basin is tiny. The area believed to be the state's shale gas epicenter spans a mere three counties: Lee, Moore and Chatham.

Fracking advocates say the

amount of fuel in the ground here could supply local brick kilns or small industrial plants in the area, but it's not clear whether North Carolina's gas could serve a more distant market.

"The conditions don't seem too favorable at this point for energy companies to seek to break into North Carolina," said James Womack of the N.C. Mining and Energy Commission.

Womack said he sees "a lot of dog sniffin' going on" from independent energy developers, but so far the nosing

around hasn't produced lasting results.

Womack has been a point of contact for potential energy developers in his role as chairman and commissioner of the Mining and Energy Commission over the past two years.

He said several energy developers are exploring business options, and he hopes their interest leads to seismic testing in and around Sanford, where fracking would likely get underway first.

Seismic testing and other preliminary measurements are needed to pinpoint the

extent and location of natural gas underground before drilling can get underway.

The commission is winding down its task of writing the state's fracking rules — more than 120 standards — which are now headed to the legislature for final approval.

By and large, lawmakers are pleased with the rules and not inclined to tinker with them, said Rep. Mike Hager, the Rutherfordton Republican who will be majority whip when the legislature convenes in January.

"What you see is a rule package that has a lot of the General Assembly's wishes already baked into it," said Hager, who chaired the Public Utilities and Energy Committee, which handles most energy-related legislation for the state House.

If the legislature takes no action on the rules, they au-

tomatically go into effect this spring. If lawmakers opt to direct the commission to change some rules, the effective date of the rules would be delayed, possibly until the fall, he said.

Democrats have either voted against fracking or tended to favor stricter standards that Republicans say would have killed the industry.

Cassie Gavin, lobbyist for the Sierra Club, which opposes fracking, predicted that Democratic Party efforts to have the rules rewritten will get nowhere in the Republican-dominated legislature.

"I wouldn't expect them to get in the way of the process," Gavin said. "The expectation is, no matter what happens, a drilling permit could be issued in the spring."

A permit would let an oil-and-gas company set up drill pads, derricks, compressor

stations and other heavy equipment to start extracting natural gas from underground shale rock formations.

But Spiro said North Carolina has plenty of logistical disadvantages, and some of the proposed fracking rules are no help to the industry. The rules cover such issues as well shaft construction, chemical disclosure, buffer zones, water testing, and a host of other technical specifications.

Spiro said North Carolina's proposed \$1 million environmental accident bond is the highest in the country. Energy-intensive Texas requires a bond of \$250,000, while Ohio's bonding requirement is \$15,000, according to a 2013 report from the Environment America Research & Policy Center.

Spiro also said that an expected proposal from the N.C. Department of Transportation — requiring energy companies to pay for rebuilding roads and bridges damaged by trucks bearing heavy industrial equipment — imposes another financial obstacle. The transportation agency is scheduled to submit its proposals to the state legislature Jan. 1.

Hager, who oversaw energy bills in the N.C. House of Representatives, said the lifting of the moratorium will not be a watershed moment in the state's history.

"It's not a great sea change or North Carolina in the fact that the amount of gas we have is probably on the smaller scale," he said.

Instead, he characterized it as more of a Hal Mary to the free-market energy gods: "In energy, we have to throw everything against the wall and see what sticks."

# Prospects for fracking iffy in N.C.

Even after ban is lifted, high costs make state a long shot for drilling

By JOHN MURAWSKI  
jmurawski@newsobserver.com

After four years of heated debate, North Carolina stands on the cusp of lifting its fracking moratorium and opening the state's woodlands and meadows to shale gas exploration.

The state legislature, which con-

venes next month, is expected to let energy developers start pulling drilling permits as early as April, and no later than autumn.

But the imminent end of the moratorium is arriving on an anti-climactic note. Despite a sustained effort by the Republican-led legislature to turn North Carolina into an energy-producing state, the prospects for energy exploration here remain iffy.

Falling energy prices globally, coupled with high startup costs in a

state with no history of drilling, make North Carolina a long shot for shale gas exploration.

Even the most ardent boosters of fracking acknowledge that North Carolina is destined to remain a low priority for the energy industry for an indefinite time.

"I'm pulling teeth to get anyone to look at North Carolina and to allocate resources," said Nicholas Spiro, an independent energy developer focusing on North Carolina. "You'll see some interest, but I

don't think you'll see any more than you currently see. You've got a lot of pontification, a lot of talking."

Spiro is operating independently after his previous employer, Dallas-based Industry Petroleum, lost interest in exploring North Carolina this year. Spiro said he is trying to build alliances with other investors and speculators but noted that the preliminary geologic testing alone could run up millions of dollars of expenses.

SEE FRACKING, PAGE 6A

**Our Views**

# Fracking fizzle

**After lots of rule-making and fussing, fracking may not be a big deal in North Carolina.**

**G**ov. Pat McCrory and his fellow Republicans in the General Assembly once spoke of fracking, the extraction of gas through high-pressure injection of chemically laced water into rock, as a potential economic boom for the state. Once North Carolina opened the way to fracking, they said, jobs would be created that would help the state prosper.

Now, those in the industry that pushes fracking have become reluctant suitors when it comes to North Carolina. They've flirted with lawmakers, who formed a group to set rules for fracking that ended up as agreeable to the industry as they were objectionable to environmentalists.

But the suitors don't appear ready to walk the aisle.

It seems that shale gas exploration or drilling requires expensive geologic testing that would cost the companies millions of dollars. And there's no way around that, no matter how breathless politicians may be about the benefits of fracking.

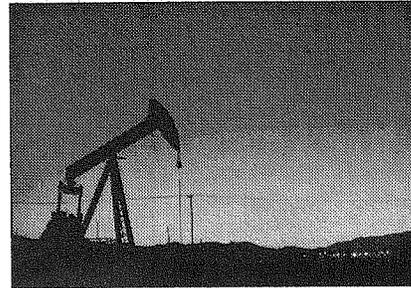
North Carolina has another problem – or perhaps that should be called a blessing – when it comes to fracking. The state's shale deposits just don't appear to be that large. So energy companies are hesitant to invest all those millions for the potential of a fairly small return.

Then there's the matter of global energy prices, which are falling.

The fracking debate has stretched on for years, and Repub-

licans will have only themselves to blame if it turns out it was all a lot of sound and fury.

Environmentalists who warned that fracking in other states had resulted in problems with water pollution were roundly dismissed by the fracking advocates, who fell into a trap they set for themselves. They touted the benefits of fracking without entertaining the idea that maybe North Carolina wasn't an ideal place to do it.



The pro-fracking lawmakers alarmed a lot of people, particularly those in Lee, Moore and Chatham counties, the most likely spots for exploration.

And, of course, they took their usual posture of siding with industry when the time came to make all the rules.

Now the attempts to turn a corner of North Carolina into North Dakota may be for naught.

James Womack of the state's Mining and Energy Commission has been the contact person for companies with an interest in fracking. He recently said, "The conditions don't seem too favorable at this point for energy companies to break into North Carolina."

Even some Republicans in the legislature seem to be backing away, with Rep. Mike Hager of Rutherford County, designated as House majority whip, saying, "It's not a great sea change for North Carolina in the fact that the amount of gas we have is probably on the smaller scale."

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## Fact Check: Is Duke telling "The Truth about Toxicity?"

BY MARK BINKER @ NCCAPITOL

WRAL.COM - POSTED DEC. 19, 2014

**RALEIGH, N.C.** — As the CBS news magazine "60 Minutes" aired its [segment earlier this month examining Duke Energy's coal ash spill on the Dan River](#), someone in the company's public relations office was busy tweeting.

One of those short missives read, "#CoalAsh: The truth about toxicity" and linked to [a fact sheet posted online](#). "It's a tool that we've used at community meetings and events," said Paige Sheehan, a spokeswoman for the company.

The sheet, she said, also been used when addressing local government meetings. It has existed and been posted online for several months, she said, adding that it has had a few tweaks along the way.

Our interest here on @NCCapitol's fact-checking desk is always piqued when we see the words "the truth" about any particular subject, especially complex scientific and economic topics.

"Ash contains low levels of trace elements. Even if you do come into contact with ash, studies have shown you'd have to ingest large amounts to have the potential for experiencing adverse effects," says one of three main bullet points summarizing the page-long explainer.

Although that doesn't exactly make the case for coal as part of a balanced breakfast, despite comparing the amount of arsenic in coal ash to the amount of arsenic in apple juice, the fact sheet does run counter to the image of toxin-laced goop leaching into groundwater and rivers that has been part of the coal ash narrative over the past 10 months.

**THE QUESTION:** Are the "low levels of trace elements" in coal ash really nothing to worry about, or might this well-crafted piece of corporate communications be downplaying the toxicity issue?

**BACKGROUND:** Coal ash is the material left over when coal is burned for fuel. Some ash is caught by scrubbers that filter air before it leaves a power plant, while other material is collected from the bottom of boilers. Although the bulk of this material is inert, coal ash contains a number of materials considered harmful to human health, including arsenic, cadmium, chromium, selenium, lead and mercury.

For decades, Duke and other power companies stored ash in wet ponds, although more modern dry-storage methods move the ash to lined landfills or recycle it into concrete, shingles and the like. While a massive spill from a Tennessee Valley Authority coal ash lake raised national attention to the issue in 2008, battles over coal ash in North Carolina remained mainly under the political radar until Feb. 2, when a coal ash pond at a retired power plant in Rockingham County [spilled an estimated 39,000 tons of coal ash into the Dan River](#).

That spill brought attention to [ongoing lawsuits over coal ash ponds located at 14 current and former power stations](#) throughout the state. Environmentalists have long argued that toxins from unlined coal ash ponds have fouled both groundwater and local waterways. While a 1970s case involving Belews Lake has long been the poster child for this kind of leaching, environmental groups have argued it is occurring on a number of waterways.

<http://www.wral.com/fact-check-is-duke-telling-the-truth-about-toxicity-/14288028/>

**NEWS NOTES:** It's worth noting that environmental advocates recently withdrew a study [claiming that fish from a lake near a coal ash pit were unsafe to eat](#) after the company raised questions about the science involved.

Also of note, the Duke fact sheets says, "The Environmental Protection Agency has evaluated coal ash extensively and has repeatedly determined that it is not a hazardous waste."

That may change as soon as Friday, when the EPA is expected to issue regulations governing coal ash. The federal agency could rule that hazardous material rules apply to coal ash or impose restrictions more similar to household waste.

**SOURCING:** Duke's one-page fact sheet is accompanied by a one-page list of references. Some are references to government reports detailing the materials in coal ash, the toxicological profile of arsenic or a [handy explainer from a West Virginia scientist putting the measures of parts per million and parts per billion](#) into layman's language. Most of the resources in this group are cited as providing numerical and scientific values for the sheet.

However, there are four names that come up several times on the reference list and are used to back up the sheet's conclusions drawn from the numbers: Lisa Bradley, John Ward, EPRI and ACAA.

EPRI is the [Electric Power Research Institute](#), an industry-funded think tank of which Duke is a member. The ACAA is the [American Coal Ash Association](#), an industry trade group that promotes "the management and use of coal combustion products." There's nothing wrong, per se, with industry think tanks, but it's important to keep in mind that they come to the table with a particular point of view. Groups that are in the business of promoting energy producers and the beneficial uses of coal ash are not likely to highlight the potential health and environmental problems associated with the material.

Bradley is [vice president and senior toxicologist](#) for AECOM, a company that, among other things, provides planning and engineering services to the energy industry. She is also a member of the ACAA's executive committee.

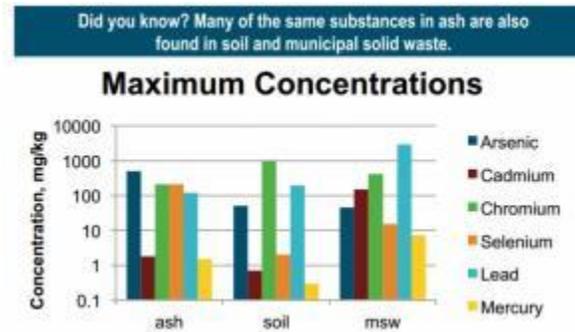
Ward is a marketing, communications and public affairs consultant who has worked for several energy-related businesses before starting his own consulting company. He also heads [Citizens for Recycling First](#), a Denver-based group that advocates for recycling coal ash. Ward's name appears in the transcripts of several hearings the EPA held over the past two years examining whether coal ash should be designated as a hazardous waste.

While both Bradley and Ward obviously have a good deal of background related to energy and coal ash, their ties to industry are not immediately clear in the citations on the Duke fact sheet.

"Dr. Bradley is an MIT-educated Ph.D., regarded as one of the nation's leading experts in coal ash toxicity. She offers deep expertise in discussing the issue," Duke's Sheehan said when asked about Bradley's work and affiliations.

Sheehan pointed to [several articles](#) Bradley [had written](#), including one for [The Air and Waste Management Association](#). She also pointed out that Bradley had been appointed to the National Coal Council by U.S. Secretary of Energy Dr. Ernest Moniz.

**SCIENCE:** To help evaluate the fact sheet, @NCCapitol turned to Gerald LeBlanc, professor and program director at North Carolina State University's Department of Environmental and Molecular Toxicology, and Avner Vengosh, a professor at Duke University's Nicholas School of the Environment who has actively studied coal ash. Vengosh's latest research specifically deals with [determining whether contamination comes from a particular coal ash source or not](#).



We should note that Duke Energy views Vengosh as "aligned with anti-coal groups," pointing to work he has done with the Appalachian Voices website and similar advocacy groups. He is a frequent source for North Carolina due to his expertise in the subject and his studies of the TVA spill.

We started by asking LeBlanc whether he would hand [Duke Energy's fact sheet](#) to an undergraduate college student as a good primer on environmental risk.

"No," he said. "This was written to convey a one-sided story, that there's no problem with coal ash. I appreciate the fact they support their facts with sources of information. The bad news is that most of those sources are coal trade organizations."

Because of Duke Energy's reliance on industry trade groups rather than peer-reviewed research, he said, "you have to take everything they say here with a grain of salt."

Vengosh was similarly critical of the overall impression the company's fact sheet might leave with a less-informed reader. "The literature and the scientific evidence clearly shows that coal ash is a dangerous material," Vengosh said.

Both Vengosh and LeBlanc cautioned that, just because there were risks associated with coal ash, does not mean that ash ponds or other storage facilities were necessarily harmful to their immediate environments. Rather, they said, each case needs to be carefully examined. However, both said Duke Energy's fact sheet goes too far in downplaying the risks.

Sheehan said Duke Energy wasn't trying to have people overlook the risks associated with coal combustion residuals but rather offer an answer to a frequently asked question about how the toxicity of coal compares with other substances.

"The chart in the fact sheet helps the public understand which constituents are in ash and how it compares to soil and solid waste to help inform the discussion about the best approach to continue to manage it safely," she said.

One of LeBlanc's strongest critiques of Duke's fact sheet is it addresses things that aren't really a concern with coal ash. "There are a few issues that we're very concerned about, and then there are a wealth of things that we're not concerned about," LeBlanc said. "They're sort of expounding on this wealth of things that are not problematic. We don't eat coal ash. You could say a lot of things about how much coal ash you would need to eat to get sick ... but that's just not relevant to the issue."

Sheehan said the company regularly gets questions about direct exposure, particularly from people living in the area of the Dan River spill. It's one reason why, she said, the company makes the comparison between the toxins in coal ash and in the soil.

<http://www.wral.com/fact-check-is-duke-telling-the-truth-about-toxicity-/14288028/>

"The constituents that are naturally occurring in soil dissolve the same way as constituents in coal ash," she said. "There are background levels of these constituents in groundwater and surface water."

This is a point of contention in much of the litigation between environmental advocates and the company. Environmental groups contend that rivers and groundwater see spikes in contaminants near coal ash ponds. In general, the concern with coal ash is that water that washes through the ash picks up toxins and washes them away where they can affect drinking water or be consumed by fish and birds, which are then eaten by humans. Vengosh said that studies suggest that, due to the processes involved in burning coal, it is much easier for toxins to wash out of ash into water supplies than it is for the same material to be washed out of soils.

**SMALL QUANTITIES:** Duke's fact sheet makes the point that "trace elements in ash are measured in very small units. A part per million is equivalent to four drops of water in a 55-gallon drum."

Sheehan said this was not offered up to minimize the risk but to help educate the public on words, measurements and other information they may not have heard about before and to put it into context.

"I think it's safe to say that most of us don't spend much time thinking about measurements in parts per billion," she said. "We included analogies in the fact sheet to help people understand the language and put it into perspective."

LeBlanc said that he worries the descriptions of those very small amounts might give a non-scientist the impression they're not worth worrying about.



"It says two different things to scientists and to a lay audience," he said.

The reasons that government regulations set very low limits on materials like arsenic and selenium, he said, is because those materials are toxic.

**THE CALL:** To land a green light on [our fact-checking scale](#), we demand "no materially incorrect assertions or misleading statements." While there aren't any fact errors in this sheet, our experts say the facts Duke Energy cites are used to build a case that might give the casual reader the wrong idea. A yellow light on our scale generally indicates a lack of context or facts that have been cherry-picked. The focus on direct ingestion dangers and the less-than-transparent citation of industry trade groups would meet that test for us. Generally, we reserve red lights for those willfully perpetrating factual errors. But our fact checks will sometimes give a red light to those who are using true facts to, either on purpose or by accident, obscure the truth.

"I don't to take sides on these things. I try to be an objective source of information for either side," LeBlanc said. "But I do find it a little bit disappointing when I see documents like this and they're stated as, 'The Facts.' Really, it is trying to put some facts out there that are going to mislead. In my opinion, that's what they're doing here."

Duke Energy earns a red light for this fact sheet.

Reporter Mark Binker

# Coal-fueled electric cars sully air, too



Road Worrier  
**Bruce Siceloff**

Jan. 4 2015  
News + Observer

A new study finds that plug-in electric cars can be the dirtiest vehicles on the road – when they run on electricity produced from the favorite fuel of America's utilities: coal.

Nissan Leafs, Teslas and other electric cars have no tailpipes and no exhaust. But three University of Minnesota researchers looked at air pollution from the entire life cycles of plug-ins and other alternative cars.

Their calculations included the pollutants produced when corn is grown and fermented for ethanol and when minerals are mined to make the big lithium-ion batteries that power plug-in cars. And for plug-in cars, they did the math on electricity derived from burning coal – and from cleaner sources such as natural gas, wind and solar.

The study, online at [bit.ly/1xLuhDf](http://bit.ly/1xLuhDf), was published in December in the Proceedings of the National Academy of Sciences. It measured each car's production of ground ozone and fine particulate matter – two unhealthy elements of air pollution, which kills more than 100,000 people in the

SEE SICELOFF, PAGE 8A

## SICELOFF

CONTINUED FROM PAGE 1A

United States each year.

The conventional gas car ranked in the middle of the pack when it was compared with 10 alternatives. Electric cars were the cleanest if they ran on electricity derived from renewable sources or natural gas. The dirtiest cars relied on coal-fired electricity or on ethanol.

"If we adopt electric vehicles and power them with clean fuel sources, it can cause a large decrease in air pollution," the lead author,

Christopher W. Tessum of the University of Minnesota's Engineering Department, said Monday. "If we power them with a dirty source, coal, it causes an increase in air pollution."

For every 100 air pollution deaths attributable to gasoline cars, Tessum and his colleagues calculate the equivalent of only 26 deaths from plug-in cars, driven the same number of miles, that use electricity created from wind or solar power.

Burning natural gas to make that same electricity is almost as clean (50 deaths) – and, it turns out, much cleaner than burning compressed natural gas in the cars themselves (89 deaths).

### The dirtiest cars

The dirtiest picture was painted for plug-in cars with electricity produced entirely from coal – at 363 deaths on this scale, nearly four times deadlier than the average gasoline car. This exaggerates the true picture, since coal is used to produce less than half the nation's electric power.

Tessum and his colleagues reckon that 45 percent of our electricity will come from coal in the year 2020 – he points out that some projections are lower – and at that share they attribute 186 deaths to these cars.

As old power plants are decommissioned, coal is becoming a smaller part of the electric power supply. Duke Energy says coal is its top fuel source for North and South Carolina customers, currently a 31 percent share. Duke projects that coal will fall by 2029 to third place behind nuclear and natural gas, accounting by then for 21 percent of its electricity.

"If you look at the energy mix in North Carolina, there's also a lot of nuclear, which is carbon-free," said Duke spokesman Randy Wheelless.

Gas-electric hybrid cars

"If we encourage electric vehicles with clean electricity ... the gains are much higher."

**CHRISTOPHER W. TESSUM**

UNIVERSITY OF MINNESOTA

such as the standard Toyota Prius – the kind that don't plug into the electric power grid – show up pretty well in the Minnesota study, with an estimated 71 pollution-related deaths for every 100 deaths from gasoline cars. Since consumers have more direct control over what car they buy than over the fuel source used to produce local electricity, the Minnesota study suggests that buying a thrifty hybrid car might be a good idea.

"Consumers, if they're concerned about the health impacts that come with pollution – things like asthma, heart disease and the increased probability of death – they can buy more efficient gasoline cars like the Prius," Tessum said. "But there's a ceiling for how efficient these cars can be. If we encourage electric vehicles with clean electricity generation, the gains are much higher."

Other studies have faulted electric cars for substantial environmental damage, based on high levels of pollution created in the manufacture of batteries that car owners recharge at their homes at night. Tessum said the Minnesota study calculates much lower pollution levels from battery production.

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or [newsobserver.com/roadworrier](http://newsobserver.com/roadworrier)

Twitter: @Road\_Worrier



2014 3rd Place Adult Winner, Robert Leadbetter

## Contest Rules:

- 1) Photographs should feature Orange County wildlife, natural resources, landscapes, or people enjoying the parks and other outdoor environments.
- 2) All photos must be taken in a natural setting (no staged photos).
- 3) Photos must be taken in Orange County.
- 4) Orange County employees are eligible with the exception of DEAPR staff. Contest judges are ineligible.
- 5) Entries per person: Maximum of five (5) total photos.
- 6) Complete and submit a Contest Entry Form for each photo entered, form found under "Breaking News" at: <http://orangecountync.gov/deapr/>. Complete the Orange County Photo Release form for any third party appearing in your photos.
- 1) Photos must be high resolution .gif or .jpg files. Photos may also be submitted on a DVD or CD, in the proper format, and mailed or emailed to: Orange County DEAPR, 306-A Revere Rd., PO Box 8181, Hillsborough, NC 27278; email: [lthecht@orangecountync.gov](mailto:lthecht@orangecountync.gov)
- 2) **DEADLINE TO ENTER: May 15, 2015.** Orange County DEAPR, 306-A Revere Rd., PO Box 8181, Hillsborough, NC 27278.

### The Department of Environment, Agriculture, Parks & Recreation

(DEAPR) works to conserve and manage the natural and cultural resources of Orange County. Included within this "green infrastructure" are natural areas and nature preserves, open spaces, parks and recreation facilities, water resources, and agricultural and cultural resource lands.

Consistent with the strong environmental ethic of the community, DEAPR also strives to bring environmental education, recreation, athletics and other programs to residents of the County — with a goal of promoting cultural, physical and natural stewardship and well being.

#### ORANGE COUNTY



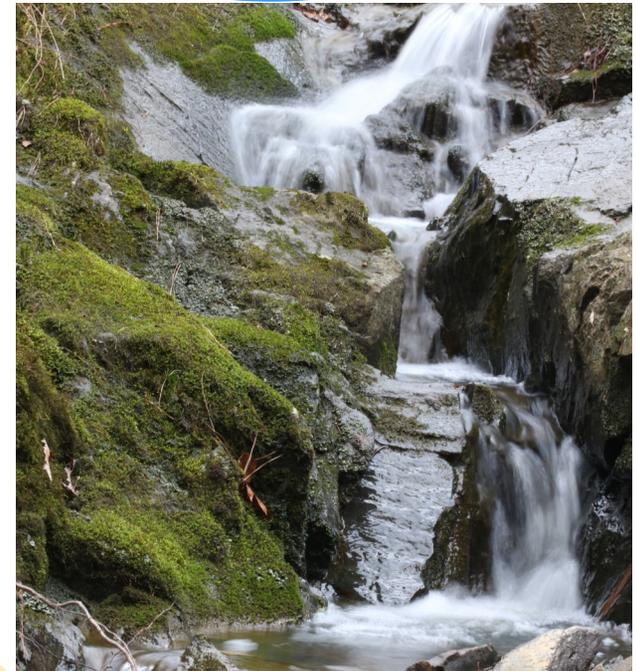
### Department of Environment, Agriculture, Parks & Recreation

Orange County DEAPR  
306-A Revere Rd.  
PO Box 8181  
Hillsborough, NC 27278

Phone: 919-245-2510  
Fax: 919-644-3351  
<http://orangecountync.gov/deapr>  
E-mail: [lthecht@orangecountync.gov](mailto:lthecht@orangecountync.gov)

### DEPARTMENT OF ENVIRONMENT, AGRICULTURE, PARKS & RECREATION

## "The Nature of Orange" Photography Contest



2014 Adult Winner, Barbara Driscoll

919-245-2510  
<http://orangecountync.gov/deapr/>

## "The Nature of Orange" Photography Contest

The Department of Environment, Agriculture, Parks and Recreation (DEAPR) is proud to present its 4th Annual photography contest. The goal is to inspire exploration, celebration and appreciation of Orange County's diverse landscapes and outdoor experiences. Through photography we want you to document the beauty of our wildlife, waterways, natural resources, and people connecting with their environment.

**Deadline: All entries must be received by May 15, 2015**

### Age Divisions:

- Youth (age 18 and younger)
- Adult



2014 1st Place Youth, Kirby Lau

### Photographs should feature:

Orange County wildlife, natural resources, landscapes, or people enjoying the parks and outdoor environments.

### How to Submit Your Photo:

See the Contest Rules on the reverse page.

**Prizes:** \$100 First, \$75 Second, and \$50 Third Place cash prizes will be awarded for photos in both divisions; divisions will be judged separately. In addition, participants will receive a certificate and winning photographs will be displayed in prominent, public locations.

**For more information** about parks and natural settings in Orange County visit: <http://orangecountync.gov/deapr/>

### 2014 2nd Place Adult, Catherine Stevens



### Owner/Use Rights:

Contestants retain the copyright to their photographs, and all rights thereto, except as follows. Orange County and DEAPR shall have the right to use the likeness, name, and/or images photographed by contestants in any and all publications, including web site entries without compensation in perpetuity.

Photos will be credited to the contestant named in the entry form. Descriptions or titles, if any, used with the photos are in DEAPR's sole discretion (see Photo Release and Agreement on the required Entry Form under "Breaking News" at <http://orangecountync.gov/deapr/> )

### Judging Criteria:

*Relevancy to Featured Topics* - Is the photo an obvious illustration of the focus of the contest?

*Composition / Arrangement* - Are the objects in the photo arranged in a meaningful, pleasing manner or are they "haphazard"? Did the photographer use the best angle or otherwise interesting perspective?

*Focus / Sharpness* - Is the object of the photo in focus? If not in sharp focus, does it appear to be an intentional effect to enhance the image in some "artistic" way?

*Lighting* - Did the photographer use proper lighting of the subject matter? Do any extremes of darkness or brightness lend to or detract from the image content?

*Creativity* - Does the photographer show some creative thought or original idea in the making of this image?

## Sponsors

- Orange County Department of Environment, Agriculture, Parks and Recreation
- Orange County Commission for the Environment
- Orange County Parks and Recreation Council



2014 3rd Place Youth, Caroline Mohler

### DEPARTMENT OF ENVIRONMENT, AGRICULTURE, PARKS & RECREATION

Orange County DEAPR  
306-A Revere Rd.

Phone: 919-245-2510  
Fax: 919-644-3351

<http://orangecountync.gov/deapr>  
E-mail: [lthecht@orangecountync.gov](mailto:lthecht@orangecountync.gov)

# OWASA may stop spraying sludge on farms

## Sewage byproduct is used as fertilizer

By TAMMY GRUBB  
tgrubb@newsobserver.com

**CARRBORO** The Orange Water and Sewer Authority's board of directors will consider ending a program that has sprayed treated sewage sludge on local farmland since 1977.

A draft report recommends OWASA remove the water from the sludge and send all the "dewatered biosolids" to the McGill com-

pany in Chatham County for composting. The company converts the biosolids into fertilizers and soil compost.

The change could save \$113,000 a year in mostly sludge program personnel but also some equipment costs, the report says.

It also could avoid the need for more land if future changes to federal rules affect how much sludge can be sprayed, the report says. Those rates now are based on the nitrogen content of the biosolids and how much nitrogen is required by the crops being sprayed.

The first part of a two-part draft Biosolids Management Report will be discussed at 6 p.m. Thursday in the OWASA Community Room, 400 Jones Ferry Road in Carrboro. The board could decide later this month. The second part of the report, due March 6, will offer short- and long-term solutions.

Sludge is a byproduct of treating human feces and other sewage waste. So-called biosolids are separated from water at the Mason Farm Wastewater Treatment Plant. The biosolids are treated with high temperatures in an oxy-

gen-deprived environment, and micro-organisms eat away at other, undesirable micro-organisms and bacteria in the biosolids.

The process produces methane, which is burned, and liquid biosolids, or sewage sludge. The sewage sludge is regularly tested for toxicity, trace metals, solids, nutrients and other materials. OWASA also tests for groundwater contamination near sludge fields.

OWASA treats 7.5 million gallons of residential sewage each day at Mason Farm and produced, from

SEE **SLUDGE**, PAGE 3A

Wednesday, January 7, 2015 **3A**

## SLUDGE

CONTINUED FROM PAGE 1A

July 2013 to June 2014, a little over 3,029 tons of wet biosolids.

Half is sprayed on 1,087 acres of farmland in Orange, Chatham and Alamance counties, about 86 percent privately owned. OWASA owns another 153 acres of spray fields west of Orange Grove Road that could be used for any future spraying.

The other half is dried and sent to McGill, which contracted with OWASA in 2007 to compost about 28 percent of its biosolids. The New Hill plant is roughly 50 miles roundtrip and charges \$26 per wet ton. OWASA reported spraying 1,200 to 1,400 tons of sewage sludge on farmland in 2006.

Stopping the sewage sludge program is a good start, said Myra Dotson, founder of the Sewage Sludge Action Network.

But sending all the biosolids to McGill, she said, is just exporting the problem, because the compost and fertilizers produced still contain traces of heavy metals, bacteria and other toxic materials. Using it on lawns, gardens and playing fields will make more people sick, she said.

The Orange County-based group educates people about the dangers to public and environmental health of sewage sludge and the garden products produced from it, which

## What's next?

The OWASA Board of Directors will discuss a draft Biosolids Management Report at 6 p.m. Thursday in the OWASA Community Room, 400 Jones Ferry Road in Carrboro.

Comments also can be sent to the board via email at [boardmembers@owasa.org](mailto:boardmembers@owasa.org) or by mail to 400 Jones Ferry Road, Carrboro, NC 27510.

European and some U.S. scientists have begun to recognize.

Those researchers argue the science behind federal Environmental Protection Agency rules is outdated, the National Institutes of Health reported in 2013, and residents living near sludge land have reported physical symptoms, including skin rashes and respiratory and gastrointestinal distress. More research was recommended in 2002, but the NIH reported last year that little has been done.

One alternative, Dotson said, is disposing of biosolids in an incinerator equipped with air scrubbers. Modern systems also combine the sludge with sawdust to create pellets or gas that can then be burned to produce energy.

She and others plan to bring their ideas - which they've shared with OWASA before - to Thursday's meeting.

Grubb: 919-932-8746

Jan. 7, 2  
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