

GLENN B. ADAMS
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CHARLES E. EVANS
Vice Chairman

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JEANNETTE M. COUNCIL
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JIMMY KEEFE
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CUMBERLAND ★ COUNTY ★ NORTH CAROLINA

BOARD OF COMMISSIONERS

CANDICE WHITE
Clerk to the Board

KELLIE BEAM
Deputy Clerk

MEMORANDUM

TO: Policy Committee Members (Commissioners Boose, Evans and Lancaster)

FROM: Kellie Beam, Deputy Clerk to the Board KB

DATE: September 29, 2017

SUBJECT: Policy Committee Meeting – Thursday, October 5, 2017

There will be a regular meeting of the Policy Committee on Thursday, October 5, 2017 at 10:30 AM in room 564 of the Cumberland County Courthouse.

AGENDA

1. Approval of Minutes – September 7, 2017 Regular Meeting **(Pg. 2)**
2. Discussion of Procedures to be Followed by Inspectors for the Enforcement of the Minimum Housing Code **(Pg. 11)**
3. Consideration of Resolution Supporting the Ozone Advance Program **(Pg. 20)**
4. Other Items of Business **(NO MATERIALS)**

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CUMBERLAND COUNTY POLICY COMMITTEE
COURTHOUSE, 117 DICK STREET, 5TH FLOOR, ROOM 564
SEPTEMBER 7, 2017 – 10:30 A.M.
MINUTES

MEMBERS PRESENT: Commissioner Charles Evans
Commissioner Michael Boose (arrived at 10:35 AM)
Commissioner Larry Lancaster

OTHER COMMISSIONERS
PRESENT: Commissioner Glenn Adams
Commissioner Jimmy Keefe
Commissioner Jeannette Council
Commissioner Marshall Faircloth

OTHERS PRESENT: Amy Cannon, County Manager
Tracy Jackson, Assistant County Manager
Sally Shutt, Assistant County Manager
Melissa Cardinali, Assistant County Manager
Rick Moorefield, County Attorney
Phyllis Jones, Assistant County Attorney
Tom Lloyd, Planning & Inspections Director
Cecil Combs, Planning & Inspections Deputy Director
Candice White, Clerk to the Board
Kellie Beam, Deputy Clerk to the Board
Press

Commissioner Evans called the meeting to order.

1. APPROVAL OF MINUTES – AUGUST 3, 2017 SPECIAL MEETING

MOTION: Commissioner Lancaster moved to approve the minutes from the August 3, 2017 special meeting of the Policy Committee as presented.
SECOND: Commissioner Evans
VOTE: UNANIMOUS (2-0)

2. CONSIDERATION OF INTERLOCAL AGREEMENT WITH BLADEN COUNTY FOR INSPECTION SERVICES

BACKGROUND:

The Interlocal Agreement recorded below assigns the Cumberland County Planning & Inspections Department the responsibility for permitting and inspecting Innovative Solar 42, LLC. This solar farm project consists of 444.48 acres with access to the project site from Rufus Johnson Road and County Line Road entirely within Cumberland County. A

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total of 288 acres are located within Cumberland County, and the remaining 157 acres located in Bladen County. This LLC will generate power for Duke Energy. Pursuant to NCGS 153A-353, an Interlocal Agreement is needed to permit Cumberland County Inspectors to provide inspection services within Bladen County. All permits and permitting fees for providing the inspection services associated with this project (Building, Electrical, Water Supply Watershed) will be issued and fees collected by Cumberland County.

RECOMMENDATION/PROPOSED ACTION:

Staff requests consideration by the Policy Committee and approval to move forward to the full Board of Commissioners as a Consent Agenda item at the September 18, 2017 regular meeting.

INTERLOCAL AGREEMENT BETWEEN CUMBERLAND COUNTY AND BLADEN COUNTY FOR BUILDING INSPECTION SERVICES FOR A SOLAR FARM PROJECT SITED IN BOTH COUNTIES

THIS INTERLOCAL AGREEMENT, is made and entered into by and between the County of Cumberland, a body politic and political subdivision of the State of North Carolina, hereinafter referred to as "Cumberland," and the County of Bladen, a body politic and political subdivision of the State of North Carolina, hereinafter referred to as "Bladen," to become effective upon the approval of the governing boards of each county in accordance with G.S. § 160A-461.

WITNESSETH:

WHEREAS, the Cumberland County Inspections Department has issued permits for the development of a solar farm project identified as IS 42 Solar Farm (the "Project,") identified as follows: Watershed Permit issued to Innovative Solar 42, LLC; Building Permit B-17-170656 and Electrical Permit E-17-171043 issued to Canadian Solar; Building Permit B-17-172615 and Electrical Permit E-17-172617 issued to Grays Creek Properties LL; and

WHEREAS, the Project is sited on the Cumberland-Bladen county line and consists of approximately 288.27 acres with PIN 0339-87-3814 located in Cumberland; and approximately 156.21 acres with PIN 0339-00-55-3698, PIN 0339-00-75-1483, and PIN 0039-00-85-8763 located in Bladen (the Project Site); and

WHEREAS, the county line is not marked on the ground within the Project Site; and WHEREAS, highway access to the Project Site is from Rufus Johnson Road and County Line Road entirely within Cumberland; and

WHEREAS, because most of the Project Site and all of the highway access to the Project Site is within Cumberland, and the exact location of the county line is not marked on the

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ground in the Project Site, Bladen wishes to defer the plan review, permit issuance, inspections and closures of the Building, Electrical and Watershed Permits to Cumberland; and

WHEREAS, G.S. § 153A-353 provides that a county may designate an inspector from another county to serve as a member of the county inspection department, with the approval of the governing body of the other county; and,

WHEREAS, in order to provide inspection services for the Project in the most efficient manner, Cumberland and Bladen desire to enter into this interlocal agreement for inspection services for the Project.

THEREFORE, Cumberland and Bladen, by and through their respective Boards of Commissioners, enter into this Interlocal Agreement for the purposes stated herein.

ARTICLE 1

PURPOSE AND AUTHORITY FOR THE AGREEMENT

The purpose of this Agreement is for Bladen to designate Cumberland's inspectors as Bladen's inspectors for all inspection and permitting of the building, electrical and watershed permits for all portions of the Project and Project Site located in Bladen as described above. The authority for this Agreement is §§ 153A-11, 153A-353, and 160A-11 of the General Statutes of North Carolina.

ARTICLE 2

DURATION OF THE AGREEMENT

This Agreement shall become effective as of the date any inspection or permitting services are, or were, provided on the portion of the Project Site located in Bladen and shall continue until all building, electrical, and watershed permits for the portion of the Project Site located in Bladen are completed and issued.

ARTICLE 3

NO JOINT AGENCY

This Agreement shall not establish a joint agency between the parties.

ARTICLE 4

PERSONNEL

4.1. For purposes of this Agreement only, Bladen designates all inspectors assigned by Cumberland to conduct building and electrical inspections and issue building and electrical permits for the Project as inspectors for Bladen for all portions of the Project and Project Site located in Bladen as described above. This designation is made

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pursuant to G.S. § 153A-353.

4.2. For purposes of this Agreement only, Bladen appoints the Cumberland Watershed Administrator as Bladen's agent for the purposes of inspecting and issuing any watershed permit on behalf of Bladen for that portion of the Project and Project Site located in Bladen as described above.

4.3. For purposes of this Agreement only, the building, electrical and watershed permits issued by Cumberland for the portion of the Project or the Project Site located in Bladen as described above, shall be deemed to be permits issued by Bladen.

ARTICLE 5

PERMITTING FEES

For purposes of this Agreement only, all building, electrical, and watershed inspections and permitting fees for inspecting and permitting the portion of the Project and Project Site located in Bladen as described above, shall accrue to Cumberland in consideration of Cumberland providing these services on behalf of Bladen. All inspection and permitting fees shall be billed to and collected from the owner of the Project by Cumberland. Bladen shall have no obligation for the payment of any fees or other costs for these inspection and permitting services.

ARTICLE 6

NO PROPERTY TO BE ACQUIRED

No real or personal property shall be acquired by either party incident this agreement.

ARTICLE 7

AMENDMENT

This Agreement may only be amended by a writing approved by the governing boards of each party.

ARTICLE 8

TERMINATION

8.1 This Agreement may be terminated early by written notice from either party delivered to the county manager of the other party, subject to the further conditions of this Article.

8.2. In the event Cumberland should terminate this Agreement early, any fees that it has collected for inspection services that have not been completed shall be paid to Bladen. The amount of such fees owed to Bladen shall be determined as the percentage the amount of services which have not been completed bears to the total services for which the fee has been collected.

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8.3 In the event Bladen terminates this Agreement early, Cumberland shall retain all fees for inspection services that it has collected and shall have no obligation to pay any portion of the collected fees to Bladen. Upon notice of termination received from Bladen, Cumberland shall immediately cease to perform inspections or issue any permits for the portion of the Project or Project Site located in Bladen.

ARTICLE 9

DISPUTE RESOLUTION

If any dispute shall arise between the parties as to any term of this Agreement or any condition related to the performance of the services under this Agreement, the parties shall first make an effort to resolve the dispute by a committee consisting of a county commissioner, the county manager, and the chief inspections official from each county.

This Interlocal Agreement was approved by the Cumberland County Board of Commissioners at a meeting held _____, 2017, and entered into the minutes.

Tom Lloyd, Planning & Inspections Director, reviewed the background information, recommendation and proposed interlocal agreement as recorded above.

Tracy Jackson, Assistant County Manager, stated the Bladen County Board of Commissioners has approved the Interlocal Agreement. Rick Moorefield, County Attorney, stated he recommends the Cumberland County Board of Commissioners approve the Interlocal Agreement.

MOTION: Commissioner Lancaster moved to recommend to the full board approval to move the Interlocal Agreement forward as a Consent Agenda Item at the September 18, 2017 regular meeting.
SECOND: Commissioner Boose
VOTE: UNANIMOUS (3-0)

3. REVIEW OF CUMBERLAND COUNTY TRAVEL POLICY

BACKGROUND:

A recent revision to the Travel Policy was most recently approved by the Board of Commissioners on June 16, 2008. The most recent procedure change within the document was on December 15, 2010, as approved by the former County Manager and County Attorney.

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RECOMMENDATION/PROPOSED ACTION:

For review and discussion as requested by Commissioner Boose.

Vicki Evans, Finance Director, reviewed the background information and recommendation as recorded above.

Commissioner Boose stated he added this item to the agenda because it has been 10 years since any changes have been made to the Travel Policy. Commissioner Boose asked if mileage and the daily rate are updated regularly. Ms. Evans stated mileage is updated as often as the IRS updates mileage reimbursement rates and meals are followed by GSA which are federal guidelines. Questions and discussion followed.

No action taken.

4. CONSIDERATION OF A FACILITIES NAMING POLICY

BACKGROUND

Cumberland County does not have a formal process or policy for naming facilities owned by the County. At the May 23, 2017, special Policy Committee Meeting, staff presented the proposed policy recorded below for the Committee's review and deliberation. By consensus, the committee requested that the draft policy be brought back to the committee for consideration to allow other commissioners who are not on the committee a chance to provide input.

Following the recommendation of the Policy Committee, the full Board of Commissioners approved naming the Courthouse in memory of Judge E. Maurice Braswell on June 5, 2017. The Courthouse, E. Newton Smith Building, and the Bacote House are the only County-owned facilities named for individuals.

RECOMMENDED/PROPOSED ACTION

Consider the draft policy recorded below for naming County-owned facilities and areas. The policy also includes guidance on how memorials are to be displayed at a County facility.

COUNTY OF CUMBERLAND FACILITY NAMING POLICY

I. PURPOSE

To establish a formal policy and process for naming public facilities owned by Cumberland County. A sound policy can add meaning and significance that embody the values and heritage of this County.

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II. AUTHORIZATION

The Board of County Commissioners will be responsible for considering and recommending the naming of facilities that are owned by the County.

III. OBJECTIVES

- A. Provide name identification wherever appropriate for public buildings, structures, facilities, and specified areas.
- B. Provide for citizen input into the process of naming facilities as described above.
- C. Ensure control for the naming of facilities by the Cumberland County Board of Commissioners.

IV. QUALIFYING NAMES

Names should provide some form of individual identity related to:

- A. The geographic location of the facility
- B. A geologic, historical, botanical, horticultural, or scientific feature inherent to the area
- C. An outstanding feature of the facility
- D. Commonly recognized historical event, group, or individual
- E. An adjoining subdivision, school, or street
- F. An individual, donor, or group who contributed significantly to the acquisition or development of the individual facility
- G. An individual who provided an exceptional service in the interest of the County as a whole
- H. An individual who has provided at least 25 years of service to the County
- I. An individual who has been deceased at least one year

V. NAMING PROCESS

- A. At the time land or a facility is acquired, but before development or occupancy occurs, the County Manager will assign a non-descript working name for the area or facility.
- B. Once development is initiated, or occupancy of the facility occurs, the County Policy Committee will receive naming applications in writing for review. If approved by the Policy Committee, the recommendation of a Qualifying Name will go on to the full Board of Commissioners for further consideration.
- C. For an individual (excluding historically significant individuals) to be considered, that person must have contributed significantly to the acquisition or development of the facility or the overall County. Substantial contribution may consist of volunteer services, the provision of land, or a monetary donation. The recommended name must be submitted by a group and accompanied by:
 - 1) a biographical sketch, which shall provide evidence of contributions to the department, facility, or County over all, and

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- 2) a petition demonstrating broad support for the person being recommended. The person must be of fine moral character with demonstrated leadership qualities.
- D. After a name is decided upon by the Board of Commissioners, public notice of the recommended Qualifying Name will occur twice in a 60-day public-notice period.

VI. RENAMING

- A. The renaming of a facility is strongly discouraged. It is recommended that efforts to change a name be subject to the most critical examination so as not to diminish the original justification for the name or discount the value of prior contributors.
- B. Facilities named after individuals should never be changed unless it is found that the individual's personal character is or was such that the continued use of their name for a facility would not be in the best interest of the County.
- C. In order for a facility to be considered for renaming, the recommended name must qualify according to Section V of this policy.

VII. OTHER NAMING ALTERNATIVES

- A. Real property may be donated to Cumberland County subject to any condition for naming the property as may be approved by the Board of Commissioners upon acceptance of the donated property.

VIII. PLAQUES, MARKERS, AND MEMORIALS

- A. All plaques, markers, and memorials are subject to the same naming criteria in Section V of this policy.
- B. Because of their proneness to vandalism and maintenance, plaques, markers, and memorials should be used sparingly.
- C. The Board of Commissioners shall determine the style, size, and placement of all plaques, signs, or markers on a case-by-case basis. In general, the plaques, signs, or markers shall blend or compliment their environment.

Mr. Jackson reviewed the background information and recommendation as recorded above. Mr. Jackson stated when the draft policy was put together he looked at other policies from around the state. Mr. Jackson stated reviewed the draft Facilities Naming Policy.

Commissioner Boose stated he recommends under the item II. AUTHORIZATION the word "re-naming" be added so it would read "The Board of County Commissioners will be responsible for considering and recommending the naming/*re-naming* of facilities that are owned by the County".

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Commissioner Boose stated under item VI. C. it states “the recommended name must be submitted by a group and accompanied by” he recommends deleting “by a group”. Commissioner Council recommended just changing the word “*must*” to the word “*should*”. The consensus of the committee was to change the word “*must*” to the word “*should*” instead of deleting “by a group” so it will read “the recommended name *should* be submitted by a group and accompanied by”.

Mr. Moorefield stated he will need to make some changes to the language under the item VII. OTHER NAMING ALTERNATIVES. Mr. Moorefield stated the changes to this section were minimal and would be made in time for the draft policy to go forward to the next full board meeting for consideration on September 18, 2017.

MOTION: Commissioner Boose moved to recommend to the full board approval of the draft policy for naming County-owned facilities and areas with the proposed revisions made.

SECOND: Commissioner Lancaster

VOTE: UNANIMOUS (3-0)

5. OTHER ITEMS OF BUSINESS

No other items of business.

MEETING ADJOURNED AT 11:02 AM



OFFICE OF THE COUNTY ATTORNEY

5th Floor, New Courthouse • P.O. Box 1829 • Suite 551 • Fayetteville, North Carolina 28302-1829
(910) 678-7762

**MEMO FOR THE AGENDA OF OCTOBER 5, 2017,
MEETING OF THE POLICY COMMITTEE**

TO: Asst. County Manager Sally Shutt; Director of Planning and Inspections
Tom Lloyd
FROM: Co. Atty. *R. Moorefield*
DATE: September 26, 2017
SUBJECT: Procedures to be followed by Inspectors for the Enforcement of the
Minimum Housing Code

Requested by Policy Committee Chair Evans
Estimate of Time Needed: 15 minutes

Attachments: (1) Minimum Housing Code Enforcement Procedures – September, 2017
(2) Example of Report on Title for Minimum Housing Code Enforcement

BACKGROUND:

Policy Committee Chair Evans asked Planning and Inspections Director Tom Lloyd to provide the Policy Committee with an explanation of how the owner was represented by someone with a power of attorney in Minimum Housing Case MH1773-2017, heard August 21, 2017. At the time Policy Committee Chair Evans asked for this report, the Planning and Inspections Director had already asked the County Attorney to meet with inspections staff and discuss this issue and others that had recently arisen with respect to enforcement of the Minimum Housing Code. The County Attorney had proposed to create an outline of minimum housing code enforcement procedures and provide training to inspections staff on these procedures. For that reason, the Planning and Inspections Director asked the County Attorney to discuss this process with Policy Committee Chair Evans. Policy Committee Chair Evans asked the County Attorney to present that information to the Policy Committee.

The outline of the procedures is attached. It addresses every issue that has arisen with respect to service of notice and the conduct of the hearings in the past seven years. A Report on Title is attached as an example of how complex some of these matters are. These procedures are intended to insure that all owners and parties of interest are served notice of the violations and hearing and that the structures which are demolished are in fact located at the address and on the parcel of land owned by the persons to whom notice was given. Determining ownership and location is often difficult for a number of reasons including incorrect tax mapping and listing information, multiple addresses on a single parcel, bad descriptions of the boundaries in the deeds, and ownership passing by inheritance without the estate being administered. The county

attorney is working with Inspections staff to improve the forms used for these enforcement procedures. Even with better forms and a more uniform approach, enforcement of this ordinance is often going to take several months to complete.

In response to Policy Committee Chair Evan's specific question about an owner being represented by an attorney-in-fact, it is permissible as long as the county attorney determines that the power of attorney is valid. In the case that was heard August 21, 2017, the power of attorney was not valid and that case will not go forward except through a civil action with a guardian being appointed for the owner. To do so will increase the cost of this enforcement action considerably. It is a Town of Eastover case.

RECOMMENDATION/ACTION REQUESTED:

This was presented as information in response to Policy Committee Chair Evan's request and no action is requested from the Policy Committee.

PROCEDURES TO BE FOLLOWED BY INSPECTORS FOR THE ENFORCEMENT OF THE MINIMUM HOUSING CODE

The County's Minimum Housing Code has been adopted pursuant to Part 6, Article 19, Chapter 160A of the General Statutes of North Carolina, and those statutes govern its implementation. Many of the properties found to be in violation of this Code have simply been abandoned and often it is difficult to determine who owns the property or upon which parcel a structure is located. Even so, it is important to keep in mind that the demolition of these structures amounts to a taking of property by the county and the owners of these properties are always to be afforded the constitutional protection of due process. When an inspector has doubt about any aspect of the enforcement process, he or she should err on the side of caution and consult with the county attorney. The county attorney has set out below an outline of the basic processes to address recurring issues.

I. Inspections.

A Minimum Housing Code enforcement inspection shall be conducted in compliance with Section 4-83(a) of the Minimum Housing Code. An enforcement inspection shall only commence upon the filing of a written petition by one of the following:

- (1) the County or State Public Health Director;
- (2) the County or State Fire Marshal;
- (3) the County Planning Director;
- (4) the County Director of Community Development;
- (5) at least five (5) residents of the county;
- (6) the occupant of a dwelling that the occupant charges to be in violation;

or, whenever it appears to the inspector that any dwelling is in violation.

II. The Complaint.

- A. *Contents.* The complaint shall contain an itemized list of each violation of the Code which identifies the specific code sections found to be violated.

- B. *Report on Title.* The county attorney shall prepare a Report on Title for each property subject to an enforcement action. No enforcement action shall be commenced without obtaining a Report on Title. A copy of the Report on Title shall be attached to each complaint. This is necessary to explain the reason judgment creditors and other lien holders have been noticed as parties of interest.
- C. *Lis pendens.* A notice of lis pendens shall be filed with the Clerk of Court at the time a complaint is served on the owner and parties of interest.

III. Service of the Complaint and Notice of Hearing.

- A. *Service by posting.* A copy of the Complaint and Notice of Hearing shall be posted conspicuously on each structure on the property which has been found to violate any section of the Code.
- B. *Service by mail.* Service of the Complaint and Notice of Hearing by mail shall be made in accordance with Section 4-83(f) of the Code. Each owner and party of interest identified by the county attorney on the Report of Title shall be served separately by both regular mail and certified mail, return receipt requested, to the addresses shown on the Report of Title.
 - 1. If the return receipt for the certified mail is returned signed by anyone, service is deemed sufficient for the owner or party of interest to which it was addressed.
 - 2. If the return receipt for the certified mail is unclaimed or refused, and the regular mail addressed to the same owner or party of interest is not returned within ten days of mailing, service is deemed sufficient for the owner or party of interest to which it was addressed.
 - 3. If the return receipt for the certified mail is unclaimed or refused, and the regular mail addressed to the same owner or party of interest is returned within ten days of mailing, service is not deemed sufficient for the owner or party of interest to which it was addressed. When service is deemed not sufficient for this reason, the owner or party of interest shall be served by publication.

- C. *Service by publication.* Service by publication shall be made as to all owners and parties of interest for which service by publication is directed on the Report of Title, and as to all owners and parties of interest for which the return receipt for the certified mail is unclaimed or refused, and the regular mail addressed to the same owner or party of interest is returned within ten days of mailing
- D. *Affidavit of service.* An Affidavit of Service in a form approved by the county attorney shall be prepared for each owner and party of interest for which service is attempted. All Affidavits of Service shall be made part of the enforcement file.

IV. The Hearing.

- A. *When all parties have been served.* All owners and parties of interest have a right to be heard at the hearing, and to appeal the order of the inspector.
- B. *When all parties have not been served.* If during the conduct of the hearing, the inspector discovers information indicating that there are owners or parties of interest that have not been served, the inspector shall conduct the scheduled hearing and give notice to the parties present that the scheduled hearing shall be continued to a date that is not less than thirty (30) days from the scheduled hearing in order to attempt service on any unserved party and to give the unserved party an opportunity to be heard. The inspector shall consult with the county attorney as to the perceived deficiency in service and how to remedy it.
- C. *Representation by an attorney.* Any party may be represented by an attorney. An attorney representing an owner or party of interest shall file a written notice of appearance which identifies all parties represented by the attorney and provides the attorney's mailing address and State Bar Number.
- D. *Representation by someone other than an attorney.* If anyone other than an attorney appears on behalf of an owner or party of interest, the person appearing must file a written document signed by the party being represented indicating the appointment of the representative. Examples of such appointments include a power of attorney and an agent. The hearing must be continued as to the party being represented by someone

other than an attorney and the inspector shall consult with the county attorney as to the validity of the appointment. The county attorney shall advise the inspector how to proceed.

- E. *Persons with special needs.* If it appears to the inspector that any owner of party of interest appearing at the hearing has a handicap or disability that substantially impairs his or her ability to communicate by ordinary hearing and speech, the hearing shall be continued as to such person and the inspector shall consult with the county attorney. The county attorney shall advise the inspector how to proceed.

V. Special Circumstances.

The county attorney shall advise in the Report on Title of any special circumstances affecting an enforcement action. Examples of such special circumstances include:

- (1) the property is subject to civil litigation such as a tax or mortgage foreclosure, condemnation or boundary dispute;
- (2) one of the owners or parties of interest is incompetent or is a minor;
- (3) one of the owners or parties of interest is in a bankruptcy proceeding;
- (4) the property must be surveyed to determine whether the structure for which demolition is sought is located upon it; or
- (5) the dwelling found to be in violation is a manufactured home which is not owned by the owner of the land upon which it is sited.

If a special circumstance is indicated, the inspector shall follow the instructions provided by the county attorney. Any questions on the procedures to follow should be directed to the county attorney.



CUMBERLAND COUNTY LEGAL DEPARTMENT

117 DICK STREET • ROOM 551 • FAYETTEVILLE, NC 28301 • (910) 678-7762 • FAX: 678-7758

Limited Title Report for Planning & Inspections Dept.		PIN 0424-44-5969
CURRENT OWNER & MAILING ADDRESS:	Luis A. Lopez and wife, Kitwan J. Lopez 5122 Miranda Drive, Hope Mills, NC 28348	
PARTIES OF INTEREST & MAILING ADDRESS:	America's Wholesale Lender, 4011 Westchase Blvd., Raleigh, NC 27607 Trustee Services of Carolina, LLC, 5919 Oleander Drive, Suite 115, Wilmington, NC 28403 Mortgage Electronic Registration Systems, Inc., P.O. Box 2026, Flint, MI 48501-2026 Countrywide Home Loans, Inc., P.O. Box 10423, Van Nuys, CA 91410-0423 Countrywide Home Loans, Inc., 9115 Harris Corners Pkwy, Suite 550, Charlotte, NC 28269 Countrywide Bank, N.A., 1199 North Fairfax St., Suite 500, Alexandria, VA 22314 First American Title Insurance Lenders Advantage, 1228 Euclid Avenue, Suite 400, Cleveland, OH 44115 First American Lenders, 1100 Superior Avenue, Suite 200, Cleveland, OH 44114	
PROPERTY ADDRESS:	5122 Miranda Drive, Hope Mills, NC 28348	
DEED REFERENCE:	Warranty Deed, Book 6503 at page 3	
DESCRIPTION:	Lot 137, Southview, Section 5, Plat Book 107 at page 54	
TAXING DISTRICT:	0051 Pearces Mill	
PROPERTY CLASS:	Residential	
BUILDING TYPE:	Single Family Res	
TAXES:	Paid through 2016	
DEEDS OF TRUST:	Deed of Trust from Luis A. Lopez, unmarried, to Trustee Services of Carolina, LLC, trustee for the benefit of Mortgage Electronic Registration Systems, Inc. (MERS), acting solely as nominee for the lender, America's Wholesale Lender, securing the principal amount of \$145,255.00, dated April 26, 2004, and recorded April 27, 2004, in Book 6503 at page 5 of the Cumberland County Registry. Deed of Trust from Luis A. Lopez and Kitwan J. Lopez, husband and wife, to Trustee Services of Carolina, LLC, trustee for the benefit of Mortgage Electronic Registration Systems, Inc. (MERS), acting solely as nominee for the lender, Countrywide Bank, N.A., securing the principal amount of \$11,290.00, dated May 23, 2006, and recorded September 8, 2006, in Book 7357 at page 162 of the Cumberland County Registry.	
UCC STATEMENTS:		
JUDGMENTS:		
BANKRUPTCIES:		
SEARCH PERIOD:	April 27, 2004, to August 24, 2017	

PAGE TWO

You are to attach a copy of this report to the notice and serve the following owners and parties of interest by certified mail, return receipt requested:

1. Luis A. Lopez and wife, Kitwan J. Lopez
5122 Miranda Drive, Hope Mills, NC 28348
2. America's Wholesale Lender
4011 Westchase Blvd.
Raleigh, NC 27607
3. Trustee Services of Carolina, LLC
5919 Oleander Drive, Suite 115
Wilmington, NC 28403
4. Mortgage Electronic Registration Systems, Inc.
P.O. Box 2026
Flint, MI 48501-2026
5. Countrywide Home Loans, Inc.
P.O. Box 10423
Van Nuys, CA 91410-0423
6. Countrywide Home Loans, Inc.
9115 Harris Corners Pkwy, Suite 550
Charlotte, NC 28269
7. Countrywide Bank, N.A.
1199 North Fairfax St., Suite 500
Alexandria, VA 22314
8. First American Title Insurance Lenders Advantage
1228 Euclid Avenue, Suite 400
Cleveland, OH 44115
9. First American Lenders
1100 Superior Avenue, Suite 200
Cleveland, OH 44114

This report is current to August 24, 2017, at 5:00 p.m.



Rickey L. Moorefield, County Attorney



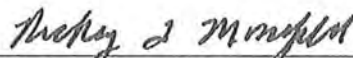
OFFICE OF THE COUNTY ATTORNEY

5TH FLOOR, NEW COURTHOUSE • P.O. BOX 1829 • SUITE 551 • FAYETTEVILLE, NC 28301 • (910) 678-7762

Limited Title Report for Planning & Inspections Dept.		PIN 0416-81-9454
PROPERTY ADDRESS:	2224 Dixie Trail, Fayetteville, NC 28306	
OWNER(S):	Albert Wilson Perdue and wife, Nancy Fay Perdue	
DEED REFERENCE:	Warranty Deed, Book 2441 at page 703	
DESCRIPTION:	Southern ½ of Lot 60, Pine Acres Section II, Plat Book 13 at page 20	
TAXING DISTRICT:	0021 Cumb Road	
PROPERTY CLASS:	Residential	
BUILDING TYPE:	Single Family Res	
TAXES:	Paid through 2010; Action is pending on this parcel	
LIENS:	CUMBERLAND COUNTY TAX FORECLOSURE: 17 SP 493	
OTHER EXCEPTIONS:		
SEARCH PERIOD:	From May 21, 1974, to August 27, 2017	
NOTES:		

You are not to proceed with demolition on this property.

This report is current to August 27, 2017, at 5:00 p.m.



Rickey L. Moorefield, County Attorney

AMY H. CANNON
County Manager

MELISSA C. CARDINALI
Assistant County Manager



ITEM NO. 3

DUANE T. HOLDER
Assistant County Manager

TRACY JACKSON
Assistant County Manager


SALLY S. SHUTT
Assistant County Manager



OFFICE OF THE COUNTY MANAGER

MEMORANDUM FOR THE AGENDA OF THE OCTOBER 5, 2017 MEETING OF THE POLICY COMMITTEE

TO: MEMBERS OF THE POLICY COMMITTEE

FROM: TRACY JACKSON, ASST. COUNTY MANAGER 

THROUGH: AMY CANNON, COUNTY MANAGER

DATE: SEPTEMBER 27, 2017

SUBJECT: RESOLUTION SUPPORTING THE OZONE ADVANCE PROGRAM

Requested by: Tracy Jackson, Asst. County Manager

Presenter(s): Tracy Jackson, Asst. County Manager
Joel Strickland, FAMPO Director

Estimate of Committee Time Needed: 10 Minutes

BACKGROUND:

The Fayetteville Area Metropolitan Planning Organization (FAMPO) Air Quality Stakeholders is requesting a resolution seeking continued support of the existing Ozone Advance Action Program. This program is a collaborative effort among local governments, agencies, and other groups interested in protecting and improving the air quality of Fayetteville and Cumberland County. Attached to this memo is a copy of the proposed resolution and a copy of the most recent Ozone Advance Program Action Plan.

RECOMMENDATION/PROPOSED ACTION:

Staff recommends approval of the proposed resolution and further consideration by the full Board of Commissioners as a Consent Agenda item at the October 16, 2017 regular meeting.



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MEMO

Sustainable Sandhills

To: Cumberland County Commissioners
From: Denise Bruce, Sustainable Sandhills Green Action Coordinator
CC: Joel Strickland, FAMPO
Date: September 19, 2017
Re: Resolution Supporting the Ozone Advanced Program

The Fayetteville Area Metropolitan Planning Organization (FAMPO) Air Quality Stakeholders (formerly the Cumberland County Air Quality Stakeholders) seeks the continued support of the Cumberland County Commissioners for improved air quality through the Ozone Advanced Program. The FAMPO Air Quality Stakeholders will continue to administer the successful Ozone Advance Program on behalf of Cumberland County and the FAMPO region. Ozone Advanced is a voluntary program where regions, towns, and communities receive guidance from the Environmental Protection Agency to maintain attainment with the National Ambient Air Quality Standards.

As a demonstration of support by Cumberland County please consider the attached resolution.

**RESOLUTION SUPPORTING THE
OZONE ADVANCE PROGRAM**

RESOLUTION 2017-01

WHEREAS, the federal Clean Air Act, through the Environmental Protection Agency (EPA), establishes air quality standards to protect public health and welfare; and

WHEREAS, Cumberland County has acknowledged the importance of these standards in promoting quality of life, economic development, and future healthy development; and

WHEREAS, Cumberland County is currently attaining the 2015 federal ozone standard of 0.070 parts per million (ppm); and

WHEREAS, in 2003 the Cumberland County Board of Commissioners partnered with all of its municipalities to participate in the EPA's Early Action Compact and created the Air Quality Stakeholders of Cumberland County to proactively improve air quality for our citizens; and

WHEREAS, EPA, in conjunction with state governments, business, industry, and environmental interest, has developed an option known as an "Ozone Advance Program," through which an area, in partnership with the North Carolina Department of Environmental and Natural Resources and EPA, can voluntarily improve conditions through strategies developed through an Action Plan to help avoid a designation of non-attainment; and

WHEREAS, the benefits of participating in an Ozone Advance Program include: clean air sooner, potentially avoiding non-attainment designation; preference during EPA federal grant allocations; flexibility to achieve standards in cost effective ways; development of local standards in partnership with stakeholders and the state, and other benefits;

NOW, THEREFORE, BE IT RESOLVED, that Cumberland County supports the Ozone Advance Program and will participate in the development and implementation of an Action Plan with the purpose of reducing ground-level ozone concentrations.

Ozone Advance Program Action Plan

Cumberland County, North Carolina



A joint effort by US EPA Region 4, North Carolina Department of Environment and Natural Resources, and the Cumberland County Board of Commissioners, Town of Falcon, City of Fayetteville, Fort Bragg Military Reservation, Town of Godwin, Town of Hope Mills, Town of Linden, Town of Spring Lake, Town of Stedman and Town of Wade and the Fayetteville Area Metropolitan Planning Organization

September 14, 2016

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1. Purpose of the Ozone Advance Program

1.0 Introduction

The Ozone Advance is a collaborative effort between the EPA, states, tribes, and local governments. The program encourages expedition emission reductions in ozone attainment areas to help these areas continue to meet the National Ambient Air Quality Standards (NAAQS) for ground-level ozone. Specifically, the Ozone Advance Program will:

- Help attainment areas reduce emissions in order to ensure continued health protection,
- Better position areas to remain in attainment, and
- Efficiently direct available resources towards actions to address ozone problems quickly.

Ozone Advance promotes local actions to reduce ozone precursors in attainment areas to help these areas continue to maintain the ozone NAAQS. The program encourages states, tribes, and local governments to take proactive steps to keep their air clean.

Ozone Advance is distinct from the former Early Action Compact (EAC) program in that it focuses on attainment areas, and it does not provide regulatory flexibility in the form of deferred designations or otherwise. The programs are similar, however, in terms of their encouragement of early actions to reduce ozone precursors, and the development of stakeholder groups.

1.1 Background and Stakeholders Involvement

The Clean Air Act (CAA), as amended in 1990, is the most recent version of a law first passed in 1970. The 1990 Amendment made some major changes in the Act, by empowering the US Environmental Protection Agency (EPA) to set up permitting and enforcing programs for larger sources that release pollutants into the air.

On July 17, 1997, the EPA promulgated revised National Ambient and Air Quality Standards, addressing changes in the Ozone and moving from 1-hour standard to an 8-hour standard, as longer exposure to ozone have been proven to have a significant impact on people and the environment. The new primary and secondary standard was set to 0.08 parts per million (ppm) for ground-level ozone.

In 2002, the EPA proposed a new program: The Early Action Compact (EAC), to areas in the country that would meet certain criteria. Each participating area was to have an Early Action Compact Memorandum (EAC) of Agreement signed by December 31, 2002. The Chairman of the Cumberland County Board of Commissioners originally signed the EAC Memorandum of Agreement on December 13, 2002. The Early Action Plan, a document outlining local, state, and federal strategies to reduce ozone precursors, followed. Milestones set by EPA were met by Cumberland County resulting in designation as an Ozone Attainment Area in April 2008. Ground level ozone standards were changed once more in 2008 and set at 0.075 ppm and updated again in

2015 to .070ppm. Cumberland County elected to continue with the air quality regional efforts in the hope that uninterrupted work would further the ozone precursors reduction. The Cumberland County Air Quality Stakeholders Committee, which was formed as a part of the EAC, now meets quarterly ten years after first assembling to review and promote air quality improvement strategies.

As a former Early Action Compact Region this area decided it was advantageous to participate in this program and the Cumberland County Board of Commissioners approved participation in the Ozone Advance (OA) Program to continue the efforts initiated in 2002. Chairman W. Marshall Faircloth signed the letter of interest on September 4, 2012. Every municipality within Cumberland County signed a resolution of support and commitment to participate in the OA program in 2013. Cumberland County and the City of Fayetteville proclaimed May as Air Quality Awareness month annually in 2014 and 2015. The towns of Eastover and Spring Lake signed new resolutions in 2015 and Sustainable Sandhills is working to renew resolutions with the other Stakeholder municipalities in 2016-2017.

Table 1A. Air Quality Stakeholders of Cumberland County 2016

NAME	Affiliation
Carolyn Justice Hinson	Fayetteville Public Works Commission (PWC)
Commissioner Larry Lancaster	Town of Fayetteville/ Cumberland Co. Representative
Commissioner Peggy Raymes	Town of Stedman
Councilwoman Kathy Jensen	City of Fayetteville
Russ Rogerson	Economic Development
Shanelle B. Harris	Fayetteville Area System of Transit (FAST)/ FAST Civil Rights Activist
Dr. Ana MacDowell	Medical Rep.
Francis Collier	Town of Linden
Gary Slater	Major Industry
Hanah Ehrenreich	Sustainable Sandhills
Janice Lucas	Town of Falcon
John Gillis	Homebuilders Association
Johnny Lanthorn	Town of Wade
Jon Parsons	Environmental Rep./ Energy Mgr @FSU
Celestine Raineri, REHS	Environmental health
David Heins	Fort Bragg
Natalee Ezzell	Town of Godwin
Kim Nazarchyk	Town of Eastover- Town Manager

Table 1B. Combined Air Team (CombAT) Members	
Al Miller	Cumberland County Schools (CCS)
Cecil Combs	Deputy Director Planning& Inspection Cumberland County
Faye Lewis	Mid Carolina Council of Governments (MCCOG)
Gary Cullen	Air Program Mgr @ Ft Bragg Public Utilities
Glen Prillman	Fort Bragg
James Bush	Cumberland County School District
Jeff Brooks	Fayetteville State University (FSU)
Jeffery Brown	Engineering and Infrastructure Director Engineering and Infrastructure Department of County Cumberland
Jennifer McHone-Sides	North Carolina Department of Environmental Quality
Jerry Dietzen	City of Fayetteville
Eddie Dancausse	North Carolina Department of Transportation
Joe Levister	Fayetteville Technical Community College
Karen Hilton	Combat Contacts
Lee Jernigan	City Traffic Engineer
Phillip Hart	COF- Transportation Planner
Mike Rutan	FAMPO

The Stakeholders (Table 1A.) revised by-laws in early 2016 to mandate a quarterly meeting schedule in conjunction with the CombAT team members.

The Stakeholders' committee is supported by the Combined Air Team (CombAT) (Table 1B.) that includes members of Cumberland County, City of Fayetteville, Fayetteville State University, Public Works Commission, Fayetteville Area System of Transit (FAST), the Fort Bragg Air Team, and is coordinated by the community environmental nonprofit, Sustainable Sandhills. CombAT is on call to provide the Stakeholders with technical information and administrative assistance. The public involvement does not end with the Stakeholders. An aggressive process of education and outreach into the community has been documented since the beginning of this endeavor, to include involvement of the Public School Systems (Cumberland County and Fort Bragg), utility providers, the Plant Managers Association, and public education requesting presentations. The Air Quality web page, maintained by FAMPO staff, provides information on the local effort and related links (<http://www.fampo.org/airquality.htm>). FAMPO contracts with Sustainable Sandhills to plan and implement air quality related programs throughout their region. Minutes of the Stakeholders' meetings and list of outreach and presentations are on file and open to the public.

1.2 Cumberland County Characteristics

Cumberland County is a mixture of urban and rural areas. The 2014 census updated for Cumberland County was 326,328. The 2010 census population for Cumberland County was 319,431 of which 42,702 rural population and 276,729 located within the Urbanized Area.

1.3 Local Efforts

In April 2001, Fort Bragg Military Reservation began planning and implementing strategies to become a sustainable installation. As part of this effort, several individuals within the surrounding Counties began working with the Military Installation to aid in the process, including the planning and implementation schedule of air quality initiatives for the metropolitan statistical area. At that point, building partnerships in support of a sustainable region was the next logical and necessary step. In partnership with the North Carolina Department of Environment and Natural Resources and stakeholders from the surrounding counties and communities, this partnership evolved into an independent community-based environmental nonprofit called Sustainable Sandhills in February 2003, with the mission to provide education, demonstration, and collaboration to preserve the environment of the Sandhills within a six county region.

The local and regional efforts to attain sustainability began prior to the development of the EPA's Early Action Compact, demonstrating the commitment of this area in attaining and maintaining healthy environment now, and for generations to come. The Cumberland County Air Quality Stakeholders/Technical Committee, Sustainable Fort Bragg, and Sustainable Sandhills participants are working together to ensure a united campaign and to avoid duplicated efforts.

Population density is varied, as shown in **Table 2A**. Because of the difference in land use and densities, care was exercised when proposing and selecting strategies to be implemented by several jurisdictions.

Table 2A. Census 2010 Demographic Information

Jurisdiction	Population	Land Area (sq. mi)	Density (People/sq. mi)
Eastover	3,628	11.33	320.3
Falcon(Part)	258	1.21	213.2
Fayetteville	200,564	145.84	1375.2
Godwin	139	0.52	269
Hope Mills	15,176	6.94	2186
Linden	130	0.51	257.2
Spring Lake	11,964	23.06	518.8
Stedman	1,028	2.08	493.9
Wade	556	1.79	311.4
Cumberland County	319,431	652.31	489.7

2. Overview of Air Quality in Cumberland County

The North Carolina Department of Environmental Quality: Division of Air Quality (DAQ) monitors levels of all criteria pollutants in Cumberland County and reports these levels to the EPA.

According to the most recent data, Cumberland County is meeting NAAQS for all of pollutants. Federal enforcement of the ozone NAAQS is based on a 3-year monitor “design”. The design value for each monitor is obtained by averaging the annual fourth highest daily maximum 8-hour ozone values over three consecutive years. If a monitor’s design value exceeds the NAAQS, that monitor is in violation of the standard. The EPA may designate part or all of the metropolitan statistical area (MSA) as nonattainment even if only one monitor in the MSA violates the NAAQS. There are two ozone monitors in Cumberland County. One of the monitors is located northeast of Fayetteville (**Wade**) and the other was formerly located in Golfview but switched to a new location southeast of Fayetteville (**Honeycutt**) in Spring 2015 (March/April). For the 2016 update, the new monitor will be labeled “Honeycutt” although older graph information may still list “Golfview”.

Figure 1. Map of Ozone Monitor Locations



Table 3. Summary of 4th Highest 8-Hour Ozone Values (ppb)

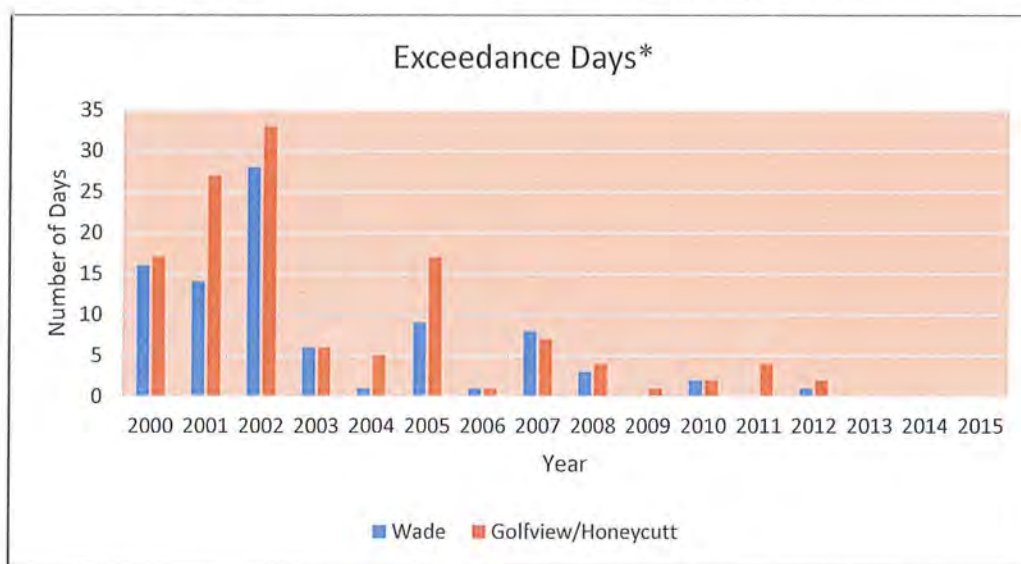
Fayetteville	4 th Highest Maximum Daily 8-Hour Average Ozone Concentration (Parts Per Billion)															
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wade	86	80	94	86	72	84	72	80	75	64	71	73	68	62	61	60
Honeycutt	83	84	95	82	77	91	74	82	75	65	73	76	69	62	66	62

Table 3A. Annual Number of Exceedance Days*

(Maximum Daily 8-hr Average Ozone Concentration*)

	Number of Exceedance Days															
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wade	16	14	28	6	1	9	1	8	3	0	2	0	1	0	0	0
Honeycutt	17	27	33	6	5	17	1	7	4	1	2	4	2	0	0	0

Graph 1. Annual Number of Exceedance Days by Monitor

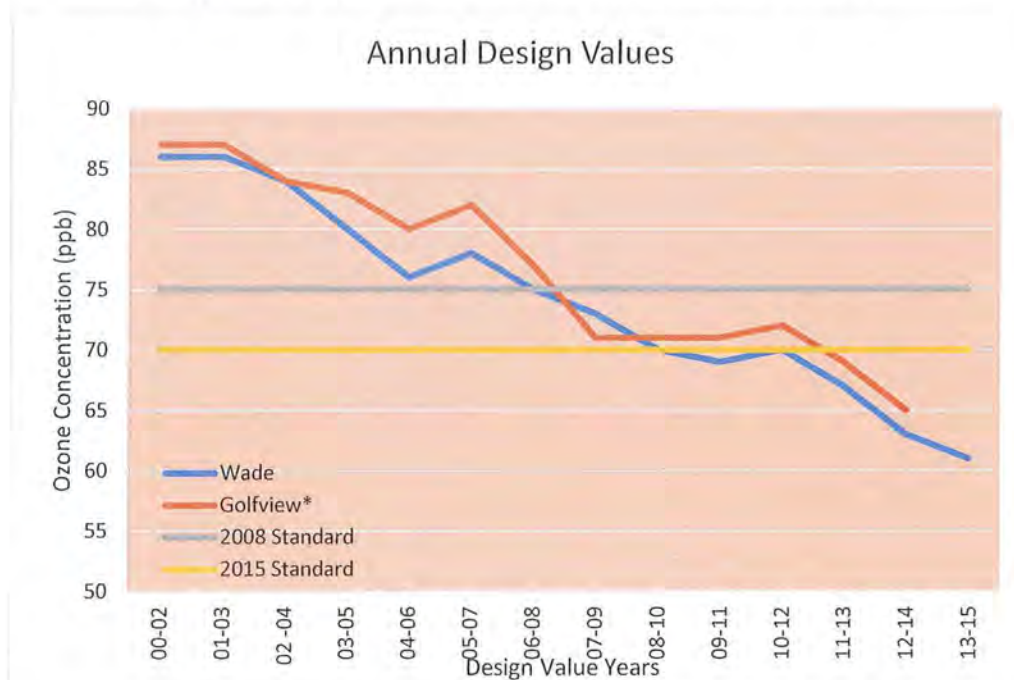


*2000 -2014 exceedance days based on maximum Ozone Concentration of >75ppb. 2015 exceedance days based on maximum Ozone Concentration of >70ppb

Table 4. Summary of Design Values (ppb) – Shaded areas exceeded O₃ NAAQS Standard

Fayetteville	00-02	01-03	02-04	03-05	04-06	05-07	06-08	07-09	08-10	09-11	10-12	11-13	12-14	13-15
Wade	86	86	84	80	76	78	75	73	70	69	70	67	63	61
Golfview*	87	87	84	83	80	82	77	71	71	71	72	69	65	--

Graph 2. Fayetteville Monitoring Sites Design Values



*The calculation of design values for Golfview have been discontinued. Design values for Honeycutt will be released in 2017.

The EPA finalized that Cross-State Air Pollution Rule (CSAPR) on September 6, 2016. CSAPR was adopted to improve air quality in areas of non-attainment that were affected downwind. The new rule updated the 2008 NAAQS.

North Carolina Department of Environmental Quality provided Cumberland County with the following information regarding the CSAPR prior to adoption.

EPA Cross State air pollution projections for the area in 2013 show both region monitors with ozone values below 70 parts per billion (ppb) as indicated in **Table 5**.

Additional published projections can be found shown on **Table 6** from the **Appendix B 8-Hour Ozone Design Values for Air Quality Modeling Scenarios** of the 2012 *Air Quality Modeling Technical Support Document: 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards Final Rule* (EPA-45/R-12-004

Table 5. EPA Cross State air pollution rule projections in ppb

Monitor Location	A	B	C	D		E	F	G	H
Wade	78.0	80.0	67.7	69.4		65.4	67.1	65.0	66.7
Honeycutt	81.7	83.0	70.7	71.8		68.4	69.5	68.1	69.2
A: 2003-2007 Average Ambient Values B: 2003-2007 Maximum Ambient Values C: 2012 Base Case Average Values D: 2012 Base Case Maximum Values E: 2014 Base Case Average Values F: 2014 Base Case Maximum Values G: 2014 Remedy Average Values H: 2014 Remedy Maximum Values									
The Base cases are emissions that are “on the books”. The Remedy case includes emissions reductions from the Cross State air pollution rule.									

Table 6. Model Ozone Projections

Monitor Location	2009-2013 Average Design Value	2009-2013 Maximum Design Value	2017 Projected Average Design Value	2017 Projected Maximum Design Value
Cumberland (Wade)	68.7	70.0	59.3	60.4
Cumberland (Honeycutt)	70.7	72.0	60.2	61.3
According to the EPA Transport for the 2008 Ozone NAAQS: 2009-2013 base period and projected 2017 design values at individual monitoring sites based upon EPA's updated air quality modeling released in the July 2015 Notice of Data Availability. The 2009 - 2013 base period average and maximum design values. The projected 2017 average and maximum design values. http://www.epa.gov/airtransport/ozonetransportNAAQS.html				

Table 7. 8-Hour Ozone Design Values (ppb) for 2017-2025 LD GHG Scenarios

State	County	2005 Baseline DV	2030 Reference Case DV	2030 Control Case DV
North Carolina	Cumberland	81.7	57.62	57.68
Where Reference Case DV is with projections without new vehicle standards and Control Case DV is with projections that include new vehicle standards Source: http://www.epa.gov/otaq/climate/documents/454r12004.pdf				

Both observed data and projected data reinforce the downward trend that shows a reduction of NO_x and VOCs, with ground level ozone values ranging from 0.094/95 ppm in 2002 to 0.068/69 ppm in 2012 and projected DVs of 0.062 ppm in 2018 and 0.57 ppm in 2030.

3. Ozone Health Effects and Sources

3.0 Overview of Ozone

Ozone (O₃) is a tri-atomic ion of oxygen. In the stratosphere or upper atmosphere, ozone occurs naturally and protects the Earth's surface from ultraviolet radiation. Ozone in the lower atmosphere is often called ground-level ozone, tropospheric ozone, or ozone pollution to distinguish from upper-atmospheric or stratospheric ozone. Ozone does occur naturally in the lower atmosphere (troposphere), but only in relatively low background concentrations of about 0.030 parts per million (ppm), well below the NAAQS. The term "smog" is also commonly used to refer to ozone pollution. Although ozone is a component of smog, smog is a combination of ozone and airborne particles having a brownish or dirty appearance. It is possible for ozone levels to be elevated even on clear days with no obvious "smog". In the lower atmosphere, ozone is formed when airborne chemicals, primarily nitrogen oxides (NO_x) and volatile organic compounds (VOCs), combine in a chemical reaction driven by heat and sunlight. These ozone-forming chemicals are called precursors to ozone. Man-made NO_x and VOC precursors contribute to ozone concentrations above natural background levels. Since ozone formation is greatest on hot, sunny days with little wind, elevated ozone concentrations tend to occur during the warm weather months, generally May through September. In agreement with EPA's guidance, North Carolina operates ozone monitors from April 1 through October 31 to capture high ozone events.

3.1 Ozone Health Effects

The form of oxygen humans need to breathe is O₂. When we breathe ozone, it acts as an irritant to our lungs. Short-term, infrequent exposure to ozone can result in throat and eye irritation, difficulty drawing a deep breath, and coughing. Long-term and repeated exposure to ozone concentrations above the NAAQS can result in reduction of lung function as the cells lining the lungs are damaged. Repeated cycles of damage and healing may result in scarring of lung tissue and permanently reduced lung function. Health studies have indicated that high ambient ozone concentrations may impair lung function growth in children, resulting in reduced lung function into adulthood. In adults, ozone exposure may accelerate the natural decline in lung function that occurs as a part of the normal aging process. Ozone may also aggravate chronic lung diseases such as emphysema and bronchitis and reduce the immune system's ability to fight off bacterial infections in the respiratory system. Asthmatics and other individuals with respiratory disease are especially at risk from elevated ozone concentrations. Ozone can aggravate asthma, increasing the risk of asthma attacks that require a doctor's attention or the use of additional medication. According to the EPA, one reason for this increased risk is that ozone increases susceptibility to allergens, which are the most

common triggers for asthma attack. In addition, asthmatics are more severely affected by the reduced lung function and irritation that ozone causes in the respiratory system. There is increasing evidence that ozone may trigger, not just exacerbate, asthma attacks in some individuals.

All children are at risk from ozone exposure because they often spend a large part of the summer playing outdoors, their lungs are still developing, they breathe more air per pound of body weight, and they are less likely to notice symptoms. Children and adults who frequently exercise outdoors are particularly vulnerable to ozone's negative health effects because they are repeatedly exposed to elevated ozone concentrations while breathing at an increased respiratory rate.

3.2 Ozone Sources

Ozone-forming pollutants or precursors are volatile organic compounds (VOCs) and nitrogen oxides (NO_x).

3.2.1 Volatile Organic Compounds

Volatile organic compounds (VOCs) are sometimes referred to as hydrocarbons. In North Carolina, large portions of precursor VOCs are produced by natural, or biogenic, sources, which are primarily trees. Man-made or anthropogenic VOCs also contribute to ozone production, particularly in urban areas. Sources of anthropogenic VOCs include unburned gasoline fumes evaporating from gas stations and cars, industrial emissions, and consumer products such as paints, solvents, and the fragrances in personal care products.

3.2.2 Nitrogen Oxides

Nitrogen oxides (NO_x) are produced when fuels are burned and result from the reaction of atmospheric nitrogen at the high temperatures produced by burning fuels. Power plants and highway motor vehicles are the major contributors in urban areas, and off-road mobile source equipment (such as construction equipment, lawn care equipment, trains, boats, etc.) are the major sources of NO_x. Other NO_x sources include "area" sources (small, widely-distributed sources) such as fires (forest fires, backyard burning, house fires, etc.), and natural gas hot water heaters. Generally, North Carolina, including the Fayetteville area, is considered "NO_x-limited" because of the abundance of VOC emissions from biogenic sources. Therefore, current ozone strategies focus on reducing NO_x. However, VOC reduction strategies, such as control of evaporative emissions from gas stations and vehicles, could reduce ozone in urban areas where biogenic VOC emissions are not as high.

3.2.3 NO_x and VOCs

The following lists the sources, by category, that contribute to NO_x and VOC emissions:

Biogenic: Trees and other natural sources

Mobile: Vehicles traveling on paved roads: cars, trucks, buses, motorcycles, etc.

Non-road: Vehicles not traveling on paved roads: construction, agricultural, and lawn care equipment, motorboats, locomotives, etc.

Point: "Smokestack" sources: industry and utilities

Area: Sources not falling into above categories. For VOCs, includes gas stations, dry cleaners, print shops, consumer products, etc. For NO_x, includes forest and residential fires, natural gas hot water heaters, etc.

Table 8. Cumberland County Emissions Estimates (ton/year)

	Point		Area		On-road		Non-road	
<i>Year</i>	NO _x	VOC	NO _x	VOC	NO _x	VOC	NO _x	VOC
2007	669	1,078	231	3,925	9,222	4,618	1,575	1,246
2011	379	811	234	2,666	6,415	3,366	808	853
2018	370	808	234	2,666	3,008	1,603	485	620
ftp://ftp.epa.gov/EmisInventory/2011v6/v2platform/reports/2011ed_2018ed_2011eh_2017eh_county_annual_totals.xlsx ftp://ftp.epa.gov/EmisInventory/2011v6/v2platform/reports/DetailsAboutEmissionsDataFiles07232015.pdf								

4. Control Measures

Several control measures are already in place and being implemented as part of the original Early Action Compact Plan for Cumberland County, which continues to focus on reductions in point, highway mobile, and non-road mobile source emissions. Fort Bragg Military Reservation continues to implement strategies to meet its sustainability goals, to include zero waste, construction of US Green Building Council LEED certified buildings, transportation multi-modal choices, and reforestation. Retrofitted and new municipal buildings still include white/light roofing and are periodically inspected, through the energy saving guarantee program, to verify that they still meet energy efficiency goals.

4.0 Proposed Local Control Measures

The following list of Air Quality Action strategies indicate several new and ongoing techniques that will be used locally to reduce ozone precursors. Although some are not quantifiable, all of these strategies are directionally correct. Strategies marked as “Ongoing” continue to serve the objectives of reducing ozone levels. As part of the Ozone Advance Program Action Plan, Cumberland County will submit an annual report verifying activities and implementations. Additional strategies may be communicated as they develop.

Appendix A. Stakeholder Directory

Appendix B. FSU Air Quality Stakeholder Updates

Prepared by Sustainable Sandhills staff: Denise Bruce, Environmental Outreach Coordinator, and Hanah Ehrenreich, Executive Director, in cooperation with the Air Quality Stakeholders of Cumberland County, Gary Slater, Chair, and Carolyn Justice Hinson, Vice-Chair, the Combined Air Team (CombAT) including US Army Fort Bragg, the North Carolina Department of Environment and Natural Resources Division of Air Quality and the Fayetteville Area Metropolitan Planning Organization

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AIR QUALITY STAKEHOLDERS OF CUMBERLAND COUNTY SELECTED OZONE CONTROL STRATEGIES AND IMPLEMENTATION SCHEDULE

AWARENESS

City of Fayetteville/Transit	Strategy: Promote Bus Ridership in the	Implementation Date: 02/2012	Updated/revised: 2016
Strategy Description:	Cumberland County High Schools		
Fayetteville Area System of Transit will implement a Transit Marketing/Outreach Campaign in the high schools. This strategy impacts 3,500 students within the FAST service area. Planned impact is reduced NOx emissions by increasing future mass transit use and reducing private vehicle miles travelled. Program began in April 2014			
Updated Description:			
Updated in 2016. FAST continues to offer transportation to Cumberland County School District students and offers transportation to sports events and jobs from 3:30pm to 11:00pm Monday through Friday. For the 2015 - 2016 School year more than 300 passes were distributed to students.			

FAMPO/Sustainable Sandhills	Strategy: Air Quality Poster Contest	Implementation Date: 2002/2003	Updated/revised: 2016
Strategy Description:			
Promote art contest with Air Quality themes. Twelve winners included in calendars distributed to Stakeholders and the community to promote conservation efforts and air quality education for grades K-5. Offered in Cumberland County and plans to expand to the portions of Hoke, Robeson, and Harnett counties, that are in the Metropolitan Planning Area for the Fayetteville Area Metropolitan Planning Organization (FAMPO).			
Updated Description:			
Ongoing. For the 2016 update, the contest saw more than 400 participants from Schools (Public and Private) in Cumberland County. In order to engage more participation the contest will be promoted along with a short air quality awareness lesson to teachers that teach health and wellness in grades K - 5 through the Cumberland County Public Schools.			

FAMPO/Sustainable Sandhills	Strategy: Direct Community Outreach	Implementation Date: 2011/2012	Updated/revised: 2016
Strategy Description:			
Display Air Quality information at community events and festivals, using educational collateral and games. Enhanced collaboration included info booths at FireAntz Hockey team Kids Nights and Swamp Dogs Green Night.			
Updated Description:			
Information booths were at the Go Green Earth Day Event, Mother and Other's for Clean Air Climate Event, Swamp Dogs Green Night and Fire Antz Kids night. New Collateral has been created which includes the Air Quality Open Book Quiz Game. Participants are given a question about air quality, and the answers can be found on a custom infographic.			

AWARENESS

Fayetteville Public Works Commission	Strategy: Tree Power	Implementation Date: 04/2005	Updated/revised: 2016
Strategy Description:	Program implemented to commemorate their 100 year anniversary by planting 100 dogwood trees along the Fayetteville Dogwood Trail, as well as educate customers about benefits of trees to the environment and air quality while demonstrating the proper placement of trees near utilities. 1,000 free tree seedling will be provided during community education seminars and events.		
Updated Description:	Program continues to reach out and educate customers on how trees reduce/absorb air pollution and help reduce energy consumption, proper planting and tree trimming, how trees provide shade and windbreaks to help reduce energy costs, and beautify the community. The program has been updated to include distribution of more than 700 Choke Cherry bushes and the planting of the long leaf pine.		

Fort Bragg	Strategy: Train Building Monitors	Implementation Date: 2013	Updated/revised: 2016
Strategy Description:			
Fort Bragg trains Repair and Upgrade Soldiers to look for energy conservation possibilities at the facility level. This strategy will reduce the demand for electricity and the amount of fossil fuel required for power generation.			
Updated Description:			
Fort Bragg continues ongoing training for Repair and Upgrade Soldiers. Quarterly updates are added to Energy Profile and Energy Use index.			

Fort Bragg	Strategy: Utility Consumption Reports	Implementation Date: 2013	Updated/revised: 2016
Strategy Description:			
Building Occupants receive a monthly utility consumption report to create awareness on energy use in facilities. This education and awareness initiative has developed to promote energy conservation in assigned/rental housing.			
Updated Description:			
Fort Bragg does not continue to give building occupants a monthly utility consumption report to create awareness on energy use. Discontinued due to non-renewal of contract. Meter data is now reviewed and audits are completed on buildings where energy use is high.			

AWARENESS

Cumberland County Schools	Strategy: Education Reports	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:			
Each of the Cumberland County Schools participate in Air Quality Awareness using the color coded flags. The Flags are raised each day along with the United States Flag and North Carolina Flag. For schools that offer a morning TV program, air quality is one of the discussion topics.			
Updated Description:			
For the 2016 - 2017 school year each school will be checked to ensure they are using the flags as part of the their daily raising of the colors.			

City of Fayetteville/Transit	Strategy: Increase Ridership	Implementation Date: 2014	Updated/revised: 2016
Strategy Description:			
The construction of a multi-modal transit facility provides opportunity to layer mass transit and low-emissions transit. This strategy ranges from improving air and water quality to reducing solid waste, benefitting owners, occupiers, and society as a whole.			
Updated Description:			
Plans to open facility were approved in August 2014. The facility is under construction and will open Feb 1, 2017.			

City of Fayetteville/Transit	Strategy: Green Business Certification	Implementation Date: 2012	Updated/revised: 2015
Strategy Description:	Transit system received Sustainable Sandhills Green Business certification in 2012. This strategy reduces solid waste, water consumption, and reduces operating costs.		
Updated Description:	Fayetteville Area System of Transit received a Sustainable Sandhills Green Business re-certification in 2015 and adopted the strategy for green infrastructure, including hybrid buses, fleet vehicles, carpooling, and the addition of more buses with bicycle transportation attachments.		

Fort Bragg		Implementation Date: 2016	Updated/revised: --
Strategy Description:	Strategy: Awareness activities and public relations		
Fort Bragg Energy Team creates energy awareness articles for the local newspaper, the Paraglide, and the Public Works digest. They also have a presence on social media with periodic updates on the Fort Bragg Facebook page and Sustainable Fort Bragg Facebook page. Fort Bragg also participates in Energy			
Updated Description:			
Newly listed measure - see above.			

AWARENESS

City of Fayetteville	Strategy: Develop alternative energy production opportunities that are financially viable	Implementation Date: 2013	Updated/revised: 2016
Strategy Description:	Exploring options for photovoltaic solar farms, biomass-to-energy, low-flow hydro and Methane gas-to-energy production. Clean energy sources reduce volume of fossil fuel burning required for power generation.		
Updated Description:	Cumberland County has a methane-reuse program that captures landfill gas and sells it under the name Fayetteville Gas to the Cargill Inc. processing plant across the Cape Fear River for use as a fuel source for the Combined Heat & Power system (CHP). Continuing strategy to explore and implement alternative and renewable energies in residential, commercial, and municipal use. City of Fayetteville is working with Cumberland County on pro-solar land use regulations. Methane re-use at Cargill will continue but no other renewable energy will be developed by the city at this time.		
City of Fayetteville	Strategy: Retrofit City buildings expand existing smart building monitoring system	Implementation Date: 2013	Updated/revised: 2015
Strategy Description:	Through moderate general fund appropriations, retrofit City buildings for more energy efficient lighting, HVAC units/motors, purchase energy star rated appliances & further reduce energy consumption. Strategy reduces the regional demand for electricity & fossil fuel used for power generation.		
Updated Description:	13-15 buildings monitored by Parks and Recreation from a centered facility have received efficient lights, AC unit replacements, and the Rec Center received new reflective roofing.		
City of Fayetteville	Strategy: Building Efficiency	Implementation Date: 2012	Updated/revised: 2015
Strategy Description:	Through moderate general fund appropriations, retrofit City buildings for more energy efficient lighting, HVAC units/motors, purchase energy star rated appliances and further reduce energy consumption by expanding the City's existing smart building monitoring system.		
Updated Description:	Better efficient lighting, AC unit replaced with upgraded equipment, building codes changed for better (30% residential and 15% commercial) energy efficiency increase.		

AWARENESS

City of Fayetteville	Strategy: Land Use Open Space Development	Implementation Date: 02/2012	Updated/revised:2016
Strategy Description:			
Enforce the adopted and revised Unified Development Ordinance for developing properties requiring open space dedication, parkland dedication, tree-save areas, buffer zones, significant tree preservation and landscape requirements all of which reduce the heat island effect and prevent ground level ozone production.			
Updated Description:			
Unified Development Ordinance revised in 2016 to promote environmentally conscious development of the Cape Fear River called the Cape Fear River Overlay.			

Sustainable Sandhills	Strategy: Alternative Energy Development and	Implementation Date: 06/2015	Updated/revised:2016
Strategy Description:	Promte Rooftop Solar		
Sustainable Sandhills opened a Solarize Sandhills program in 2015 to develop small-scale commercial and residential solar energy production in Fayetteville, Cumberland County, and the region.			
Updated Description:			
The final for the 2015 program was the installation of rooftop PV systems on two homes, to for a total of 9 Kw of renewable electrical generation. The 2016 - 2017 Solar Sandhills plan is being developed to open in the early Fall of 2016 with a goal of adding 250 Kw of renewable electrical generation			

Sustainable Sandhills	Strategy: Green Business Certification Program	Implementation Date: 2009	Updated/revised:2016
Strategy Description:			
Sustainable Sandhills began the Green Business Certification Program in 2009 to recognize businesses who were leaders of environmental stewardship. A key component of the program is raising awareness about multiple environmental impacts including Air Quality and Transportation Alternatives.			
Updated Description:			
Currently, the transportation portion of the program is under review. Sustainable Sandhills would like to increase the use of alternative modes of transportation to work for commuters through 2017.			

AWARENESS

Sustainable Sandhills	Strategy: Burnwise Awareness	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
Sustainable Sandhills will begin promoting the EPA Burnwise Campaign beginning the Fall of 2016. These efforts will be to increase awareness to reduce pollution from burning wood for heat.			
Updated Description:			
New Program - See Above			

Town of Spring Lake	Strategy: Educational Outreach	Implementation Date: 2016	Updated/revised:2016
Strategy Description:			
Providing educational outreach to citizens and businesses by providing solutions to reduce pollution and improve air quality. The Town will publicly support initiatives such as Bike to Work Day, National Dump the Pump Day and Air Quality Awareness Week.			
Updated Description:			
The Spring Lake Board of Aldermen unanimously approved a proclamation supporting “Dump the Pump” in an effort to reduce fuel usage and emissions by utilizing public transportation.			

Town of Spring Lake	Strategy: Advisory Committee	Implementation Date: 2016	Updated/revised:2016
Strategy Description:	Awareness		
The Sustainability Advisory Committee was created to assist the Board of Aldermen adopt and promote sustainable practices in air quality, water quality, energy reduction and efficiency, reduction of waste, recycling, transportation, and resource conservation.			
Updated Description:			
The committee and bylaws have been adopted by the Board of Aldermen and appointments are currently underway. The first goal of the committee is the development of a Sustainability Plan that will guide future policy and ordinance adoption.			

Fort Bragg	Strategy: Green Barracks Contest	Implementation Date: 2016	Updated/revised: --
Strategy Description:	Public relations		
Fort Bragg Energy Team created the Green Barracks contest to promote energy conservation and waste reduction in barracks facilities. This is a quarterly contest.			
Updated Description:			
Newly listed measure - see above.			

ENERGY REDUCTION

Sustainable Sandhills	Strategy: Local Food Access Program	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:			
Educate community on benefits of sourcing food locally, reducing miles traveled by food and consumers. Liaison with Downtown Restaurant Association, Slow Food Fayetteville in the Sandhills, Sandhills Farm to Table Cooperative.			
Updated Description:			
Sustainable Sandhills works with local farm cooperative to create a local food system, including the growth of local produce box subscriptions to a Community Supported Agriculture (CSA). For the 2016 year Sustainable Sandhills coordinated three CSA pick up sites, with an average of 18 subscriptions. Sustainable Sandhills partners with Slow Foods and Pop-up Dinners with an aim to connect chefs with local food producers to reduce vehicle emissions and carbon emissions related to food sourcing in the Sandhills.			

Fayetteville Public Works	Strategy: Advanced Metering	Implementation Date: 06/2014	Updated/revised: 2016
Strategy Description:	Infrastructure		
Completion estimated for June 2017, installation of Advanced Metering Infrastructure to provide utility through computer based remote control, automation and two-way communications. System will provide 115,000+ PWC customers better technology to better manage and reduce energy and water consumption. Benefits will also include reduction in service trips/vehicle usage. This strategy will lower NOx emissions by reduction of energy consumption and significant reduction of vehicle use/fuel consumption.			
Updated Description:			
Since beginning of installation 152,000 of the 185,000 meters have been installed and annual service trips/vehicle usage has already been reduced by 456,000 miles.			

Fayetteville Public Works	Strategy: LED Street Lighting	Implementation Date: 06/2014	Updated/revised: 2016
Strategy Description:	Conversion of 15,000+ streetlights to LED because LEDs have a longer life span and use less energy than traditional street lights. Immediate benefits will include reduction in energy consumption and in service trips/vehicle usage. This strategy will lower NOx emissions by reduction of energy consumption and significant reduction of vehicle use/fuel consumption. Slated to be complete by June 2017.		
Updated Description:	To date 10, 645 LED streetlights have been installed with a total energy savings of 2 million kwh.		

ENERGY REDUCTION

Fayetteville Public Works	Strategy: Retro-Commissioning	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:			
Retro-commissioning project on main operations facility/building (replacement lighting, energy improvements to heating/ventilation/AC units).			
Updated Description:			
Completed. Upgraded automation system to improve operating efficiency of chiller plant and reduce air handling unit run times. Energy usage reduced by 33% at the completion of the project.			

Fayetteville State University	Strategy: LEED Silver or Equivalent	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Building Standard		
Saving goal related to projected new building space starting 2012. A 20% electrical and natural gas savings, GHG reduction of 154 tons (CO ₂ Equivalent) annually and total of 2,000 tons by 2025			
Updated Description:			
Two buildings on campus are LEED Silver Certified. One building on Campus is awaiting certification. Two additional buildings will be renovated to meet LEED Silver Certification by 2018.			

Fayetteville State University	Strategy: FSU Energy-Savings	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:	Performance Contract (ESPC) Program		
A 15% electrical and natural gas savings, GHG reduction of 183 tons (CO ₂ equivalent) annually and total 2,000 tons by 2025; Upgrade applied to 900,000 SF of FSU facilities (savings to begin in 2015)			
Updated Description:			
For the 2015 -2016 school year FSU reported a 41% decrease in total energy usage from the baseline year 2002.			

Fayetteville State University	Strategy: UNC-GA ESPC	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:	(Lighting Only)		
Upgrades applied to 370,000 SF of FSU facilities with demonstrated energy savings to begin in 2015. 20% savings of lighting system electrical, GHG reduction of 23 tons (CO ₂ equivalent) annually and total 250 tons by 2025.			
Updated Description:			
Completed in Fall of 2015. 60% of exterior lighting has been converted to LED and 75% interior lighting has been retrofitted to energy efficient lighting.			

ENERGY REDUCTION

Fayetteville State University	Strategy: Continuous Re-Commissioning Program	Implementation Date: 2016	Updated/revised: 2016
Strategy Description:			
Re-commission facilities to maintain efficiency as use and occupancy changes during the school semesters/year.			
Updated Description:			
Program will begin in 2016. Delayed while both Energy Savings Performance Contract projects are ongoing and incomplete.			

Fayetteville State University	Strategy: Improved Space Utilization and	Implementation Date: 2015	Updated/revised: 2015
Strategy Description:	Building Scheduling		
5% electrical and natural gas savings, GHG reduction of 455 tons (CO ₂ Equivalent) annually and total 5,000 tons by 2025; Savings applies to all building. Savings ramp from 2% (2017) to 5% (2020)			
Updated Description:			
Project delayed by ESPC timeline. Targets may need to be revised downward. A 5% ultimate savings is more realistic by 2020.			

Fayetteville State University	Strategy: Food Waste Composting	Implementation Date: 2014	Updated/revised: 2016
Strategy Description:			
Capture 100% of food waste, both pre- and post- consumer; GHG reduction of 50 tons (CO ₂ equivalent) annually and total 600 tons by 2025.			
Updated Description:			
FSU capturing 80% of food waste by 2015. FSU has replaced the food waste dehydrator with a contract with a commercial compost hauler.			

Fort Bragg	Strategy: Retro-Commissioning	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:			
Facilities surveyed to ensure systems are performing as they were designed. Improvements such as occupancy schedules and sensors, variable frequency drives, etc. are normally installed during this process. This strategy ensures equipment is functioning efficiently.			
Updated Description:			
Retro-commissioning of facilities is ongoing.			

ENERGY REDUCTION

Fort Bragg	Strategy: Thermal Energy Storage	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:			
Water is chilled in the evening when energy prices are lower. Chilled water is used in district system. This strategy is used to reduced cost.			
Updated Description:			
Thermal Energy Storage has been implemented and continues to run extra thermal energy storage tanks for chilled water, shifting energy use from peak hours to off-peak hours. Chilled water runs from six to eight hours a day and in circulating mode for four to six hours of the day.			

Fort Bragg	Strategy: Purchase Energy Star	Implementation Date: 2011	Updated/revised:2016
Strategy Description:	Equipment		
Energy efficient products are procured and installed. This strategy reduces energy consumption.			
Updated Description:			
Fort Bragg's green prorument policies provide ongoing purchasing of Energy Star certified equipment.			

Fort Bragg	Strategy: Implement "Low-cost/No-cost"	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:	energy conservation measures		
Improve facility energy use intensity by installing weather stripping around windows and doors. This strategy improves the building envelope, thus reducing energy consumption.			
Updated Description:			
Fort Bragg continues to improve facilities with weather stripping and other measures to conserve energy consumption.			

Fort Bragg	Strategy: Load management	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:	incubicle/office space		
Received funding for "smart strips," a load sensing power strip. This strategy reduces energy consumption by 30% based on meter data.			
Updated Description:			
Energy Office continues to maintain data on reduced energy consumption by the "smart strips."			

ENERGY REDUCTION

Fort Bragg	Strategy: LEED certifiable facilities	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:			
Improve federal facilities resource efficiency. This strategy ranges from improving air and water quality to reducing solid waste, benefiting owners, occupants, and society as a whole.			
Updated Description:			
Energy conservation and subsequent savings are achieved through several lighting strategies. The north/south orientation of the building and window placement enables LEED facilities to reduce consumption of bulb wattage and harvest natural light in 90% of all regularly occupied spaces.			

Fort Bragg	Strategy: Renewable Energy	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:			
Renewable energy is implemented where life-cycle cost is most effective.			
Updated Description:			
A large geothermal field (five well fields) is currently in development to supplement heating and cooling loads in four buildings with plans to integrate three additional facilities. Other renewable technologies include: solar thermal, solar photovoltaic, solar walls, and ground source heat pumps.			

Fort Bragg	Strategy: Lighting Upgrades	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:			
Eliminate inefficient lighting with more efficient lighting, such as LEDs, to reduce energy consumption.			
Updated Description:			
Fort Braggs continues to upgrade inefficient lighting to LED lighting and plans to upgrade five aircraft hangers with LED lighting. Area lighting levels are also lowered in the evenings when not needed.			

ENERGY REDUCTION

Fort Bragg	Strategy: Energy Audits	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:			
Audit facilities with high energy use indices to determine if high energy use is due to mechanical failure or building occupant behavior.			
Updated Description:			
Address mechanical issues and/or work with building occupants to use energy more efficiently.			

Fort Bragg	Strategy: Building level micro-grid	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:	demonstration		
A green and energy efficiency initiative for Fort Bragg facilities. Facility will be installing approximately 150 KW of PV, DC fans, DC lighting, and battery storage.			
Updated Description:			
Project is currently in the evaluation phase.			

Fort Bragg		Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:	Strategy: Building controls and metering		
facilities that are utilizing excess energy when compared to similar facilities.			
Updated Description:			
Fort Bragg continues to implement this strategy in new and existing facilities.			

Fayetteville Public Works Commi	Strategy: Electric Vehicle Charging	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:	Stations		
PWC received \$37,000 grant from NC Green Technology Center to purchase, install, and promote use of four Level 2 Dual Electric Vehicle Charging stations throughout PWC service areas.			
Updated Description:			
Charging Stations were installed in 4 locations around the Fayetteville Area. The Charging Stations are free for public use and are managed and reported through the Chargepoint Network. Installation completed December 2015. Since installation, 194 gallons of gas have been saved, 1.5 MWh energy savings and 648 kg Greenhouse Gas savings.			

ENERGY REDUCTION

City of Fayetteville/ Transit	Strategy: Fuels Efficient Bus Upgrades	Implementation Date: 2016	Updated/revised: --
Strategy Description:			
Upgrading buses for maximum fuel efficiency.			
Updated Description:			
16 small capacity busses have been converted to propane. Resulting in a 40% savings of fuels savings. All transit buses regardless of age have been upgraded with new radiators to improve engine cooling and fuels efficiency.			

City of Fayetteville/ Environmental Services	Strategy: Hybrid Vehicle Adoption	Implementation Date: 2016	Updated/revised: --
Strategy Description:			
City of Fayetteville Environmental Services along with other city agencies will purchase hybrid fleet vehicles for employees to use			
Updated Description:			
Environmental Services purchased one hybrid vehicle in 2016, with plans to purchase more in 2017.			

City of Fayetteville	Strategy: Improved Traffic Flow	Implementation Date: 2016	Updated/revised: --
Strategy Description:			
The City of Fayetteville has implemented numerous traffic round - about within the city to reduce idle time normally seen at traffic stops. Four traffic around about were completed in 2016 and plans for 3 more projects to be completed in 2017.			
Updated Description:			
New strategy see above.			

Town of Spring Lake	Strategy: LED Street Lights	Implementation Date: 2016	Updated/revised:2016
Strategy Description:			
The Town of Spring Lake worked with Duke Energy Progress to begin converting all existing street lighting (800+) to LED bulbs to reduce energy consumption and provide a \$10,000/year savings cost to the Town (\$100,000 over 10 years).			
Updated Description:			
Approximately 50% of the street lights have been converted to LED. Project is scheduled to be completed in September 2016.			

ENERGY REDUCTION

Town of Spring Lake	Strategy: Transportation	Implementation Date: 2016	Updated/revised:2016
Strategy Description:			
The Town is currently working with FAST to offer additional routes to Spring Lake residents to increase public transportation ridership and reduce emissions from vehicle usage.			
Updated Description:			
This is an ongoing project.			

Town of Spring Lake	Strategy: Idle Reduction Policy	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
Development of policy for reduction of idle time of Town fleet vehicles to reduce fuel use and emissions.			
Updated Description:			
Policy is currently being drafted and is anticipated to be implemented by end of 2016.			

Fayetteville Public Works		Implementation Date: 2016	Updated/revised: --
Strategy Description:	Strategy: Community Solar Infrastructure		
Fayetteville Public Works Commissionhas a proposal for a 500kw solar farm that will be funded through a community solar model.			
Updated Description:			
PWC is working with the North Carolina State Clean Technology Center to complete solar farm will be completed in 2018.			

Fort Bragg	Strategy: Load management	Implementation Date: 2016	Updated/revised: --
Strategy Description:	Demonstration Projects		
Fort Bragg regularly participates in DoD funded demonstration projects focused on implementing energy efficiency technologies. Examples include a high efficiency dehumidification HVAC unit and phase change insulation material.			
Updated Description:			
Newly listed measure - see above.			

TRANSPORTATION

City of Fayetteville/Transit	Strategy: Sidewalks	Implementation Date: --	Updated/revised: 2016
Strategy Description:			
Fayetteville Area System of Transit, in conjunction with the city of Fayetteville, acquired New Freedom funds that constructed over 2.1 miles of sidewalks from Murchison Road and Hogan Street to enhance connectivity, air quality, and safety. This strategy will enhance transportation options for ADA residents and creates a pedestrian friendly community which in turn reduces gasoline consumption.			
Updated Description:			
Ongoing construction to enhance the connectivity to sidewalks and bus stops if "right of way" is available.			

City of Fayetteville/Transit	Strategy: New Transit Routes	Implementation Date: 2013	Updated/revised: 2016
Strategy Description:			
The purpose of this service is to provide transportation options in a high growth area for commercial and institutional development. This strategy will assist with reduction of Vehicle Miles Travelled (VMTs)			
Updated Description:			
Two additional routes have been added or extended to bring connectivity to neighborhoods and shopping centers. These routes began operation in 2016.			

City of Fayetteville/Transit	Strategy: Providing Transportation service to	Implementation Date: 2014	Updated/revised: 2016
Strategy Description:	FSU students.		
Fayetteville State University students will be provided free bus transit passes to by FAST. Transportation corridor service costs will be assisted by Fayetteville State University. This strategy will help reduce emission, promote bus-ridership, and assist university access.			
Updated Description:			
Fayetteville Area System of Transit's partnership with Fayetteville State University is ongoing. Scheduled times for buses has expanded to run from 3:30PM to 11:00PM to assist working students, who may use transit services to get to places of employment.			

TRANSPORTATION

City of Fayetteville/Transit	Strategy: Providing free transportation to	Implementation Date: 10/2014	Updated/revised: 2016
Strategy Description:	sporting events		
High school students will be given a 30-day pass that will provide them with free transportation to sporting events or other school related activities between 3:00 and 11:00 pm. This strategy will help to reduce emissions by mass transiting students instead of multiple students driving to the same place on their own.			
Updated Description:			
Updated in 2016. FAST continues to offer transportation to Cumberland County School District students and offers transportation to sports events and jobs from 3:30pm to 11:00pm Monday through Friday. For the 2015 - 2016 School year more than 300 passes were distributed to students.			

City of Fayetteville/Transit	Strategy: Rider Promotion	Implementation Date: 2015	Updated/revised: 2016
Strategy Description:			
Fayetteville Area System of Transit newly began to promote their appreciation of customers by offering transit passes for \$.25 on their website to increase and promote ridership.			
Updated Description:			
For 2016 FAST has added Rider promotions which include "Stuff the Bus" and a "Canned Food Drive". Both endeavors have resulted in increased ridership. The Canned Good Drive saw an increased ridership average of 537 riders. These promotions will continue in the future.			

City of Fayetteville	Strategy: Blue Toad Device use	Implementation Date: 2013	Updated/revised:2016
Strategy Description:			
Reduce idle time and travel times by monitoring vehicle timing and optimizing traffic signal timing, which will reduce gasoline consumption and emissions.			
Updated Description:			
City of Fayetteville continues to implement this strategy and monitors light signal timing at peak traffic and high use intersections. At this time there are no hard data on traffic flow and time saved.			

TRANSPORTATION

City of Fayetteville	Strategy: Perform financial analysis of future	Implementation Date: 2013	Updated/revised: 2016
Strategy Description:	vehicle replacements		
Analyze diesel-powered vehicles replacement with CNG-powered and/or hydraulic assisted hybrid garbage trucks. This strategy reduces NOx emission.			
Updated Description:			
Ananalysis is ongoing. Four trucks have been replaced in 2015 with vehicle that burn cleaner fuel, and have particulate filters.			

City of Fayetteville	Strategy: Idle Reduction Policy	Implementation Date: --	Updated/revised: 2016
Strategy Description:			
Enforce the City's Idle Reduction Policy for city-owned fleet vehicles and equipment. This strategy results in a 14-17% fuel consumption reduction with a corresponding NOx reduction.			
Updated Description:			
City employees allowed to idle only 5 minutes of 30 minute sitting time. City vehicles not allowed to go through drive-thru lanes. Incentives are created to help promote bike-to-work weeks (such as free coffee) as part of an lowered idling emissions strategy.			

Fayetteville Public Works	Strategy: Fleet Management	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Implement efforts to better manage the overall requirements of the PWC Fleet and lower fuel consumption and emissions. Automated Information Modules and GPS modules have been installed to provide information to aid in minimizing emissions and to generate information to identify and minimize unnecessary idling of vehicles. This strategy reduces NOx emissions.		
Updated Description:	PWC has been recognized at the "Champion" level of the NC Smart Fleet program for reducing fuel use. During the previous year, 221 short tons of carbon dioxide were offset with fleet best practices and using telematics software to reduce idling and conserve fuel.		

Fayetteville State University	Strategy: Student, Faculty, and Staff	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Community Improvements		
3% reduction in transportation mileage, GHG reduction of 38 tons annually, and total of 500 tons by 2025; Savings applied to all students, faculty/staff; low-emissions vehicles preferred parking campaign with all current and future new building projects; bike rack campaign with all current and future new building			
Updated Description:			
LEV parking and bike rack campaign ongoing. Covered bus stop for FSU students by FAST completed 2015.			

TRANSPORTATION

Fayetteville Public Works	Strategy: Alternate Fuel/Hybrid	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Vehicles/Equipment		
Annually replacing existing fleet and equipment with vehicles that reduce emissions and lower fuel consumption. Replaced five heavy diesel trucks in 2014 with reduced emissions diesel engines, and have replaced eight bucket trucks with two hybrid bucket trucks and six lower emission diesel engines. Currently operating five other hybrid cars/SUVs. Also replaced spark ignited propane forklifts with zero emission all electric forklifts, a diesel directional board with zero emission solar powered message board, and converted construction equipment to Tier 4 emission standards (reduces NOx emissions)			
Updated Description:			
Existing fleet includes hybrid vehicles, electric vehicles, and lower emission vehicles (LEVs). Replacements of less efficient vehicles are ongoing.			

LAND USE

Town of Falcon	Strategy: Falcon Zoning Ordinance	Implementation Date: Fall 2013	Updated/revised: 2016
Strategy Description:	Amendment to include Density Development		
Density Developments allow for the division of land while requiring development on only 60% of the overall acreage with open space designation for the other 40%. Mixed Use Development allows for the flexibility of development to included commercial, residential, and open space.			
Updated Description:			
Falcon zoning ordinance strategy still projected on a 2-5 year implementation.			

Town of Godwin	Strategy: Proposed Zoning Ordinance	Implementation Date: Fall 2013	Updated/revised: 2016
Strategy Description:	Amendment to include Density Development		
Density Developments allow for the division of land while requiring development on only 60% of the overall acreage with open space designation for the other 40%; Mandate interconnectivity (lateral access) between developments, particularly commercial; Landscaping standards, encouraging retention of existing trees. Mixed Use Development allows for the flexibility of development to include commercial, residential, and open space.			
Updated Description:			
Strategy implementation still ongoing.			

LAND USE

Town of Wade	Strategy: Proposed Zoning Ordinance	Implementation Date: 02/2012	Updated/revised:2016
Strategy Description:	Amendment to include Density Development and Mixed Use Development		
Density developments allow for the division of land while requiring development on only 60% of the overall acreage with open space designation for the other 40%; Mandate interconnectivity (lateral access) between developments, particularly commercial; Landscaping standards, encouraging retention of existing trees. Mixed Use Development allows for the flexibility of development to include commercial, residential, and open space.			
Updated Description:			
Wade is still supporting the development of green space in subdivisions. Wade also pushing for the use of LED lighting and Tier 4 emissions in new clean burning diesel tractors.			

Town of Eastover		Implementation Date: 2013	Updated/revised: 2016
Strategy Description:	Strategy: Commercial Core Overlay District		
Preserve and enhance small-scale commercial character, while providing for low-impact business opportunities with requirements for pedestrian pathways/sidewalks and amenities to include rear vehicular access, landscaping, and tree planting. This strategy reduces emissions by creating accessible walkways and reforestation of commercial areas.			
Updated Description:			
More restricted zoning codes were given to the Town, ongoing still. Eastover received an acre of land that will be left natural except for a small natural walking trail. Over 100 azaleas and 15 dogwood trees have been planted on 4.5 acres of Town property. Town received 26.5 acres of natural setting that will be used to expand the current ballpark. Town is currently working with Fayetteville-Cumberland County Parks and Rec to design a site plan which will include natural area and larger walking path.			

Town of Eastover	Strategy: Zero Lot Line Development	Implementation Date: Summer 2013	Updated/revised: 2016
Strategy Description:	Conditional Use Permit		
Zoning ordinance that requires a Conditional Use Permit for any Zero Lot Line development (residential and commercial). This strategy protects environmentally sensitive areas and provides green space which offsets emissions.			
Updated Description:			
Zero Lot live development is on going.			

LAND USE

Town of Linden		Implementation Date: Winter 2014/2015	Updated/revised: 2016
Strategy Description:	Strategy: Development-Conditional Zoning		
Landscaping standards encourage retention of existing trees; Mandatory 40% open space, development on remaining 60%; Mandate interconnectivity (lateral access) between developments, particularly commercial.			
Updated Description:			
Strategies are still ongoing			

Town of Spring Lake		Implementation Date: 2014	Updated/revised: 2016
Strategy Description:	Strategy: Land Use Open Space Development		
Riparian buffers, same as or similar to Cumberland County provisions, adopted August 2012; Tree preservation; Mandate double landscaping when clear cut, with extra credit given for retaining existing trees, similar to Hope Mills standards, adopted October 2008; Mandate interconnectivity (lateral access) between developments, particularly commercial.			
Updated Description:			
The Town Manager will review and implement strategies.			

Fort Bragg	Strategy: Creation of green space review board for construction projects	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:			
Use of the required "Tree City USA" Arbor Board to review landscape designs and site demolition plans for construction projects. This strategy minimizes tree loss during construction and assures proper plant selection/placement for passive solar design and heat island mitigation			
Updated Description:			
Fort Bragg continues to protect the Long Leaf Pine ecosystem. They have earned the Tree City USA Growth Award seven consecutive years for progress in the areas of community forestry programs, education and public relations. the provide continuing education for tree managers, planning and management, municipal funding, and tree inventory and analysis.			

LAND USE

Fort Bragg	Strategy: Creation of tree bank mitigation for	Implementation Date: 2000's	Updated/revised: 2016
Strategy Description:	construction projects		
Created a tree mitigation policy that requires onsite replanting for trees removed during construction or, if replanting is not possible on site, the funding for replanting is deposited into a mitigation tree fund that will fund replanting elsewhere on post. This strategy guarantees no deficit tree loss will result from construction projects.			
Updated Description:			
Fort Bragg continues to protect the Long Leaf Pine ecosystem by maintaining prescribed burns and replanting on unused property.			

City of Fayetteville	Strategy: Enforcement of adopted ordinances	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:	for open space development		
For developing properties, require open space dedication, parkland dedication, tree preservation ordinance and landscape requirements. This strategy reduces the heat island effect and prevents ground level ozone production			
Updated Description:			
Adjustments have been made to development zones and more area has been dedicated to green space.			

City of Fayetteville	Strategy: Open Space Development	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Enforce the adopted and revised Unified Development Ordinance for developing properties requiring open space dedication, parkland dedication, tree-save areas, buffer zones, significant tree preservations and landscape requirements all of which reduce the heat island effect and prevent ground level ozone production.		
Updated Description:	Unified Development Ordinance revised 2015 to incentivize land developers to retain Long Leaf pine habitat. Development plans are required to include an area of open space with 24 trees per acre.		

City of Fayetteville	Strategy: Commercial/Mixed Use	Implementation Date: 2012	Updated/revised: 2016
Strategy Description:	Development		
The UDO supports up to 24 dwelling units per acre (due) in commercial areas and 32 due in mixed use districts. Having residents in close proximity to commercial services reduces fuel consumption with a corresponding reduction in NOx. Recent amendments offer increased density in certain areas to encourage redevelopment in a more sustainable pattern.			
Updated Description:			
City of Fayetteville continues to plan and coordinate redevelopment of residential density with mixed use/commercial development.			

LAND USE

City of Fayetteville	Strategy: Tree canopy/Specimen trees	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:			
Protect and retain existing tree canopy/specimen trees during and after development. Trees and landscaping reduce NOx and uptake carbon dioxide.			
Updated Description:			
The UDO has clear concise requirements of tree protection that the City of Fayetteville continuously adheres to such as public protection of trees, public maintenance of trees by walkways and streets, and replanting.			

City of Fayetteville	Strategy: Redevelopment Toolbox	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:			
Incentives have been adopted to encourage redevelopment of existing sites and development of infill sites, thereby reducing sprawl with a corresponding reduction in fuel consumption and NOx.			
Updated Description:			
City of Fayetteville continues to use the "redevelopment toolbox" incentive as an ongoing strategy. It leverages private investment using City funding, capital improvement programming, federal and state grants, and promotes development of investment in priority areas and projects, such as Cottage Developments, Regional Activity Centers, Small Subdivision Alternative Standards, and Residential Density in Commercial Districts, etc.			

City of Fayetteville	Strategy: Increase use of sustainable	Implementation Date: 2011	Updated/revised: 2016
Strategy Description:	development practices		
Incentives have been adopted to encourage greater use of sustainable development practices and to support urban agriculture			
Updated Description:			
City of Fayetteville partners with Sustainable Sandhills to design a Climate Adaption Plan. The plan was completed in 2015.			

LAND USE

City of Fayetteville/Cumberland Parks and Recreation	Strategy: Extension of Cape Fear River Trail		
Strategy Description:		Implementation Date: 2012	Updated/revised:03/2016
Once the Grove Street bridge is completed, the Cape River Trail will be extended; going south from Clark Park to Hoffer Road near Public Works Commission (PWC) water treatment plant. Asphalt sidewalks and bike paths will also be added.			
Updated Description:			
Cape Fear River Trail extension completed in early 2016.			

City of Fayetteville	Strategy: Urban Heat Island Reduction	Implementation Date: 2016	Updated/revised: --
Strategy Description:			
The City of Fayetteville has implemented a number of projects around the city to reduce the urban heat island normally caused by open pavement. These projects include road medians with tree plantings, and islands planted with flowers and grass. In 2016 there are 5 projects underway.			
Updated Description:			
New Initiative - See Above			

City of Spring Lake	Strategy: Murchison Road Landscaping	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The Town partnered with NCDOT to upgrade interior medians along Murchison Road project (NCDOT U-4444B) from asphalt/concrete to tree lined grassed median for aesthetics and to help mitigate emissions from vehicular traffic.			
Updated Description:			
Project should be completed late 2016 to early 2017.			

LAND USE

City of Spring Lake	Strategy: Sidewalk Improvement	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The Town received a \$200,000 Section 5310 Grant from FAMPO to install sidewalks and pedestrian improvements along Bragg Blvd and Lillington Highway to enhance mobility for seniors and individuals with disabilities, upgrading interconnectivity between commercial and residential neighborhoods and providing			
Updated Description:			
Project is ongoing and is anticipated to be completed in 2017. The Town has also applied for a \$220,000 Transportation Alternatives Program Grant for additional sidewalk improvement to increase pedestrian interconnectivity.			

City of 319:347Spring Lake	Strategy: Land Use Ordinance	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The City of Spring Lake has an Land Use Ordinance in place. Proposed amendments will be reviewed by Sustainability Advisory Committee, additional amendments and/or revisions may be included based upon their review.			
Updated Description:			
New Initiative - See Above			

City of Spring Lake	Strategy: Land Conservation	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The Town acquired approximately 60 acres of undeveloped property along Little River to dedicate as a conservation area that will include walking trails and serve as an educational tool for educational outreach. The property will serve as a protective buffer by restricting development along that portion of Little River. The Town is proposing to acquire an additional 40 acres that is adjacent to include in the project.			
Updated Description:			
New initiative - see above			

LAND USE

Town of Falcon	Strategy: Tree Plantings	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The Town of Falcon has committed to planting additional trees on public property. The trees selected for the project will include those varieties that are hearty and easy to maintain.			
Updated Description:			
New Initiative - See Above			

Town of Eastover	Strategy: Tree Plantings	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
On the Site on of the new Town Hall, the Town of Eastover planted more than a dozen Dogwood Trees. Landscaping around the facility also includes hearty varieties of shrubs and grasses.			
Updated Description:			
New Initiviate - See Above			

Town of Eastover	Strategy: Land Conservation	Implementation Date: 2016	Updated/revised:--
Strategy Description:			
The Town of Eastover acquired 28 acres of undeveloped land adjacent to the local ball field. A review has been set up to determine the best use for the property. Proposals currently include a park with green space and an amphitheater.			
Updated Description:			
New Initiative - See Above			

Stakeholder Directory

Name	Affiliation	ADDRESS	TELEPHONE	EMAIL
Carolyn Justice Hinson	PWC	Public Works Commission PO Box 1089 Fayetteville, NC 28302	910-223-4015	Carolyn.Hinson@faypwc.com
Commissioner Larry Lancaster	Town of Fayetteville/ Cumberland Co. Representative	2602 Dartmouth Drive Fayetteville, NC 28304	(H) 484-2774 (C) 308-9285	lll@nc.rr.com , llancaster@co.cumberland.nc.us
Commissioner Peggy Raymes	Town of Stedman	526 Rosewood Court, Stedman, NC 28391	(H) 910-323-8893 (C) 910-309-9891 (W) 910-484-3885	praymes@ccs.k12.nc.us
Councilwoman Kathy Jensen	City of Fayetteville	Council Member District 2 P.O. Box 58561 Fayetteville, NC 28305	910-433-1992	kjensen@ci.fay.nc.us
Russ Rogerson	Economic Development	2723 Fort Bragg Rd, Fayetteville, NC 28303	910 -678-7648	russ@faybiz.com
Shanelle B. Harris	Fayetteville Area System of Transit (FAST)/ FAST Civil Rights Activist	455 Grove St Fayetteville, NC 28301-0998	(W) 910-433-1157 (F) 910- 433-1064	sharris@ci.fay.nc.us
Dr. Ana MacDowell	Medical Rep.	Allergy Partners 1317 Medical Drive Fayetteville, NC 28304	(H) 910-487-9395 (W) 910-323-3890	amacdowell@allergypartners.com
Elizabeth Small, Francis Collier	Emailed two names and phones for possible replacements. Need to contact them.:	P.O. Box 228 4835 Main Street Linden, NC 28356-0228	—	ibesmall@embarqmail.com, fvcollier@embarqmail.com, linden, Commissioner@embarqmail.com
Gary Slater	Major Industry	Clear Path Recycling, LLC	910-849-6603	
Hanah Ehrenreich	Sustainable Sandhills	351 Wagoner Dr., Ste 333 Fayetteville, NC 28303	910-484-9098	hanahe@sustainablesandhills.org
Janice Lucas	Town of Falcon	PO Box 61 7370 N. West Street Falcon, NC 28342	(V) 910-980-1296 (C) 405-595-8775	JHL0717@aol.com
John Gillis	Homebuilders Association	128 S. Churchill Drive Fayetteville, NC 28303	(H) 484-9828 (W) 308-4255	jmgillisjr@gmail.com
Johnny Lanthorn	Town of Wade	6841 Main Street Wade, NC 28395	910-484-7467	johnny.lanthorn@faypwc.com
Jon Parsons	Environmental Rep./ Enery Mgr @FSU	Board Member, Sustainable Sandhills 7265 NC Hwy 87 South Fayetteville, NC 28306	910-309-8824	jparson2@uncfsu.edu
Celestine Raineri, R.S.	Environmental health		910-396-8795 910-396- 8207	craineri-smith@co.cumberland.nc.us
David Heins	Fort Bragg	Public Works Bldg3-1631, Butner Road Fort Bragg, NC 28310- 5000	--	david.a.heins.civ@mail.mill
Natalee Ezzell	Town of Godwin	PO Box 11 Godwin, NC 28344	--	njezzell0331@email.campbell.edu
Kim Nazarchyk	Town of Eastover- Town Manager	3863 Dunn Road Eastover, N.C. 28312	910-323-0707	townmanager@eastoverncc.com

FSU Air Quality Stakeholder Updates

FSU LEED Certification

Buildings LEED Silver certification status

- Renaissance Hall, LEED Silver certified
- Science and Technology, LEED Silver certified
- Rudolph Jones Student Center, pending LEED Silver certification
- Lyons Science, renovation project 2018 targeting LEED Silver certification

Do you have any performance measures since completion?

FSU ESPC

Project Size & Financing



- **~ 900,000 SF**
 - 22 buildings - most of the main campus (no residence halls)
- **\$10.4 M Project**
 - \$940k in annual savings
- **Bank of America Financing**
 - 3.6% @ 17 year term + construction period

ESPC Scope of Work

Energy Conservation Measures



Why ESPC?
Project Background
Scope of Work & Issues Addressed
Challenges
Results & Outcome
Lessons Learned
Summary

- **DDC Controls and Analytics**
 - Multiple Existing Systems
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- **Central Chilled/Hot Water Plant**
 - Underground piping
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In the Lyons Science Annex Basement

LSA, LS, Rosenthal, Chick, TSS, LTB, Telecom, JKSA, Lilly, Capel Pool



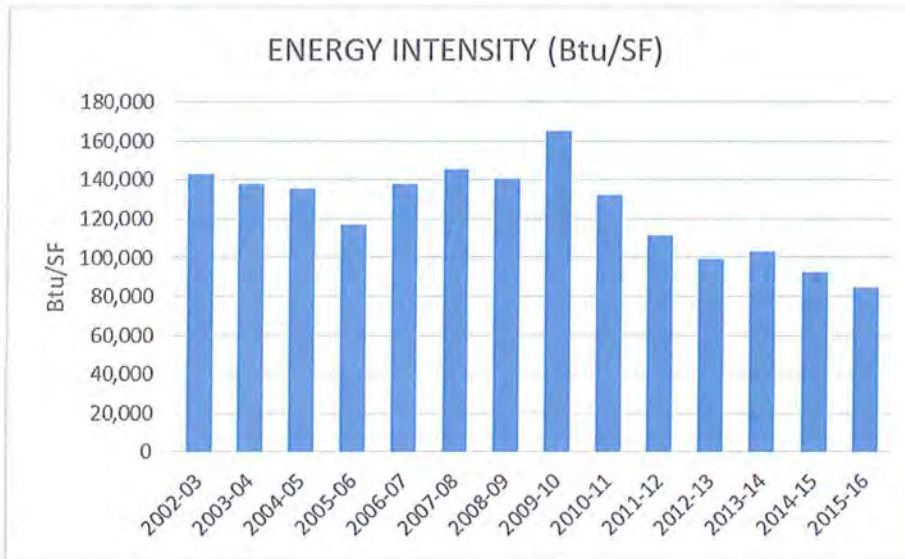
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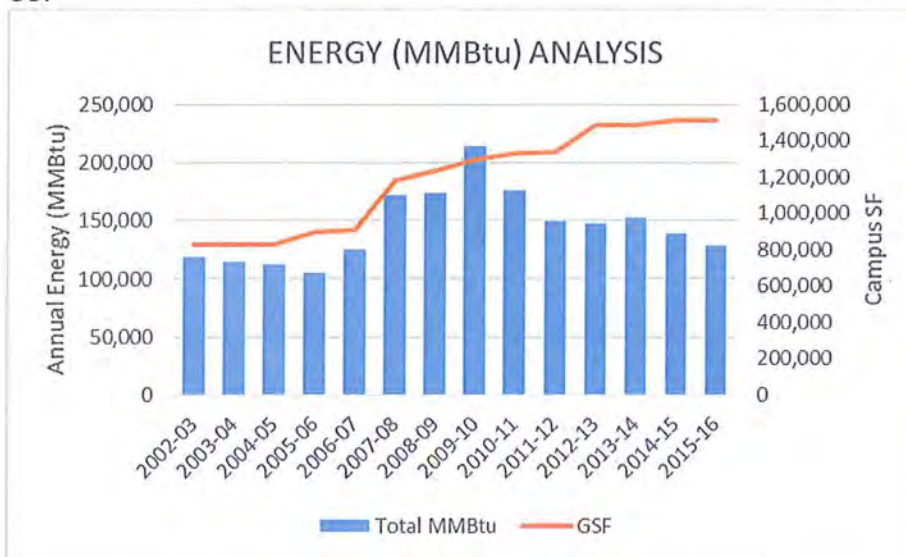


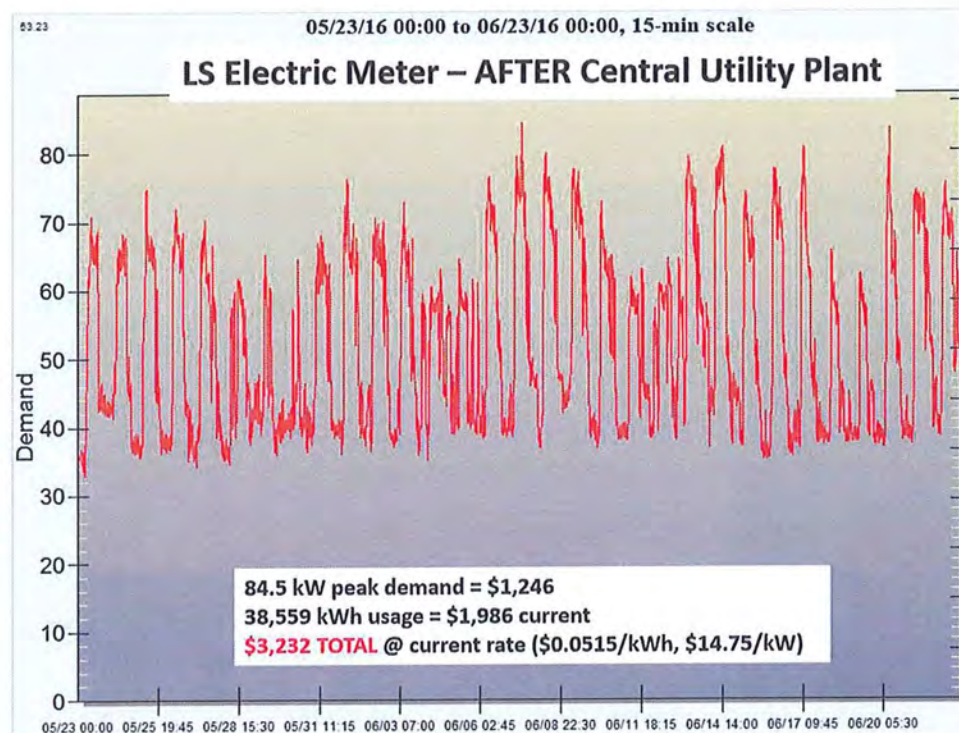
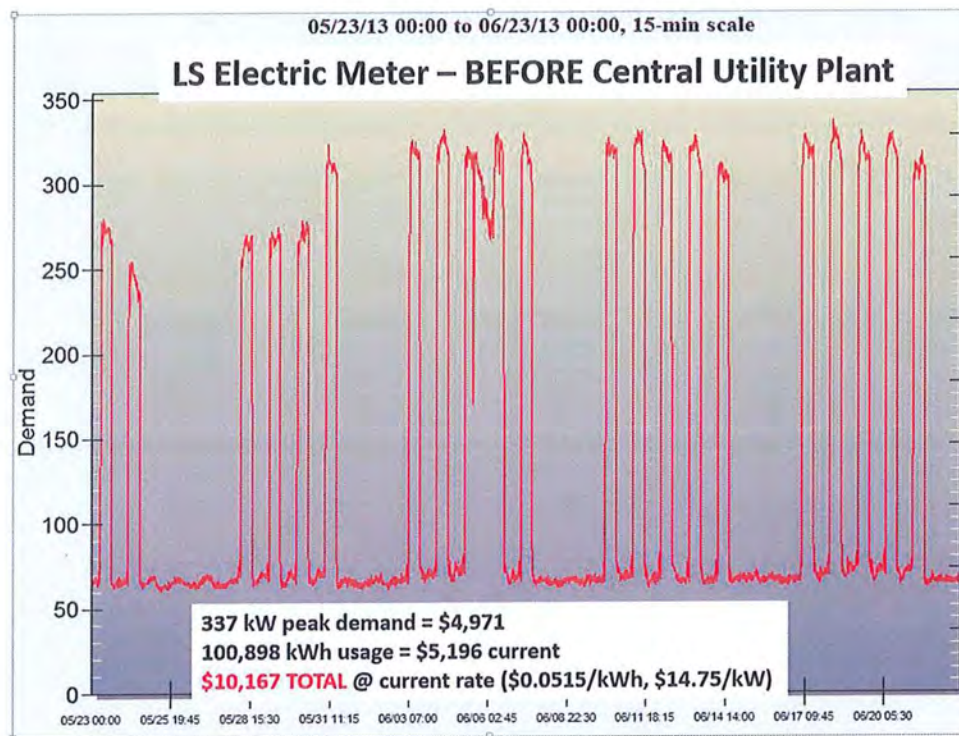
Here are the campus wide energy and water usage per academic year

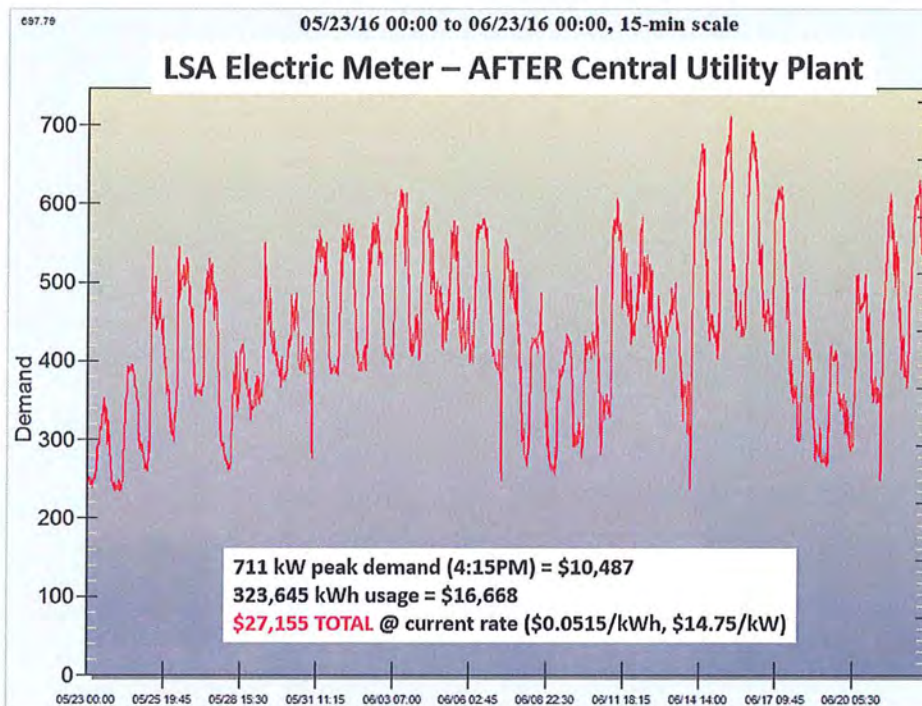
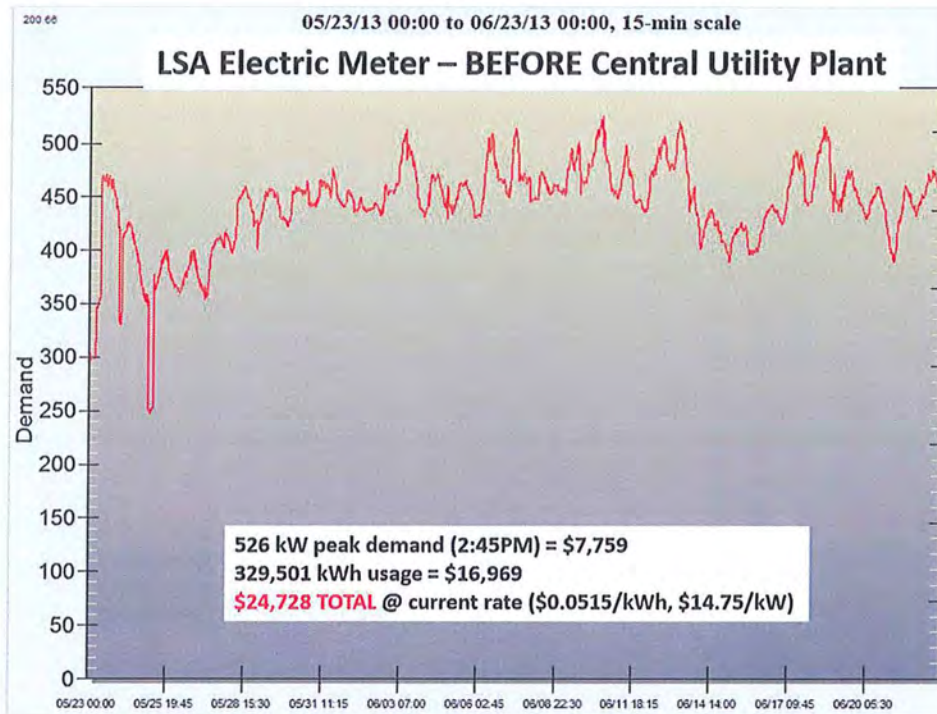


2014-15, FSU reported 36% energy reduction which enable us to win the Certificate of Recognition in Utility Savings Initiative 30% Club at the 5th Annual Appalachian Energy Summit.

2015-16, FSU just reported a 41% decrease in energy usage from baseline year 2002-03.







Was the Performance Contract (ESPC) Program completed?

The ESPC was completed. Last pay application was approved on 9/1/2015.

Status of Food Waste Composting?

FSU Dining started a composting program on 8/17/16 with a food diversion pilot program with the SMART Recycling.

What about Lighting?

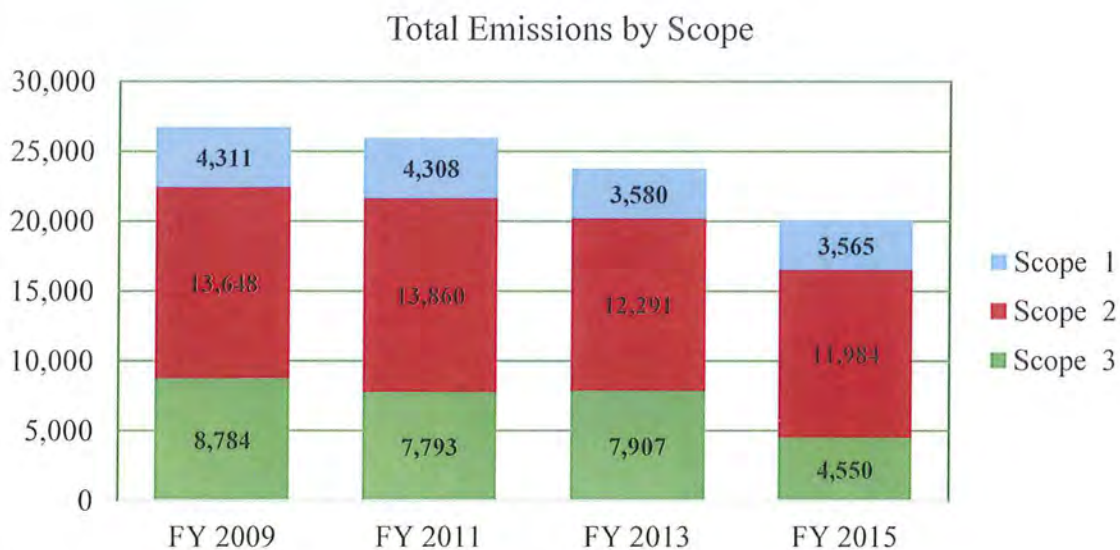
60% of exterior lighting has been retrofitted LED

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Greenhouse Gas Emissions

Scope	Source	FY 2009	FY 2011	FY 2013	FY 2015
Scope 1 Emissions (MTCO ₂ e)	Stationary Sources	4,080	4,115	3,413	3,258
	Mobile Sources	149	145	127	117
	Fugitive and Process Sources	82	42	39	183
	Agriculture Sources	0.1	5.7	0.1	6.7
	<i>Total Gross Scope 1 Emissions</i>	<i>4,311</i>	<i>4,308</i>	<i>3,580</i>	<i>3,565</i>
Scope 2 Emissions (MTCO ₂ e)	Purchased Electricity	13,648	13,860	12,291	11,984
	<i>Total Gross Scope 2 Emissions</i>	<i>13,648</i>	<i>13,860</i>	<i>12,291</i>	<i>11,984</i>
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	Air Travel	890	600	404	283
	Other Directly Financed Travel	41	86	98	148
	Study Abroad Air Travel	-	-	-	46
	Solid Waste	(24)	(18)	(19)	(17.5)
	Scope 2 Transmission & Distribution (T&D) Losses	1,350	1,371	1,216	741
	<i>Total Gross Scope 3 Emissions</i>	<i>8,784</i>	<i>7,793</i>	<i>7,907</i>	<i>4,550</i>
Scope 1- 3 Gross Emissions (MTCO ₂ e)	<i>Total Gross Emissions</i>	<i>26,743</i>	<i>25,961</i>	<i>23,778</i>	<i>20,099</i>
	Gross Square Footage (GSF) x1000	1,434.2	1,530.3	1,691.5	2,493.7
	Full-Time Equivalent Students (FTE)	5,382	5,116	5,149	5,083

Scope 1- 3 Net Emissions (MTCO ₂ e)	Total Gross Emission Intensity per 1000 GSF	18.6	17.0	14.1	8.1
	Total Gross Emission Intensity per FTE	5.0	5.1	4.6	3.95
	Purchased Offsets	0	0	0	0
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- From 18.6 in FY 2009 to 17.0 in FY 2011, a 2-year decrease of 8.6 %
- From 17.0 in FY 2011 to 14.1 in FY 2013, a 2-year decrease of 17.1 %
- From 14.1 in FY 2013 to 8.1 in FY 2015, a 2-year decrease of 42.6%

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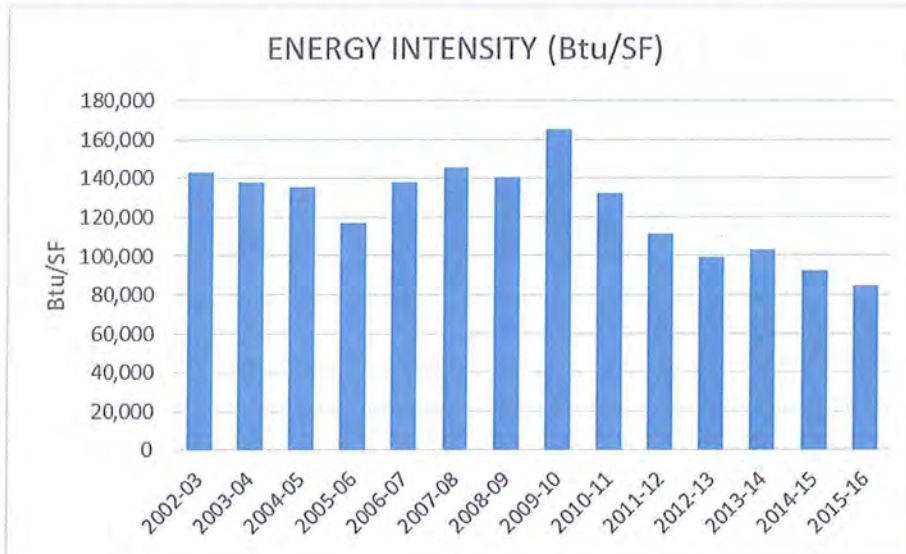
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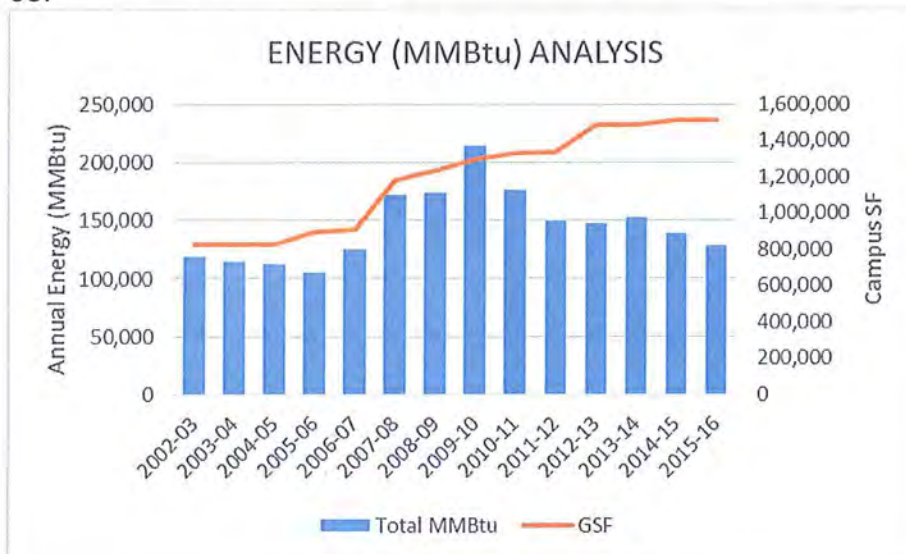


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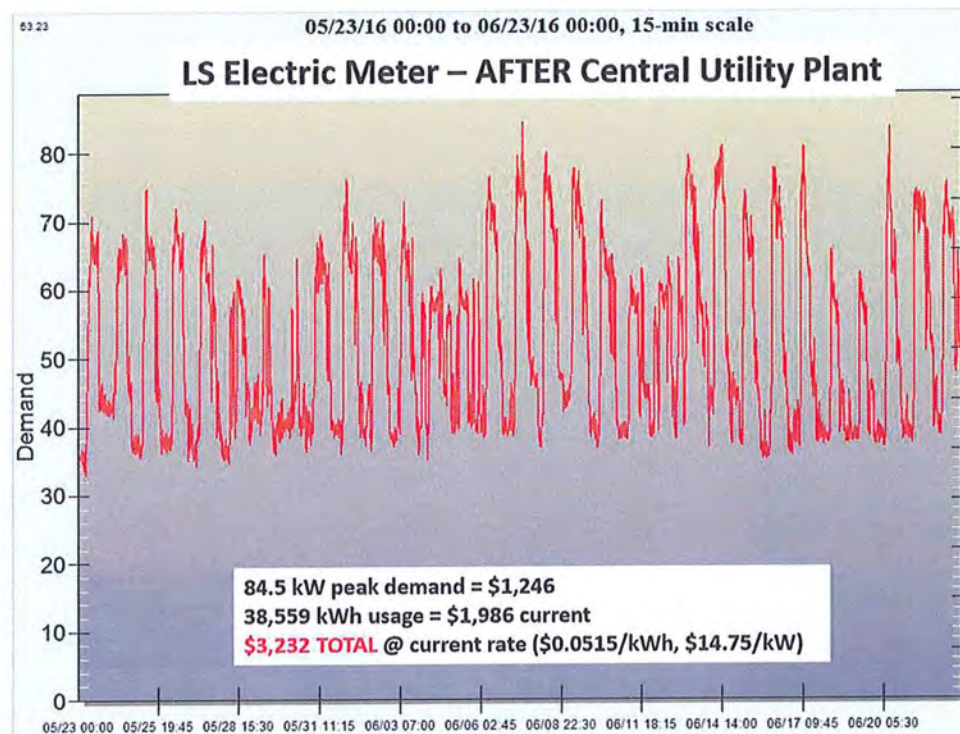
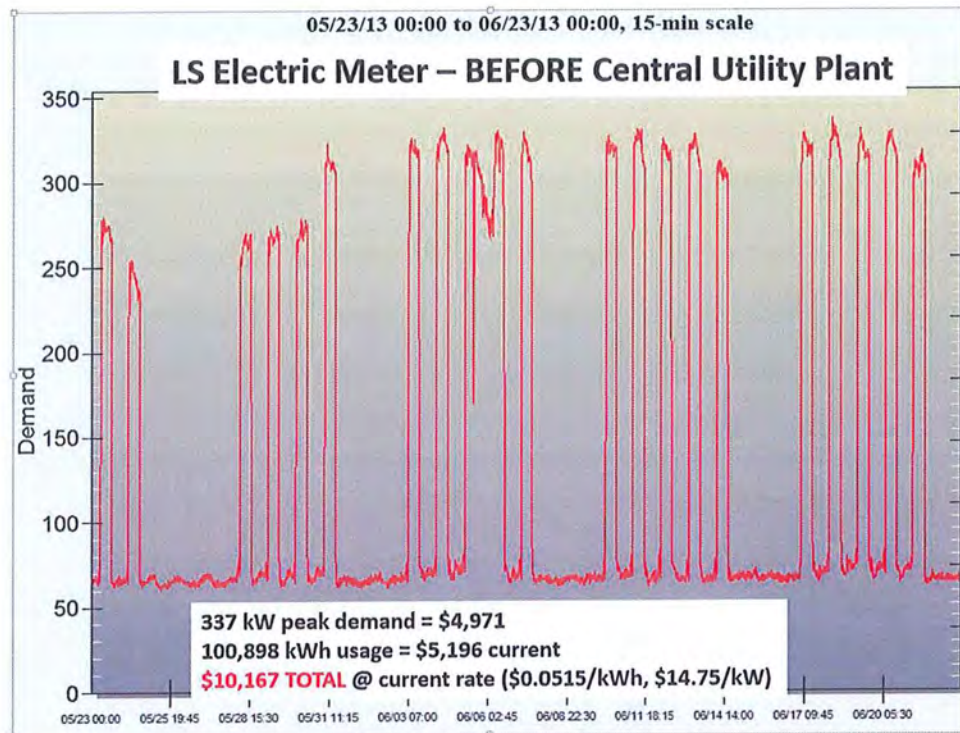


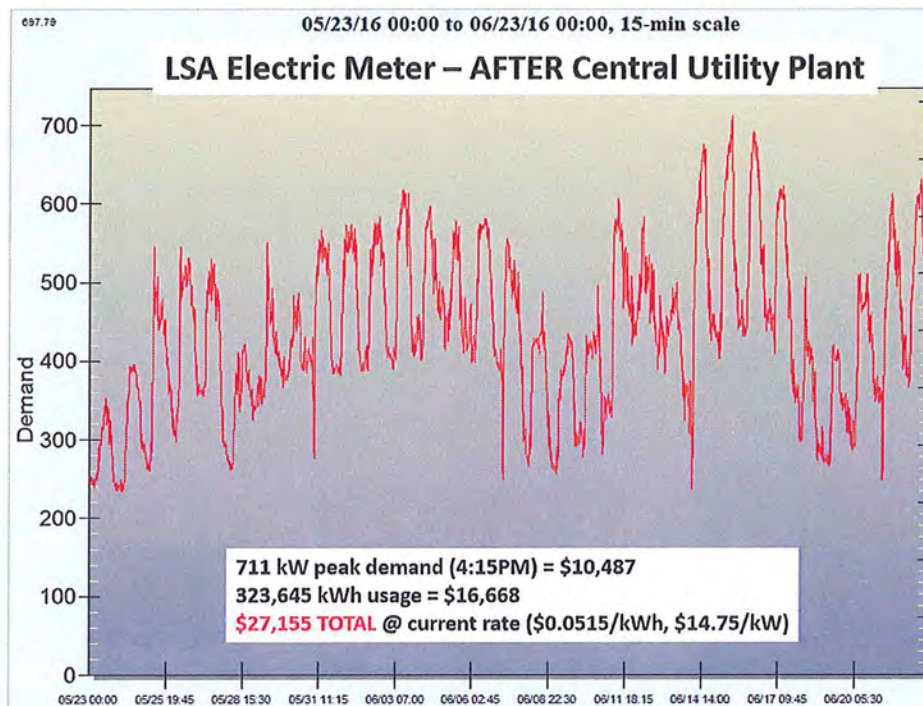
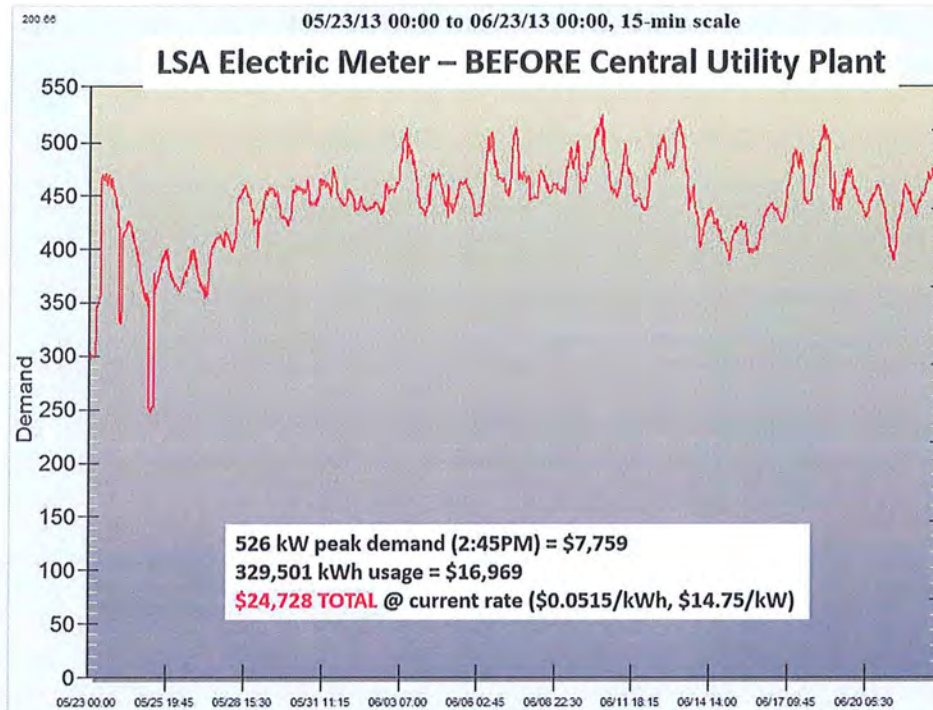
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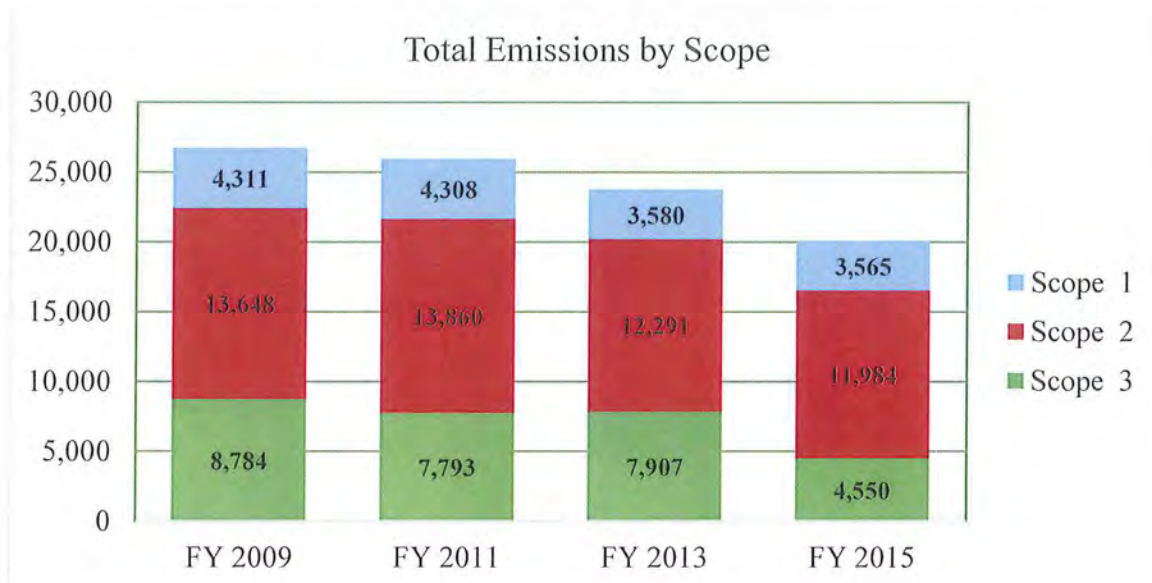
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