

ENVIRONMENTAL ADVISORY BOARD
Amended Minutes

The Environmental Advisory Board of the City of Raleigh held a meeting on March 14, 2019 at 5:45 p.m. in Room 303, Wilders Grove Solid Waste Services Center, 630 Beacon Lake Drive, Raleigh, NC 27610 with the following present:

BOARD MEMBERS

Graham Smith, Chair
Anya Gordon
Linda Watson
Beverly Clark
Justin Senkbeil
Aranzazu Lascurain

STAFF

Cindy Holmes, Sustainability Office
Nicole Goddard, Sustainability Office
Greg Sponseller, Sustainability Office
Tim Gainer, Solid Waste Services
Amanda Astor, Solid Waste Services
Stan Joseph, Solid Waste Services

ABSENT

Jamie Cole
Brian Starkey
Benjamin Bobay

PUBLIC

April Hamblin, BeeMowAware
Alice Hinman, Apiopolis
Larry Larson, former Environmental Advisory Board member

CITY COUNCIL

I. Tour of Sonoco Recycling Facility

Mr. Patrick McDonald, Raleigh Plant Manager, Sonoco Recycling, provided the Board a tour of the Sonoco Recycling Facility (111 S Rogers Lane, Raleigh, NC 27610).

II. Call to Order

Mr. Graham Smith called the meeting to order at 5:45 p.m.

III. Approval of Meeting Minutes

The minutes from the February meeting were approved as written.

IV. Public Comment

- a. Ms. April Hamblin BeeMowAware Campaign
 - i. Ms. Hamblin provided information to the Board on the BeeMowAware Campaign which supports pollinator and bee habitats in urban areas. The Campaign is working with Apiopolis and Bee City USA to spread awareness on pollinator issues. Recommendations include the use of clover rather than traditional grass, adjusting mowing schedules and lawn heights, and using insecticides and pesticides that promote pollinator wellness.
- b. Ms. Alice Hinman, BeeMowAware Campaign
 - i. Ms. Hinman offered more information on the BeeMowAware Campaign including benefits of using clover in place of grass and recommending that the City consider the Sustainable Site Initiative to support landscape projects.
- c. Mr. Larry Larson, BeeMowAware Campaign
 - i. Mr. Larson recommended that the City provide guidance on how to support pollinators and bee populations as this will expand understanding and support of the BeeMowAware Campaign objectives.
- d. Ms. Beverly Clark recommended that the BeeMowAware Campaign group offer this information and a presentation to the team working on Dorothea Dix Park and the Parks, Recreation, and Cultural Resources department.

V. SWS Presentation

- a. Mr. Stan Joseph, Director of Solid Waste Services, spoke to the Board about the relationship between the City of Raleigh and Sonoco and current and future recycling

markets. He also provided a brief overview of the type of information he will provide to City Council during his update. Mr. Joseph asked that the Board continue to support Solid Waste Services and help others understand there are complex recycling market issues and yard waste issues at Wilders Grove.

The board discussed three challenges for recycling and they are:

- a) Lack of clarity about what materials can and cannot be recycled.
- b) The use of black bags for both waste and recyclables at the Red Hat Amphitheater and other downtown events and that these materials are then thrown away.
- c) The recycling glass market has declined in the last few years, and recycled glass may not have a market in the future.

VI. Staff Updates

- a. GardenCorps
 - i. Ms. Cindy Holmes updated the board about GardenCorps, a collaborative project between Sustainability, Housing & Neighborhoods, Parks, Recreation and Cultural Resources, the Foodbank of Central and Eastern North Carolina, and Master Gardeners of Wake County. The project officially began this afternoon with a group of 18 students paired with active adult mentors and Master Gardeners. The 12-week curriculum focuses on learning how to grow food in the community garden at the Food Bank and includes instruction on how to prepare and safely cook food. GardenCorps is a pilot project through the City of Raleigh Strategic Plan section Safe, Vibrant and Healthy Community. This project is an outgrowth of the Board's interest in urban agriculture and the Wake County Food Security Plan.
- b. 2019 Environmental Awards
 - i. Ms. Nicole Goddard stated that the Environmental Awards will be on April 4th. She confirmed the Board members' receipt of the invitations to distribute and provided more hard copies. The event is on track except for music which is being addressed. Past winners will be invited and recognized during the event.

VII. Announcements/Member Comments

- a. Ms. Linda Watson would like the Board to consider calling the Environmental Awards planning group together earlier for planning purposes. Ms. Watson would like to use the awards as a means of driving action and change throughout the City. Planning should begin immediately following the event and the format, in general, should be reconsidered. The Board should also consider recognizing individuals in addition to organizations.

VIII. Other Business

- a. The board discussed having their April meeting, which was the next week after the Environmental Awards and decided they wanted to have the meeting. There was also a discussion of rescheduling the May Board meeting as both Ms. Cindy Holmes and Ms. Megan Anderson will be out of town. Ms. Holmes will provide some additional options for rescheduling the May meeting.

IX. Upcoming Meetings/Events

- i. Next Meeting – April 11, 2019. The Board will meet at 5:00 p.m. in Room 303, Raleigh Municipal Building, 222 West Hargett Street, Avery C. Upchurch Government Complex, Raleigh, North Carolina.
- ii. **The Environmental Awards will be held on April 4, 2019 at 6 p.m. at Market Hall.**
- iii. Spring has Sprung Celebration at Fletcher Park is March 16.

iv. Earth Day is April 22nd

X. Adjournment

The meeting concluded at 7:04 p.m.

Attachments:

BeeMowAware Campaign handouts

Feed bees with clover



*Wait 2 weeks to start
the mower*



#BeeMowAware

Did you know?

Lawns cover more land in the United States than any other irrigated crop (Wheeler et al., 2017). Apiopolis (<https://www.apiopolis.org/>) is a nonprofit urban bee sanctuary in Raleigh, North Carolina. Their mission is to improve the health and habitat of honey bees and native pollinators and to form dynamic collaborations that promote the wellbeing of the Raleigh community in a holistic, inclusive, and joyful manner. Raleigh is also a designated “Bee City USA.” The Xerces Society Bee City USA initiative fosters ongoing dialogue in urban areas to raise awareness of the role pollinators play in our communities and what each of us can do to provide them with healthy habitat. Bees are declining in urban areas (Ahrne et al., 2009; Hamblin et al., 2018; Potts et al., 2010), however, research shows that some urban areas can support bee communities (Hamblin et al., 2018; Larson et al., 2014a). Apiopolis hopes to start a campaign in Raleigh that would begin with a change in management practices in parks and other city-managed lands. This campaign will be presented to the City of Raleigh on March 14th for at Environmental Advisory Board Meeting. Based on scientific research, Apiopolis recommends the following management practices:

1. **Seeding clover into lawns.** White clover (*Trifolium repens*) is a healthy food source for bees (Filipiak et al., 2017; Larson et al., 2014a). Clover is relatively drought-tolerant and fixes nitrogen, which decreases the need for fertilizers (dengarden, 2017; Hancock and Harmon, 2012). Clover does not require irrigation, and it remains green even if urinated on by pets. Clover cover requires less-frequent mowing, and it outcompetes weeds. Clover seed is inexpensive, and only needs to be sown every few years (dengarden, 2017).

Where city-managed lawns have little pedestrian traffic, for example on roadsides, we recommend replacing lawns entirely with clover (Rhoades, 2018) or NC wildflowers.

Purchasing local white clover: <https://fifthseasongardening.com/>;
<https://www.southernstates.com/catalog/category/farm/grass-seed/clover>;
<https://www.tractorsupply.com/tsc/catalog/grass-seed>

Establishing white clover:

https://secure.caes.uga.edu/extension/publications/files/pdf/B%201251_5.PDF

Top 25 wildflowers for NC: <https://growing-small-farms.ces.ncsu.edu/wp-content/uploads/2012/08/Top-25-Plants-and-Suppliers-2.pdf? fwd=no>;
<https://www.pollinator.org/PDFs/SoutheastMixedForestrx3.pdf>

2. **Mow to 3 inches every two to three weeks.** Infrequent mowing increases the drought tolerance, pest tolerance, and weed tolerance of grass. Taller grasses are ultimately more aesthetically pleasing than those more frequently mowed (Burke, 2019; Smitley, 2013a). Three to four inches is the optimal height for lawns (Smitley, 2013a). Lerman et al. (2018) found when mowing every two weeks, grass and clover lawns grow to an average of 5 inches and bee *abundance* increased; when mowing every three weeks lawns grow to an average of 6 inches and bee *diversity* increased (Lerman et al., 2018). It is important to note,

however, that growth rates may differ depending on region and seasonal variations.

If leaving an entire field of taller grass is a problem, mow borders on the weekly schedule and patches on a bi-weekly schedule to create an orderly appearance while still supporting wildlife (Nassauer, 1995).

For fields with little pedestrian use, we recommend mowing only twice per year to support wildlife and biodiversity (Wastian et al., 2016).

NCSU Lawn Extension: https://content.ces.ncsu.edu/extension-gardener-handbook/9-lawns#section_heading_6628
<https://content.ces.ncsu.edu/carolina-lawns>
Cornell Turfgrass Program: <https://turf.cals.cornell.edu/>

3. **Leave bare patches of soil** (depending on location and field usage) to provide nesting habitat for ground-nesting native bees (Frankie et al., 2009). North Carolina is home to more than 500 species of native bees (Pickering, 2019), and the pollination services native bees provide cannot be compensated for by honey bees (Garibaldi et al., 2013; Winfree et al., 2007).
 4. **Use Integrated Pest & Pollinator Management (IPPM) strategies to limit the use of pesticides, insecticides, and other chemical sprays** including mosquito sprays. We recommend to only control pests on a need-basis per location. Depending on the pest, there are numerous control options that should be employed before using chemical sprays.
 - If chemical sprays are deemed necessary for an area, follow label instructions carefully to minimize influence on bees.
 - Avoid spraying when flowers are in bloom (Lainer, 2015; Smitley, 2013b).
 - Do not spray chemicals in windy conditions.
 - If you do use chemicals, mow the clover and floral blooms *beforehand* and only spray after dark when bees are *not* foraging.
 - If there are floral blooms such as tree flowers that cannot be removed, consider alternative methods of control (Smitley, 2013b) such as harvesting practices, cultural sanitation methods, or biological control.
- For white grub control, use granular Chlorantraniliprole instead of neonicotinoids or other systemic pesticides (Lainer, 2015; Larson et al., 2014b; Larson et al., 2013).
 - Before relying on mosquito sprays, especially pyrethroids, eliminate stagnant water, including birdbaths (Hinman, 2018). You can request alternative

treatment from mosquito control companies (Hinman, 2018). One alternative method is treating water holes where mosquitos breed with Bti, natural bacterium from soils, that produces specific toxins against flies and mosquitoes (EPA, 2017; Larson, 2019). If other chemical mosquito control is used, it should be sprayed after dark and in low-wind to limit bee exposure to the chemicals (Caron, 1979).

Best Management Practices for Turf Care and Pollinator Conservation:

<http://www.greencastonline.com/operationpollinator/pdf/pollinator-bmp-booklet.pdf>

Apiopolis Informational Blog: <https://www.apiopolis.org/blog>

Preventing Negative Impacts of Pesticides on

Pollinators: <https://xerces.org/guidelines/pollinator-pesticide-risk-reduction/>

How to Reduce Bee Poisoning to Pesticides:

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw591.pdf>

Protecting Pollinators in Urban Areas: Reducing Hazards from Pesticide Use

<https://www.lsuagcenter.com/~media/system/2/5/7/5/25753f4491634f8edb93aodado2b4742/anr-2420pdf.pdf>

Protecting Pollinators in Urban Areas: Safe Use of Integrated Pest Management

<https://www.lsuagcenter.com/~media/system/2/5/7/5/25753f4491634f8edb93aodado2b4742/anr-2387pdf.pdf>

NCSU IPM Extension: <https://content.ces.ncsu.edu/extension-gardener-handbook/8-integrated-pest-management-ipm>

NCSU Pollinator-Friendly Turf Extension: <https://harnett.ces.ncsu.edu/lawn-care-and-pollinator-friendly-landscaping/>

Pollinator Conservation Resources: <https://xerces.org/pollinator-conservation-resources-us-and-canada/>

NCSU Mosquito Control: <https://entomology.ces.ncsu.edu/mosquito-control-around-homes-and-in-communities/>

EPA Mosquito Control Using Integrated an Approach:

<https://www.epa.gov/mosquitocontrol/success-mosquito-control-integrated-approach>

County Extension Officers Contact: <https://www.ces.ncsu.edu/local-county-center/>

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