## FLORIDA BEACON



From the President's Desk Erik Neugaard

## Florida Association of Environmental Professionals

#### New Local Chapter Boundaries and Gainesville Area Chapter

I am pleased (and relieved) to announce that in spite of the weak economy, FAEP is going strong and has attained excellent membership levels. We have made substantial improvements to our website and management support to our local chapters, are making arrangements to host the NAEP Annual Conference in 2014, and are ensuring we have a solid foundation on which to build aggressively when the economy improves. As shown on the map below, we have also revised several local chapter boundaries to include previously excluded counties, and create a new Gainesville Area Chapter to accommodate the environmental programs associated with the University of Florida and other environmental professionals in the area.



Please contact me at <u>erik.neugaard@rsandh.com</u> if you would like to help establish the new Gainesville Area Chapter. Thanks.

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## FAEP 2010-2011

#### **Board of Directors**

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Upcoming Conferences and Workshops			
Event	Date	Place	
2011 Sustainable Florida Conference	Oct. 24-25	Tallahassee	
38th Annual Natural Areas Conference	Nov. 1-4	Tallahassee	
Environmental Law & Justice Symposium	Nov. 3-4	Tallahassee	
Florida Brownfield Conference	Nov. 13-16	Orlando	

## Tampa Bay Student Chapter News

Taylor Mckibben, the former TBAEP Student Chapter President at the University of South Florida, St. Petersburg campus student chapter president graduated last December. Shortly thereafter, she got a job with Groundwater & Environmental Services, Inc. (GES) in St. Petersburg. Taylor sent this message to the Tampa Bay Chapter Board of Directors right after she started working for GES:

I am excited to announce my new position as an Environmental Scientist at Groundwater & Environmental Services. My job hunt began immediately after graduating from USF with my environmental science degree last December. I was beginning to get discouraged until I received an email from Ben La Monte, site operations manager at GES. He had viewed my resume on LinkedIn after I popped up as "someone you might know" due to our TBAEP connection. I applied for the position on their website, got an interview, and just finished my second week here at GES. I am so thankful for the support the Tampa Bay Chapter gave me both during school, and after graduation. I want to especially thank Bruce Hasbrouck, Teri Hasbrouck, and Carl Asprinio for all their encouraging words and great recommendations. I am now able to join the TBAEP as a professional and will hopefully be able to guide other students along a path to success in the environmental field.

TBAEP wishes Taylor great success in her future endeavors and looks forward to having her participate in the organization at a new level. Taylor epitomizes the kind of dedicated student that TBAEP supports by funding student chapter efforts. Several years ago NAEP, FAEP and TBAEP provided funding to send Taylor and two other students from the USF student chapter to the NAEP conference in Phoenix.

Another one of the students that went to the NAEP conference in Phoenix was Tom Harmon. Tom was President of the student chapter before Taylor and was very instrumental in starting the chapter at the St. Pete campus. Immediately after receiving his Bachelor's degree, Tom began the pursuit of a Master's degree. In fact, he met his mentor, Jack Grove, at the NAEP 2008 Phoenix conference, and worked with Jack on the research for his thesis. Tom defended successfully on October 17th and is looking for opportunities to present his thesis material to other FAEP local chapters in the state. If your chapter would like to hear about Tom's work *"Anthropogenic Changes over the Last 100 Years in Dove Sound, Upper Florida Keys, USA*, he is available as a speaker for one of your chapter's upcoming events. Congratulations to Tom for successfully defending his thesis!!

#### Florida Beacon

## **Report on the Economic Benefits of Brownfield Redevelopment**

What are the economic benefits of brownfields? The EPA has released a new report titled - *Air and Water Quality Impacts of Brownfields Redevelopment, A study of Five Communities.* 

**Introduction**: A number of previous studies have compared the environmental performance of specific brownfield redevelopments with similar projects built on undeveloped greenfield sites, which often are located in less dense and less accessible areas.<sup>1</sup> These studies generally examined a single brownfield or infill development and entailed extensive site-specific analysis. The comparison greenfields generally accommodated the same number of residential units and commercial square footage, but their designs typically used more acreage per employee or per residence and were less location efficient. A review of 12 of these studies concluded that the brownfield and infill developments result in significant environmental benefits compared to their greenfield counterparts (Appendix A). However, making broader quantitative assessments of other brownfield redevelopment around the country requires a methodology that is more easily transferable. This study tests an analytical approach to quantifying the environmental impacts of multiple redevelopment projects in a given municipal area in a manner that can be replicated in other regions. The method was applied to five cities and their surrounding areas—Seattle, Washington; Baltimore, Maryland; Minneapolis-Saint Paul, Minnesota; Emeryville, California; and Dallas-Fort Worth, Texas. These municipal areas correspond approximately to metropolitan statistical areas as defined by the U.S. Census Bureau.

Paste this URL in your web browser for the report: http://www.epa.gov/brownfields/BFEnvironImpacts042811.pdf

## **FAEP Board of Directors Elections**

Elections for the 2012 Board of Directors will be held this fall. There is one position available for an At-Large Board Member. If you are interested in running for the position, contact your local chapter. According to the FAEP Bylaws, each chapter is to submit a nomination. Nominations should be submitted to info@faep-fl.org.

Once the elections are held for the open position, the seated Board of Directors will elect officers during the January 2012 Board Meeting.

Board meetings are held monthly via teleconference. Occasionally, in person meetings have been held in Orlando at the SFWMD offices. This is a great opportunity to represent your local issues on the FAEP Board as well as give yourself exposure to other Environmental Professionals around the state. At-large member terms are three years. Yearly elections are held for the officers who serve one-year terms. An officer may succeed him/herself once for a total of two years in that same position.

Please consider taking advantage of this career-building opportunity serving on the FAEP Board of Directors.



## **NAEP** News

#### NAEP Board of Directors Nomination information Deadline is November 18, 2011

NAEP needs You to serve as an elected at-large Board Member

NAEP is a voluntary association headed by a Board of Directors. The Board is composed of 12 at-large elected members from the environmental field, four ex-officio members, and one chapter representative for each 150 NAEP members in the Chapter. All serve without compensation. Each year prior to the annual conference, 4 at-large Board Members are elected to serve a three-year term of office. For more information the requirements and expectations of an elected at-large Board Member please review the Self Nomination Form. The deadline for submission is November 18, 2011. The form can be found at the link below: https://naep.memberclicks.net/assets/2012naepselfnominationform-final.doc

#### NAEP Environmental Excellence Awards Nomination Information Submission deadline date is December 2, 2011

The National Association of Environmental Professionals (NAEP)

is seeking nominations for our annual National Environmental Excellence Awards.

We are requesting nominations from you, your company, or agency describing outstanding environmental contributions from applicable projects and programs. It is not necessary for you or your organization to be a member of NAEP and nominations may include projects or programs recognized by others. The Environmental Excellence Award nomination(s) are to be submitted to the NAEP Awards Review Committee and must be received by December 2, 2011. Each selected Award Winners will receive a beautiful award plaque and an invitation to briefly address participants at the Annual NAEP National Conference. This year's conference will be held in Portland, Oregon, May 21-24, 2012. The form can be found at the link below:

naep2012environmentalexcellenceawardnominationform.doc



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#### Florida Beacon

#### News from FDEP Florida's Ozone Air Quality

#### Florida's Air Quality – The Good News

The pollutant of greatest concern to Florida's air quality officials over the years has been ground-level ozone. Throughout the 1980s, Florida's largest urban counties were designated by the U.S. Environmental Protection Agency (EPA) as "nonattainment" for ozone—meaning that ozone levels violated the national ambient air quality standard for ozone in effect during those years. By the early 1990s conditions had improved, and all Florida counties were meeting the standard.

In 1997, based on new health studies, EPA strengthened the air quality standard, and several Florida counties were again facing the possibility of nonattainment. However, ozone levels across the state were trending downward, and by the time EPA was ready to designate nonattainment areas, no areas of the state were in violation. Then, in 2008 EPA again tightened the ozone standard, and, again, Florida was looking at areas going into nonattainment. But, ozone levels continued to decline, nonattainment designations were delayed, and today no areas of the state violate the 2008 standard.

Now, EPA is expected to review and possibly further tighten the ozone standard in 2013. Whether Florida will again escape nonattainment is impossible to predict. But, Florida's air is among the cleanest in the eastern U.S. and is expected to get even better over the next few years as emissions of the pollutants that cause ozone formation continue to decrease.

#### What is Ozone?

Ozone  $(O_3)$  is the principal component of urban smog. Ozone builds up near the ground through a series of complex chemical reactions driven by sunlight and involving volatile organic compounds (VOCs) and nitrogen oxides  $(NO_x)$ . VOCs are produced by natural and anthropogenic sources. Anthropogenic sources include fuel combustion in engines and industrial operations; some types of chemical manufacturing operations; evaporation of solvents in consumer and commercial products; and evaporation of volatile fuels such as gasoline. Nitrogen oxides are emitted from motor vehicles; off-road engines such as aircraft, locomotives and construction equipment; fuel burning power plants and other industrial facilities; and other combustion sources.

Ozone has the same chemical structure and properties whether it occurs miles above the earth or at ground level; however, ozone has both good and bad effects depending on its location in the atmosphere. Ozone occurs naturally in the stratosphere approximately 10 to 30 miles above the earth's surface and forms a layer that protects life on earth from the sun's harmful ultraviolet radiation. In the lower atmosphere, where natural ozone levels are low, additional ground-level ozone is formed as a result of human emissions of VOCs and NO<sub>x</sub>.

At the ground, ozone concentrations can reach unhealthy levels when the weather is hot and sunny with light winds. Ozone may cause inflammation and irritation of the respiratory tract, particularly during physical activity. The resulting symptoms can include breathing difficulty, coughing, and throat irritation. Breathing ozone can also worsen asthma attacks and increase the susceptibility of the lungs to infections, allergens, and other air pollutants. Groups that are sensitive to ozone include children and adults who are active outdoors, and people with respiratory disease such as asthma.

#### What is the Ozone Standard and how is it Measured?

In 2008, the national ambient air quality standard for ground-level ozone was lowered from 0.084 parts per million (ppm) to 0.075 ppm. Compliance with this primary (health-protective) standard at 0.075 parts per million (ppm) is based on the three-year average of the annual fourth-highest maximum daily eight-hour ozone concentration. In 2010, EPA announced that it was considering revising the ozone standard to a value in the range of 0.060 ppm to 0.070 ppm. This proposal has been withdrawn until the next regularly scheduled review of the ozone standard in 2013, and the standard will remain at 0.075 ppm for the time being.

The Florida Department of Environmental Protection (DEP) and eight DEP-approved local air pollution control agencies monitor ozone year-round at 57 locations in 33 counties across the state. High ozone levels only occur on a limited number of days per year, typically from spring through early fall when weather conditions are most conducive to ozone formation. The <u>Air Quality Index forecast</u> alerts sensitive persons to limit prolonged, moderate exertion outdoors on those few days. Continued on the next page.....

#### **Florida Beacon**

#### How do Ozone Levels in Florida Compare to the Ozone Standard?

Figure 1 displays ozone compliance values for the highest monitor in each county with complete data from 2009 through September 2011. As stated previously, no areas in Florida violate the 0.075 ppm air quality standard.

While all areas of the state comply with the air quality standard, the highest ozone levels in the state occur in Northwest Florida and the lowest in Southeast Florida. The northwest corner of the state experiences more days with light winds than the southernmost portion of the state. Northwest Florida is also influenced more by emissions from nearby states.

#### What has been the Trend in Ozone Levels in Florida?

Ozone levels in Florida, and the entire eastern United States, have come down over the past 20 years or so, and this trend is expected to continue. This improvement in air quality has been the result of ongoing, significant emission reductions from industries and individual motor vehicles. Figure 2 displays the trend in ozone compliance values across the state over the last ten years. The maximum, minimum, and average ozone compliance values for all ozone monitors in Florida are provided. Since 2008, the trend has been steadily downward, and it is expected to continue so for at least the next several years.

#### What has been the Trend in NO<sub>x</sub> Emissions in Florida?

As stated above, ground-level ozone is formed through a series of chemical reactions involving volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>). Research has found that in Florida and throughout the Southeast, NO<sub>x</sub> emissions play a more important role than VOC emissions in the formation of ozone.

Figure 3 shows the long-term trend in mobile and stationary source emissions of  $NO_x$ . Since 2001, the statewide trend has been steadily downward. Preliminary data for 2010 and 2011 show this trend continuing, largely due to ongoing emission reductions from electric power plants.  $NO_x$  emissions from the power sector in Florida have decreased by 80% over the last decade. And, while more vehicles occupy Florida's roads, newer cars and trucks emit less pollution than older ones with the result that overall emissions from motor vehicles are also declining.

Market forces and air pollution control programs currently in place have led to lower emissions and improved ozone levels throughout Florida and much of the U.S. in recent years. If EPA had tightened the ozone standard to 0.070 ppm in 2008, 22 Florida counties would have been in violation based on 2006-2008 data. Just three years later, using 2008-2010 data, only five counties exceed the 0.070 ppm level. The good news: further emission reductions and further improvements in Florida's air quality are "in the pipeline."



Figure 1: The data in the map above are displayed in parts per billion (ppb) for better readability, where 1 ppb = 0.001 ppm. For example, the ozone standard of 0.075 ppm equals 75 ppb. Any value of 76 ppb or greater would represent a violation of the ozone standard. Compliance with this standard is based on the three-year average of the annual fourth -highest maximum daily eight-hour ozone concentration.



Figure 2: Average ozone compliance values for all Florida ozone monitors, with the maximum and minimum values indicated.



#### **Florida Beacon**

## More News from FDEP Rolling in the Sunshine State

I occasionally get curious about fairly odd topics. This morning, I decided I needed to know how many vehicles I passed on the way to work. After half a mile and 178 vehicles, my curiosity shifted to tires. How many tires are rolling across Florida right now? What happens to all those gazillion tires when they go flat or bald?

Turns out, DEP keeps track of that sort of thing. An estimated 15,250,000 automobile, light truck, and smaller tires plus 850,000 medium truck and larger tires were removed from vehicles in Florida in 2008, according to the "Waste Tires in Florida, State of the State" report.

Sixteen million tires take up a lot of landfill space. Stockpiling isn't particularly helpful – retired tires, especially piles and piles

of them, provide breeding grounds for mosquitoes that transmit nasty diseases such as West Nile virus and eastern equine encephalitis. We've learned that dumping them into the ocean as a pseudo reef is a bad idea. And we for sure don't need that many tire swings. So what do we do with the tires? DEP keeps track of that, too.

• Waste-to-energy facilities used 54 percent of our old tires to enhance combustion temperature control and generate electricity.

• Nearly 600,000 tires were shredded and used instead of soil and aggregate in projects such as landfill drainage layers, methane gas collection systems and septic system drainage trenches.

Crumb rubber made of tires from the Polk City Waste Tire Site was used to produce rubber modified asphalt (RMA) for paving the Withlacoochee and Van Fleet state trails in 1995, the first use of RMA for a trail in the U.S. (BTW, the Withlacoochee State Trail was recently designated a National Recreation Trail.)
Recycled tires are used as fuel in cement kilns and pulp and paper factories.

- Tire shreds can be used to stabilize soil when constructing road embankments.
- Ground rubber is used in rubberized asphalt to pave playgrounds, running tracks and roads.

In small quantities, old tires can also be used as crash barriers around race tracks and boat bumpers at marinas. If you just need to dispose of a tire or two, check with a local tire center or contact your city or county waste management department.

In any case, 18-wheeler or 4-wheeler size, tires are on our list of things to count. DEP's Waste Tire Management Program addresses how waste tires should be moved, stored, processed, used or disposed. Staff assist in cleaning up illegal tire piles and work with potential buyers to develop markets for waste tires. In addition, DEP distributes grants to counties to help manage waste tires. In Florida, that's the way we roll with tires.

#### Resources

2010 numbers provided by Daniel M. Kuncicky, Ph.D., Environmental Manager, Solid Waste Section, Florida Department of Environmental Protection <u>Waste Tire Management Program</u> The <u>waste tires report</u> online <u>Withlacoochee State Trail</u> General James A. Van Fleet State Trail

By: Cherie Graves, FDEP

## Florida Beacon







# SAVE THE DATE!

November 4, 2011



# SFAEP's Annual Conference Regulatory Challenges in a Changing Environment

Located at: Kovens Conference Center FIU North Campus 3000 N.E. 151 Street, Miami Sponsorship opportunities available contact Nicole Carter at: NicoleC@c3ts.com



South Florida Association of Environmental Professionals





### Florida Beacon



## National Association of Environmental Professionals

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#### Florida Beacon

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#### Florida Beacon

## FAEP WELCOMES THESE NEW AND RENEWING MEMBERS

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Members who have renewed or joined during the past quarter