

Wake County Board of Commissioners
Growth, Land Use, and Environmental Committee
June 11, 2018
4:30 p.m.
Wake County Justice Center, Room 2800

Commissioners Present:

John Burns-Chair
Sig Hutchinson-Vice Chair
Matt Calabria
Jessica Holmes

Wake County Staff Present:

David Ellis, County Manager; Johnna Rogers, Chief Operating Officer; Denise Foreman, Assistant County Manager; Frank Cope, Community Services Director; Chris Dillon, Assistant County Manager; Ben Canada, Assistant to the County Manager; Scott Warren, County Attorney; Dr. Jennifer Federico, Animal Services Director; Dr. Joseph Threadcraft, Environmental Services Director; David Goodwin, General Services Director; Mark Forestieri, Facilities, Design and Construction Director; Tim Maloney, Planning, Development & Inspections Director; Chris Snow, Parks, Recreation and Open Space Director; Kevin Witchger, Facilities Engineer; John Roberson, Solid Waste Management Director; Alice Avery, Communications Specialist; Jennifer Heiss, Communications Specialist; Denise Hogan, Clerk to the Board; Yvonne Gilyard, Deputy Clerk to the Board, and Michelle Cerett, Executive Assistant.

Others Present:

Meeting Called to Order

Commissioner Burns called the meeting to order at 4:30 p.m.

Approval of the Minutes

Commissioner Calabria moved, seconded by Commissioner Hutchinson, to approve the Growth, Land Use, and Environmental Committee minutes of the April 9, 2018 meeting. The minutes were approved unanimously.

Mr. Dave Goodwin, Director, General Services Administration, provided an introduction for today's agenda item.

- March – 2018. Commissioner Hutchinson introduced resolutions supporting 100% Clean Energy by 2050.
- GLUE Committee referred to Staff for Feasibility and report back in May.

He shared the mandates of the 100 percent clean energy resolution.

100% Clean Energy Resolution Mandates...

- 100% Clean Energy by 2050
- 80% Clean Energy by 2030
- Phase out of Fossil Fuels by 2050
- All of Wake County
 - All Sectors
 - All Citizens

He shared the staff approach to determining the possibilities for clean energy.

2050 Clean Energy Resolution

Staff Approach: *evaluation based on current technology*

Evaluation Process*:

- Technical
- Organizational *(first today)*
- Economic

*2018 Energy Design and Management Guideline Section 1.4

Mr. Goodwin shared the organizational feasibility.

Organizational Feasibility

Do we have the Authority?

- No legal authority to mandate beyond Wake County Government
- Review addresses Wake County Government facilities and fleet.

Can we maintain it?

- Yes – Future Technology and cost unknown
- Additional Contract maintenance

Commissioner Burns asked Mr. Scott Warren, County Attorney, if there is a statute that prohibits the Commissioners from mandating 100 percent clean energy. Mr. Warren said commissioners do not have the authority to mandate clean energy for anything other than in county facilities.

Mr. Kevin Witchger, Energy Manager, shared the technical feasibility.

Technical Feasibility

Evaluation

- Define Clean Energy
- Assemble Existing Usage
- Identify methods to convert to 100% Clean Energy
- Identify methods to produce/procure Clean Energy

Clean Energy

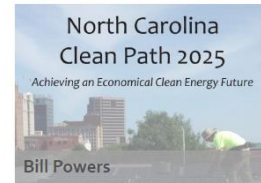
- Solar Power
- Wind Power
- Geothermal Energy
- Hydroelectric Power
- Tidal Power
- Wave Energy

He shared the recommended methods for the 100 percent clean energy to be successful.

Methods to Reach 100%

Two studies exploring 100% Clean Energy:

- 100% Clean and Renewable Wind, Water and Sunlight, *Mark Jacobson*
 - All sectors electrified by 2050
 - Solar, Wind, etc. and efficiency
- Clean Path 2025, *Bill Powers*
 - All electric Use
 - Solar and energy efficiency
 - Rooftop, Parking Lot, Ground Mounted Solar with Battery Storage

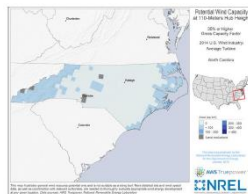


He shared information regarding wind and solar energy in our area of North Carolina.

NC - Wind and Solar

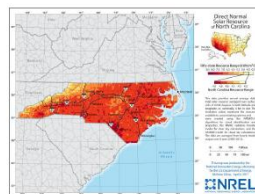
Wind Energy

- Resource is geographically limited
- Renewable Energy Credit Potential



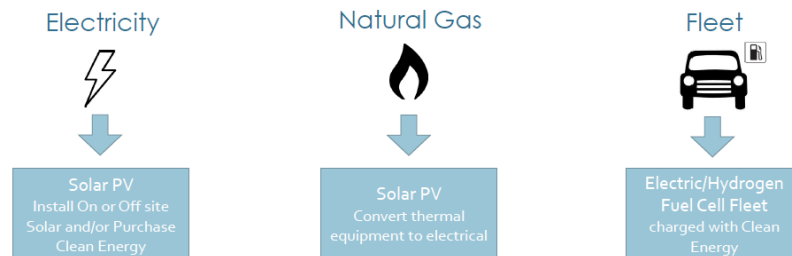
Solar Energy

- Resource Availability
- Technology easily scaled



Mr. Witchger shared the methodology to convert to solar energy.

2050 Resolution Scope: Phase out fossil fuels...

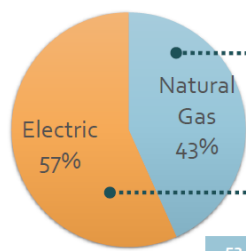


...solutions require solar. How much solar?

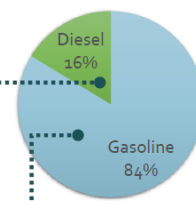
He shared a chart of the current energy consumption in Wake County. Mr. Witchger said these figures are based on current use.

Wake County Energy Consumption

Building Energy Consumption



Fleet Fuel Consumption



| | | | |
|--|-------|------|------|
| 52 MW | 31 MW | 3 MW | 8 MW |
| Solar PV Equivalent for 100% Clean Energy w/ efficiency + utility renewable growth | | | |
| 80 MW | | | |

He shared information on the potential for solar PV in all county facilities.

On-site Solar PV Potential

Roof Top PV Potential

- 30-60% of roof area
- Wake County Facilities:
5-6 MW Solar PV Potential

Canopy PV Potential

- Unshaded Parking Area
- Wake County Facilities:
3-6 MW Solar PV Potential

On-site Solar Potential:
10-15%



He shared the on-site limitations to the conversion. Commissioner Calabria asked how additional downtown buildings may affect these efforts by 2050. Mr. Witchger said that will be discussed later in the presentation.

On-site Limitations

- 10 largest buildings = 70% energy
- Remaining buildings = 30% energy
- Few could achieve 100% energy with on-site solar
- Consider off-site energy production



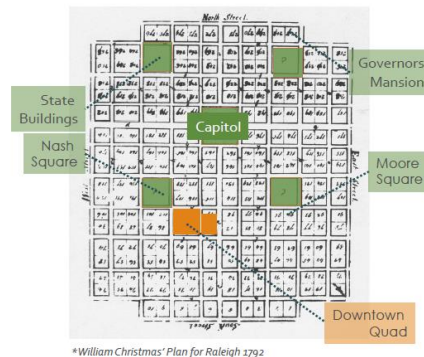
He shared the technical challenges to the conversion of all county buildings. (Three slides) Mr. Goodwin said a panel of 190 acres would be needed to provide solar energy to the four downtown county buildings and all the fleet vehicles.

Technical Challenge Illustrated

Wake County Facilities

Facilities: 4.8 million ft²
(Downtown: 1.6 million ft²)
Fleet: Over 1000 vehicles

Solar PV Needed:
80 Megawatts, 430 acres

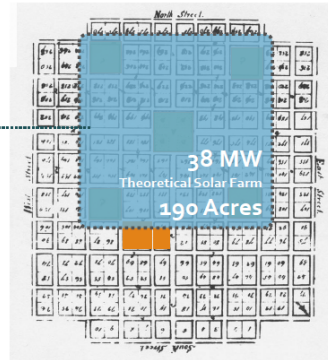


Technical Challenge Illustrated

Theoretical Panel – 4 Buildings

Downtown Quad

Electric and Natural Gas GHG Equivalent:
38 Megawatts Solar PV, 190 acres



*William Christmas' Plan for Raleigh 1792

Technical Challenge Illustrated

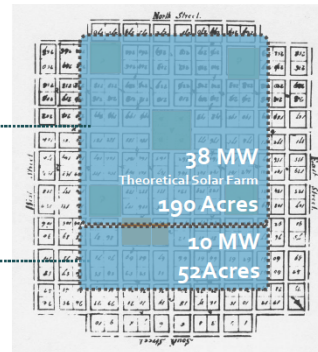
Theoretical Areas

Downtown Quad

Electric and Natural Gas GHG Equivalent:
38 Megawatts Solar PV, 190 acres

Fleet

Fuel GHG Equivalent:
10 Megawatts, 52 acres



Mr. Witchger shared the possibilities for off-site solar PV.

Off-site Solar PV Potential

Utility Scale PV Potential

- Additional:
70 MW Solar PV Needed
- Would require 350+ acres
- County farm land available, but within future Little River Reservoir
- May or may not be suitable for utility scale development
- Renting land could be an option

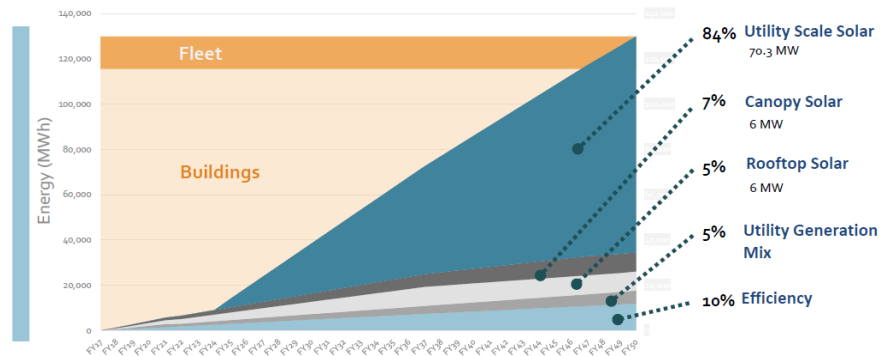
Off-site Solar Need:

80-85%



He shared what the path would look like to reach the 100 percent goal for county buildings.

Path to 100%



He shared the technical feasibility of reaching the 100 percent clean energy by 2050 goal. He said it is staff's opinion that the plan is not feasible.

Technical Feasibility

2050 Draft Resolution Not Technically Feasible

- Significant near term work to redesign and convert HVAC systems
- Large land area needed for off site solar production
- Electric and fuel cell vehicles which are not commercially available to plan phase out
- All vehicles to be clean energy including construction vehicles

Mr. Witchger shared the economic feasibility of the on-site versus the off-site methods.

Economic Feasibility

| On Site | | Off Site | |
|----------------------|----------------|---------------------|---------------|
| Building Conversions | \$10.8 million | Utility Scale Solar | \$135 Million |
| Vehicles | \$unknown | | |
| Efficiency | \$1.2 million | | |
| Rooftop Solar | \$15 million | | |
| Canopy Solar | \$21 million | | |
| \$48 Million Plus | | \$135 Million | |

Not Economically Feasible

He shared the conclusion and staff recommendation.

Conclusion & Recommendation

Conclusion:

- 100% Clean Energy by 2050 is not feasible w/ current technology

Recommendation:

- Direct staff to work with the Energy Advisory Commission and use the newly adopted energy guidelines to:
 - Maximize renewable energy and green technology
 - Require greater efficiency measures
 - Promote sustainable resources and environmental stewardship

Mr. Goodwin said energy efficient efforts are being done in new county buildings.

Commissioner Hutchinson said the county has made a significant change in energy efficiency in the past few years. He said even though the county can't mandate residents, he feels the county is setting a good example with these efforts. He feels endorsing the idea of clean energy is very important.

Commissioner Calabria suggested revising the wording of the resolution to encourage it rather than mandate it.

Commissioner Burns said the state of New Jersey has committed to 100 percent clean energy by 2030, but they have not revealed their plan to reach that goal.

Commissioner Calabria asked if it is feasible to do some buildings rather than all of them. Mr. Goodwin said the guideline the commissioners just adopted recently enables staff to do solar power on all new buildings. He said it is possible to identify certain existing buildings to focus on converting.

Commissioner Hutchinson said the adoption of the resolution endorses citizens to work towards using clean energy.

Commissioner Burns suggested the committee work on language revisions and present the resolution at the July meeting.

Commissioner Burns thanked staff for their work on their project and for providing adequate information.

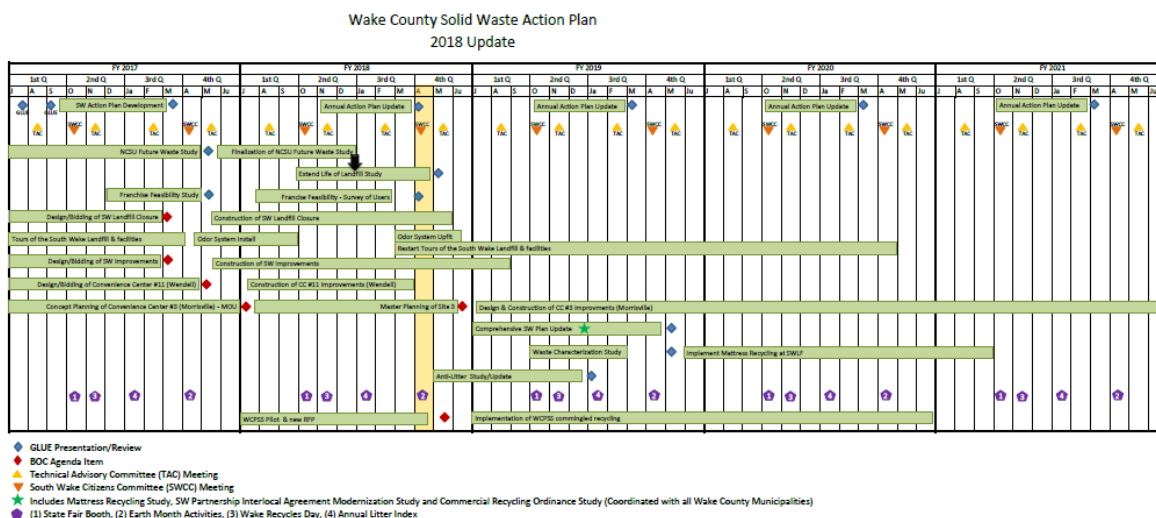
Mr. David Ellis, County Manager, said an obtainable goal is important.

Mr. Goodwin said staff has been directed to be proactive. He said the 100 percent goal may not be met, but significant progress will be made.

Commissioner Holmes said this work is very interesting, and obtainable goals are important.

Mr. Goodwin said staff routinely monitors all county buildings for energy efficiency.

Mr. John Roberson, Solid Waste Director, shared an update on the 2018 Solid Waste Action plan.

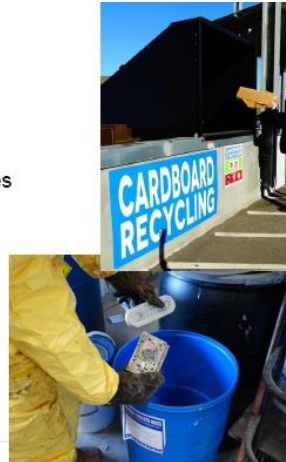


He provided a draft of the Landfill Life Extension Study for committee members to review. He said franchising was considered for the entire county, but was determined it is not feasible at this time. He said it will be evaluated again in the future.

He shared an overview of the Solid Waste Division operations.

- **Solid Waste Operations**

- Manage 19 waste facilities
 - 11 Convenience Centers
 - 3 Multi-Material Recycling Facilities
 - 3 Household Hazardous Waste Facilities
 - **SOUTH WAKE LANDFILL (SWLF)**
 - East Wake Transfer Station
- Landfill gas systems
- Illegal dumping enforcement
- Closed North Wake Landfill



WAKE COUNTY

He shared various outreach and educational programs available.

- **Solid Waste Outreach & Education**

- Feed the Bin School Program
- 86it Anti-Litter Campaign
- Community Outreach
- Facility Tours
- Food Waste Reduction

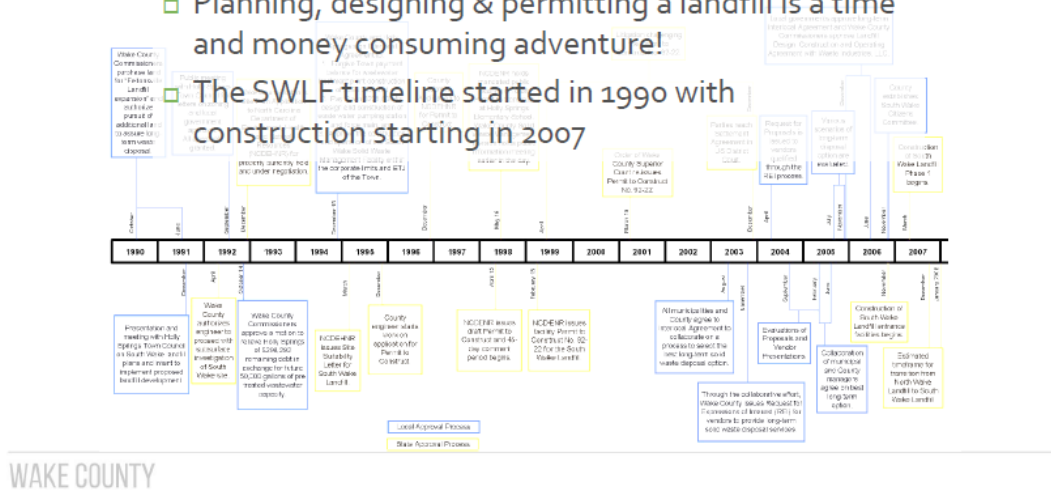


Mr. Roberson shared background information on the South Wake Landfill.

South Wake Landfill Background

- Planning, designing & permitting a landfill is a time and money consuming adventure!

- The SWLF timeline started in 1990 with construction starting in 2007



He shared the various phases of use for the landfill.

South Wake Landfill Background

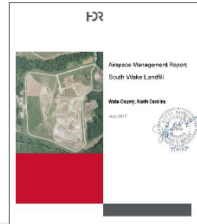
- **Phase 1A** (2008 to 2010)
- **Phase 1B** (2010 to 2015)
- **Phase 2A** (2015 – 2022?)
- **Phases 2B – 5** (2022 – 2040+)



He shared the life expectancy of the landfill. He said staff completes an annual evaluation of the landfill.

South Wake Landfill Background

- Annual evaluation of airspace remaining
- SWLF projected to last until 2040 to 2048



| Fiscal Year | Cumulative MSW Tons | Remaining Airspace |
|-------------|---------------------|--------------------|
| 2017 | 3,443,387 | 1,760,786 |
| 2018 | 4,415,666 | 1,128,434 |
| 2019 | 4,900,666 | 455,910 |
| 2020 | 5,398,241 | 1,959,522 |
| 2021 | 5,903,469 | 1,774,957 |
| 2022 | 6,407,718 | 591,200 |
| 2023 | 6,920,941 | 4,744,232 |
| 2024 | 7,437,466 | 4,980,037 |
| 2025 | 7,966,106 | 3,375,569 |
| 2026 | 8,487,952 | 2,690,899 |
| 2027 | 9,021,077 | 2,005,922 |
| 2028 | 9,554,532 | 1,320,650 |
| 2029 | 10,103,373 | 635,066 |
| 2030 | 10,652,652 | 3,665,154 |
| 2031 | 11,207,423 | 3,209,886 |
| 2032 | 11,767,743 | 2,612,275 |
| 2033 | 12,333,965 | 1,925,276 |
| 2034 | 12,905,247 | 1,237,878 |
| 2035 | 13,482,544 | 3,974,968 |
| 2036 | 14,065,815 | 3,285,827 |
| 2037 | 14,654,516 | 2,597,138 |
| 2038 | 15,249,305 | 1,907,985 |
| 2039 | 15,850,044 | 1,218,350 |
| 2040 | 16,456,790 | 2,919,216 |
| 2041 | 17,069,053 | 2,228,568 |
| 2042 | 17,688,544 | 1,537,394 |
| 2043 | 18,313,674 | 3,608,651 |
| 2044 | 18,945,056 | 3,114,352 |
| 2045 | 19,582,752 | 2,421,468 |
| 2046 | 20,226,824 | 1,727,982 |
| 2047 | 20,877,338 | 1,033,878 |
| 2048 | 21,534,356 | 336,139 |

Mr. Roberson shared the Board of Commissioner goals and objectives as it relates to the landfill.

- **BOC developed strategic goals in following categories:**
 - Community Health
 - Economic Strength
 - Education
 - Great Government
 - Growth and Sustainability (GS)
 - Public Safety
 - Social and Economic Vitality
- **2018 BOC Strategic Goals & Objectives includes:**
 - GS 2.2 - Update comprehensive solid waste plan to EXTEND THE LIFE OF THE LANDFILL through recycling and technology, and improve strategies to reduce litter.

He shared events impacting the life expectancy of the landfill.

Events Impacting SWLF Life

- **Ongoing/Prior Impacts**

- ✓ Economic slow down (10-15% reduction in tonnage)
- ✓ Implementation of commingled recycling & large carts by all municipalities (5-10% reduction in tonnage)
- ✓ Separation of C&D Material at convenience centers
- ✓ Landfill density (beyond contract requirement)
- ✓ General focus on better recycling (O&E)
- ✓ NCSU study/modeling of Wake County SW
- ✓ Piloting organics separation at convenience centers

He shared the ongoing efforts being done to improve the life of the landfill. (two slides)

- **Ongoing efforts:**

- Convenience Center Improvements - goal of improving recycling and other programs that minimize waste to landfill
 - Site 2 (South Wake)
 - Site 11 (Wendell/Zebulon)
 - Site 3 (Morrisville – future)



WAKE COUNTY

- **Ongoing (continued)**

- Partial Closure of SWLF
 - Helps with LFG collection and odors
 - Potentially compromises future waste disposal volume...
- Improved WCPSS school recycling
 - Paper-only to commingled
 - Less waste from schools

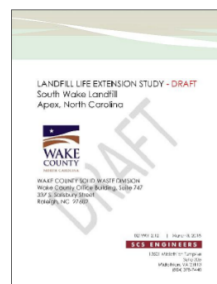


WAKE COUNTY

Mr. Roberson shared the Life of Landfill (LOL) study, which was completed recently.

Life of Landfill (LOL) Study

- **Decision to conduct a study titled “Landfill Life Extension Study” for South Wake Landfill**
 - SCS Engineers assisting with development of study
 - Study being looked at as “menu” list of topics and ideas, both on and off the landfill, that can increase the life of the SWLF



WAKE COUNTY

He shared on-site initiatives that may extend the life of the landfill. He said lowering the volume of waste collected is important.

Potential Landfill (on-site) Initiatives

- **Density, Density, Density...**
 - 25% increase in density adds 10 years (1100 vs. 1375 lbs/CY)
 - Not without a cost, but airspace value is significant
- **Side slopes - 4:1 versus 3:1 (Risk versus Reward?)**
 - 4:1 much safer in long term
 - 3:1 yields more volume but difficult to maintain
 - Where is the “sweet” spot for the landfill – 3.5:1?

He said the Material Stabilized Earth (MSE) Berm and the lateral landfill expansion is efficient, but expensive.

Potential Landfill (on-site) Initiatives

- **MSE Berm**
 - Costs versus airspace
 - Potential use of waste material (coal ash) to build wall
- **Lateral Landfill Expansion**
 - Availability of land adjacent to existing facility
 - Easier than a new LF?
 - Potential Environmental impacts



Mr. Roberson shared potential landfill initiatives.

Potential Landfill (on-site) Initiatives

- **Vertical Landfill Expansion**
 - Final grade elevation increase
 - Base grade elevation decrease
- **Temporary Overfilling Analysis**
 - Waste compacts over time due to gravity
 - Anticipate compaction to minimize future waste placement in areas that will be remote...
 - Allows earlier partial closure due to meeting final permitted grades

He shared off-site initiatives that may extend the life of the landfill. He said recycling centers greatly reduce the amount of waste being put into the landfill, but it is difficult to find a place to dispose of some items such as styro foam. He said mattresses cannot be completely buried in the landfill and finding a way to recycle them would be very helpful.

Potential WD&R (off-site) Initiatives

- **Curbside Recycling**
 - Municipal partners doing all they can?
 - Franchising for non-municipal areas
 - To impact recycling rates, needs to be mandatory
 - Competition concerns and developed convenience center program impact potential effectiveness
 - Providing incentives to haulers/recyclers
- **Mattress Recycling**
 - SWLF single biggest headache of typical items brought to landfill
 - Availability of vendors and/or volume to process



He shared information on commercial and multi-family recycling. He said the waste audit will be done later this year. He said there are grants available to companies to encourage recycling.

Potential WD&R (off-site) Initiatives

- **Encourage Commercial Recycling**
 - Data, Data, Data – waste audits, landfill data
 - Stick vs. carrot approach (require vs. encourage)
 - Small vs. Large (businesses)
- **Multi-family Recycling**
 - Container placement/space
 - Private vs. Public



Mr. Roberson said there are many options for organics. He said composting is very helpful.

Potential WD&R (off-site) Initiatives

- **Organics**
 - Education, Post Consumer Use, Composting and Anaerobic Digestion
 - Reasons other than landfill life to do organics as impact is not significant (compared to other materials)
- **Reuse**
 - Private groups (Habitat, etc.)
 - Swap shops (not sweat shops, but they may make us sweat if we open one up...)



He shared initiatives that could be implemented to encourage recycling. He said C&D recycling is difficult to dispose of due to the size and volume.

Potential WD&R (off-site) Initiatives

- **Landfill &/or Development Policies**
 - Use of disposal bans or surcharges
 - Construction permitting – SW plan requirement
 - Further source separation at Convenience centers
- **C&D Recycling**
 - 7 private C&D LF's & TS's in Wake – hard sell when disposal is pretty cheap & easy



Mr. Roberson shared a summary of the Life Of Landfill study. (3 slides)

Study Summary

| Measure | Section of Report | First/Next Step(s) | Potential Landfill Life Impact | Difficulty | Eval ² |
|---|-------------------|--|--------------------------------|------------|-------------------|
| Waste Diversion & Reduction | | | | | |
| Increase Residential Recyclable Materials Diversion | | | | | |
| Assist Select Munis w/Residential Recycling | 2.1.2 | Develop consistent performance measures; Identify underperforming munis | High | Med | ● |
| Establish/Formalize Interlocal Collaboration | 2.1.3 | Form communication mechanism for County, city/towns, & other stakeholders | High | Med | ● |
| Establish Rural Curbside Collection Service | 2.1.4 | Feasibility Study; Exploratory RFP/RFP for service | Med | High | ● |
| Offer Hauler Awards for Material Diversion | 2.1.5 | Develop program outline & facilitate hauler feedback to assess amenability | Low | Low | ● |
| Establish Mattress Diversion Program | 2.1.6 | Assess County facility/operational assets to gauge feasibility; Estimate costs | High | Med | ● |
| Create Economies of Scale | 2.1.7 | Examine space available at CCs & available recycling markets | Med | High | ● |
| Construction & Demolition (C&D) Debris Diversion | | | | | |
| Explore MRF Possibilities for CC C&D Debris | 2.2.1 | Tighten enforcement of contractor/commercial C&D abuse at CCs | Med | Med | ● |
| Source Separate Add'l C&D Material at CCs | 2.2.2 | Examine space available at CCs & available recycling markets | Low | Med | ● |
| Increase/Promote Multi-Family Complex (MFC) Recycling | | | | | |
| Start Serving Complexes in City/Towns | 2.3.1 | Identify candidate underserved MFCs; Conduct feasibility study | High | High | ● |
| Incentivize Private Haulers Serving MFCs | 2.3.2 | Assess hauler recognition program; Assess MFC containers per 2.3.4 | Low | Low | ● |
| Target Student MFCs/University Collaboration | 2.3.3 | Initiate/enhance mechanism for dialogue with Universities | Low | Low | ● |

| Key | | |
|--------|--------|---|
| Symbol | Color | Description |
| ● | Green | Recommended & Endorsed – Proceed with Implementation |
| ● | Yellow | Recommended – Proceed with Further Evaluation & Analysis to Facilitate Future Implementation |
| ● | Orange | Recommended but w/Reservations – Significant Additional Evaluation & Analysis Necessary before Proceeding w/Detailed Planning Efforts |
| ● | Black | Identified as Neutral Action – Low Priority for Further Consideration |

WAKE COUNTY

Study Summary

| Measure | Section of Report | First/Next Step(s) | Potential Landfill Life Impact | Difficulty | Eval ² |
|---|-------------------|--|--------------------------------|------------|-------------------|
| Waste Diversion & Reduction | | | | | |
| Promote Commercial Recycling | | | | | |
| Audit/Perform Data Analysis of SWLF Loads | 2.4.1 | Interview LF scalehouse/operator staff to identify select commercial disposers | Med | Low | ● |
| Target Small Businesses | 2.4.2 | Perform assessment & study | Med | Med | ● |
| Collaborate with Stakeholders | 2.4.3 | Identify major generators & form inter-sector communication mechanism | Med | Low | ● |
| Business Waste Audits | 2.4.4 | Perform assessment & study; Walkthrough | Med | Med | ● |
| Pay-As-You-Throw (PAYT) | | | | | |
| Implement Pay-As-You-Throw | 2.5.0 | Identify method of accepting fee payment at collection centers | High | High | ● |
| Expand Organics Management | | | | | |
| Expand Food Waste Education | 2.6.1 | Increase E&O, marketing, Examine County govt/schools policy | Med | Med | ● |
| Find Post-Consumer Food Waste Partners | 2.6.2 | Partner w/food rescue agencies; Maintain list of major generators | Low | Low | ● |
| Expand Composting | 2.6.3 | Expand food scrap collection & backyard program; Maintain generator list | Med | Med | ● |
| Implement Anaerobic Digestion | 2.6.4 | Conduct study/needs assessment for siting facility on County property | High | High | ● |

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WAKE COUNTY

Study Summary

| Measure | Section of Report | First/Next Step(s) | Potential Landfill Life Impact | Difficulty | Eval ² |
|--|-------------------|---|--------------------------------|------------|-------------------|
| Waste Diversion & Reduction | | | | | |
| Additional Waste Reduction/Diversion Programs | | | | | |
| Lead by Example | 2.7.1 | Examine County govt & public school policy; Identify/form gurus/committees | Low | Low | ● |
| Stimulate Reuse | 2.7.2 | Post providers on County website; Identify deconstruction/C&D reuse markets | Low | Low | ● |
| Implement New Policy | 2.7.3 | Explore political will/legal ramifications | High ¹ | Varies | ● |
| Sponsor Additional Special Events | 2.7.4 | Sponsor/provide repair workshop venue; Continue to attend special events | Low | Med | ● |
| Landfill Capacity Increase Measures | | | | | |
| Side Slope Angle Increase | 3.1.0 | Increase the final grade slopes from 4:1 to 3.5:1 | Med | Low | ● |
| MSE Berm | 3.2.0 | Build a mechanically stabilized earth berm | Med | Med | ● |
| Temporary Overfilling | 3.3.0 | Fill above permitted intermediate grades | Low | Low | ● |
| Lateral Expansion | 3.4.0 | Expand the footprint of the Landfill | High | High | ● |
| Vertical Expansion | 3.5.0 | Lower the Landfill base grades | Med | Med | ● |
| Increase Density | 3.6.0 | Work with contract operator to increase waste density | Med | High | ● |

| Key | | |
|--------|--------|---|
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WAKE COUNTY

He shared the recommended next steps. (2 slides) He said staff has started assessing future options. He said a multi-county facility may be a good option.

Next Steps

- **Never to early to start studying future waste disposal options**
 - Another landfill – unlikely in Wake County
 - Out of County transfer...
 - Waste to Energy
 - 10-15 years for planning, environmental review, design & construction
 - Want to have landfill space left for the ash!
 - Very expensive, especially with lower energy pricing!
 - Regional... work with Orange, Durham, Johnston, etc.?



He said there are other options and he asked for input from the committee.

Next Steps

- **Mattress recycling and waste composition study are at the top of the list for now**
- **Easy steps taken, harder choices exist...**
- **Input from GLUE Committee members regarding the study**
 - Move forward with green items?
 - More work on yellow?
 - Other ideas?



Commissioner Calabria asked about costs to pursue green and yellow items. Mr. Roberson said there are costs associated with them and that would be the next step. He will bring the cost information back to the committee in the near future.

Mr. Tim Maloney, Director, Planning, Development & Inspections, shared proposed amendments to the Water, Sewer and Road Financial Policy. He said staff created specific changes for the boards consideration.

Purpose of the Policy

To determine when the County should consider public financing of critical community infrastructure projects (water, sewer and roads)

He shared information that will be helpful to the commissioners prior to taking action on the revised policy.

What does the County need to know?

- Where is the project located?
- Is there a public health and safety issue?
- What are alternative solutions to resolving the infrastructure problem?
- Can a municipality or other governmental agency assist?
- Are there detailed cost estimates to fix the problem?
- Have property owners exhausted other options?
- Does the citizen petition meet the requirements of state law?
- Are there County funds available?

He shared information about recent road repairs that have taken place since the inception of the policy.

Since the policy was adopted in 2015

- Banks Pointe subdivision roads were repaired and turned over to NCDOT at a cost of \$863K
- County has collected approx. \$270K since May 1st when the assessment started
- Staff has talked with approx. two dozen communities about this policy...specific to their subdivision roads
- Two new petitions for road repairs for Mallard Crossing (\$420K) and Rose Hall (\$707K) have been submitted to the County
- To date, staff has prepared petitions for six communities

He said 30 percent of the Banks Pointe home owners paid for their repairs in full prior to the 30-day expiration date.

Mr. Maloney shared information staff has learned during the process. He said staff will stress that a 75 percent vote does not guarantee the project will happen.

Lessons learned about this process

1. Petitioners expect a project that receives a 75% yes vote from their community to move forward
2. Property Owners presume the assessment period will be 10 years and vote assuming a 1/10 annual payment
3. A 10-year assessment period for every project limits the ability to create a sufficient revolving fund to support future projects

He shared suggestions for developing a solution.

What should we do?

1. Make clarifications to the policy and petition
2. Set the financing terms up front

Mr. Maloney shared suggestions on items that need to be stated more clearly in the policy.

Clarify in the policy and petition that...

- Petitions will be considered in the order they were received and on a case by case basis
- The County is under no obligation to provide project financing
- Financing will be considered during the annual budget process
- Projects will only move forward once funding has been appropriated

He shared information on the financing terms.

Set the financing terms up front

- Financing terms (assessment period) should be stated in the petition
- Establish a formula to determine the assessment period
- The formula should result in expedited payback to the County (less than 10 years) so that other projects may be funded
- Include the formula in the policy

Mr. Maloney recommended a formula to be used to determine the assessment period for future projects.

Formula to determine assessment period

The estimated annual installment, per lot, shall be approximately equal to the average annual property tax of all the lots requesting County financing, not to exceed a period of 10 years.

He shared how Banks Pointe would have looked with the proposed formula applied.

Banks Pointe as an example

| | Term / Yrs. | Annual Installment | Total Paid |
|---|-------------|--------------------|------------|
| Average Annual Property Tax: \$3,641 Low: \$2,698 High: \$5,536 | 2 | \$4,852.10 | \$9,704.20 |
| | 3 | \$3,234.73 | \$9,704.20 |
| | 10 | \$970.42 | \$9,704.20 |

Assessment period would have been in 3 years versus 10, residents would pay \$2,300 more per year **AND** County would have \$800,000 at the end of year 3 available to fund future projects

He shared the staff recommendation.

Staff Recommendation

1. Adopt changes to the policy that
 - a. Clarify the County's process for appropriating funds for projects
 - b. Set the financing terms up front and use a formula for determining the assessment period
2. Board of Commissioners to consider approval of the recommended policy changes at the July 23rd Board meeting

Ms. Rogers said the language was written in a way that is easy for residents to understand.

Commissioner Burns asked if the changes would be applied to the two projects that have already completed the petition process. Ms. Rogers said the board would make that decision. Commissioner Burns said it is important for residents to know that the county is not obligated to provide funding. He thanked staff for their work on preparing the policy revisions.

Commissioner Calabria asked if these projects would cause financial hardship on some residents. Mr. Maloney said the information is provided to the residents, and it is up to the community to decide if they want to proceed. Mr. Maloney said there is also a process for them to apply for hardship treatment.

Commissioner Calabria asked if financial hardship treatment could be determined during the petition process. Mr. Maloney said that is not possible at this time. Ms. Rogers said if the community approves the petition at 75 percent, the other 25 percent of residents are also obligated to comply.

Mr. Maloney said there is risk involved with all projects because the cost cannot be determined until the project is put out to bid.

Commissioner Burns asked for clarification on water and sewer issues policy revisions. Mr. Maloney said these policy revisions only applies to the road section of the policy.


Mr. Mark Forestieri, Director, Facilities, Design and Construction, shared information on the Wake County Native Plants Initiative.

Mr. Forestieri shared a definition of a non-native plant.

Definitions

Non-Native Plants

- **Naturalized:** A species introduced from other areas that has become established in, and more or less adapted to, a region by long, continued growth. Does not require artificial inputs for survival and reproduction

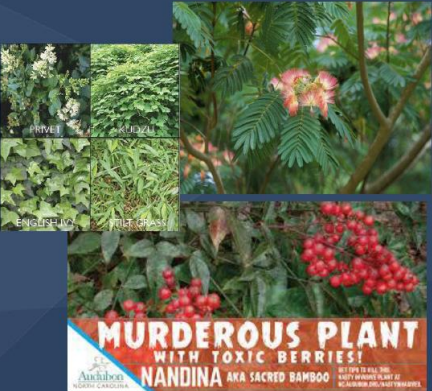


He shared a definition of an invasive plant.

Definitions

Invasive Plants:

A plant that is both non-native and able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities and ecosystems.



He shared the current Wake County standards regarding the use of native plants. (Two slides) He said the county policy prohibits the use of non-native plants in new construction.

Current Wake County Standards

Unified Development Ordinance

Article 16

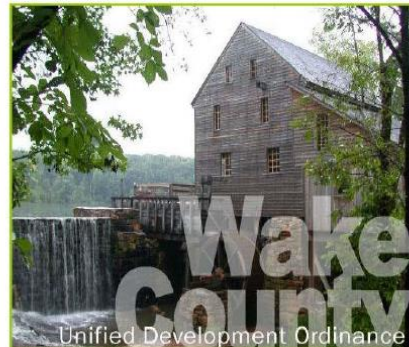
Landscaping and Tree Protection

Article 16 Landscaping and Tree Protection 16-10 Landscaping and Bufferyards

16-10-3 Plant Material, Installation and Maintenance

(3) General Standards

All landscaping materials must comply with the American Nurseryman's Standards. Nonnative or invasive plant species may not be used for planting in landscaping and bufferyards (see the USDA list of these species). Native species used in replantings are encouraged over ornamentals. All species chosen for planting should be chosen from amongst those species that typically grow in our geographical area, Zone 7. The developer is responsible for researching the biological requirements of each species utilized in the plantings.



Effective Date: April 17, 2006
Last Amended: February 3, 2018

Current Wake County Standards

Design Guidelines and Standards

Division 02 -SITE

DIVISION 02 SITE

PAGE 3 OF 7

.14 Landscaping General:

- .a Landscaping shall comply with minimum nursery standards.
- .b County preference is the use of native plant species.
- .c Turf Grass: Common Bermuda or Tall Fescue.
- .d SOD: Variety as approved by the Owner.
- .e Deciduous Trees: Container grown or Balled and Burlapped.
- .f Deciduous Shrubs: Container grown or Balled and Burlapped.
- .g Coniferous and Broadleaf Evergreens: Container grown or Balled and Burlapped.
- .h Mulch: 4" - 5" pine straw or 3" - 4" triple shredded hardwood.
- .i Soil Amendments: Compost; fertilizer/lime as determined by soil tests.
- .j Tree Protection Fencing: Comply with requirements of authorities having jurisdiction.



Mr. Forestieri shared current projects that are using native plants. He said native plants are used on all county projects.

Current Projects using Native Plants

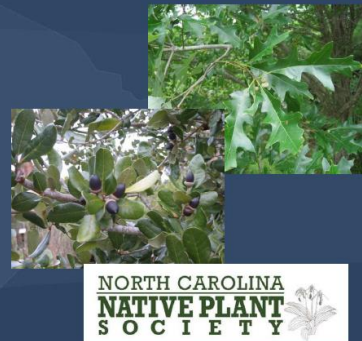
- PROS Nature Preserves
 - Robertson Millpond
 - Turnipseed
- SWLF Improvements Project
- Wake Forest Library Expansion
- Fuquay Varina Library
- Cary Library
- Oak City Center



He shared the recommended process for updating the native plant criteria.

Process for Updates - Research

- Review current standards
- Facilitate input from professionals:
 - landscape architects, plant specialists, NCSU, JCR Arboretum, NC Botanical Gardens, landscape contractors, landscape nurseries ...
- Review of other municipalities / government bodies with native plant criteria
- Review with General Services Staff



He shared the proposed plan for updating the native plant initiative. He said there was a memo released last year by the North Carolina Nursery and Landscape Association stating that there is a shortage of native plants. He said in those instances, substitutes are permitted.

Process for Updates – Proposed Plan

- Identify opportunities and challenges
 - Municipal requirements
 - Nursery supply / sourcing
 - Plant choices – sizes and types
- Recommend Native / Invasive Plants criteria
- Recommend new guidelines / criteria for Wake County project landscape plans
- Create a platform for education
- Evaluate applicability beyond Wake County projects
- Return to GLUE - late Summer



| PLANT SCHEDULE (BASE BID) | | |
|---|-----|---------------------------------------|
| Key | QTY | Botanical Name |
| LARGE TREES | | |
| NS | 3 | <i>Nyssa sylvatica</i> |
| QD | 2 | <i>Quercus rubra</i> |
| UNDERSTORY | | |
| CC | 8 | <i>Cornus canadensis</i> |
| SHRUBS, PERENNIALS & ORNAMENTAL GRASSES | | |
| FM | 21 | <i>Fothergilla major 'Mount Airy'</i> |
| RF | 110 | <i>Rudbeckia hirta 'Goldstrum'</i> |
| SH | 112 | <i>Sporobolus heterostachys</i> |
| SS | 88 | <i>Schizanthus luteus</i> |

Commissioner Hutchinson thanked staff for their work. He said the goal is to retain native plants across the county. He would like to hold a press conference to get the information out to the community. Commissioner Burns said there is work to be done before a press conference is held.

Mr. Ben Canada, Assistant to the County Manager, said the next meeting will be held July 9th, 2018.

There being no further business, it was moved by Commissioner Burns to adjourn the meeting at 6:15 p.m.

Respectfully submitted,

Michelle L. Cerett
Executive Assistant
Wake County Commissioners