

# Environmental Sustainability in Orange County

NCACC Conference  
August 29, 2009

Presentation Available at:  
<http://www.co.orange.nc.us/construction/NCACCPPT09.pdf>

# Building Blocks

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- Policies
- Practices
- Performance
- Perseverance

# Building Blocks

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**POLICIES**

**PRACTICE**

**PERFORMANCE**

**PERSEVERANCE**

# Building the Framework

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- Environmental Responsibility in County Government Goal
  - “Walk the talk”
  - 10 objectives, with action strategies
  - Environmental Stewardship Action Committee
  
- Conservation Policies
  - Energy Conservation Policy
  - Water Conservation Policy
  - Vehicle Fuel Conservation Policy
  - Cultural and Archaeological Policy

# Green Building Policies

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- Utilize standards to support goals
  - Triangle J High-Performance Building Standards
  - LEEDS
- Incorporate standard into fabric of facility planning

# Building Blocks

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# Practice Always Doing Something

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- Establish baseline minimums to be incorporated into EVERY construction related project, examples include:
  - Energy efficient lighting
  - Motion sensors
  - Low flow toilet facilities
  - Daylighting

# Practice Stretching the Green Muscles When Possible

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- Incorporate major environmentally sustainable elements when possible
  - Geothermal HVAC
  - Greywater reclamation
  - Daylighting



# Practice Doing Your Homework

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- Do your homework
  - Life cycle costing a must
  - Every strategy won't work for every situation



# Practice CAUTION!!!

- Use proven products
- Do your homework on new or unproven products
  - “greening” is everywhere and manufacturers are churning out products with inadequate research in some instances



# Practice Creative Thinking

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- Consider adaptive reuse of existing vacant or under-utilized buildings
- Consider deconstructing old facilities and re-using materials in new construction

# Reduce, Reuse and Recycle (3-R) Fee

Major commitment to waste reduction - 61% goal vs. 1991  
Recycling FY-09/10 Budget \$3.3 million  
Can't rely on vagaries of recycling markets or diminishing  
surplus landfill revenues for funding



# Four-Part Fee Captures Cost of Services

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- Basic Fee – \$37/unit/year – assessed to all improved properties. Funds “universal” recycling services available to all households and businesses in County (Drop-off recycling, electronics recycling, hazardous waste services, education and outreach, program administration)
- Urban Curbside Fee - \$52/unit/year – assessed to municipal households eligible to receive weekly curbside recycling collection
- Rural Curbside Fee - \$38/unit/year – assessed to unincorporated households eligible to receive biweekly curbside recycling collection
- Multifamily Fee - \$19/unit/year – assessed for each “multifamily” housing unit eligible to participate in multifamily recycling program

# Practice Spreading the Net Wide

- Green school construction
- Use environmentally responsible products in daily operations
  - Cleaning products
  - Office supplies
  - Paper products
  - Trash bags
  - Compostable eating utensils/paper products for events



# Regulated Recyclable Materials Ordinance (RRMO)...

- Implemented Oct 1, 2002
- Has reduced disposal of construction and demolition waste generated in Orange County by over 26%
- Objective is to reduce disposal of various recyclable materials, particularly those related to construction and deconstruction
- Requires recycling of clean wood, cardboard and clean metal with potential to add additional materials



# ...RRMO

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- Requires on-site separation of these materials from job sites, unless delivered to an Orange County certified waste separation/processing facility
- Requires issuance of a RRM Permit prior to obtaining a building permit
- Requires licensing of waste haulers
- Includes staff review of all proposed development projects
- Requires a pre-construction conference to review standards/obligations
- Demolition permits can be delayed by 60 days to explore deconstruction options
- Provides for civil and criminal penalties as well as license forfeiture

# Then...Spread the Net Wider

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- Solar farm currently being considered conceptually on top of closed Construction and Demolition Landfill
- TRIP program: Comprehensive effort to reduce toxicity of waste disposed in Orange County Landfill
- Don't forget your "green infrastructure"
- Developing joint UNC/OC landfill gas recovery project with power to be utilized by the University

# Carbon Reduction

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- Methane capture with UNC Landfill Gas project
- Greenhouse Gas Emissions Inventory
  - Vehicles = ½ of Emissions
- New Ozone standard – impending non-attainment
- Climate Change – Local actions, renewable energy



# How to Invest in Green Infrastructure

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- Green Infrastructure – Network that supports environment, economy, quality of life
- Growth agreements with municipalities
- Lands Legacy Program – 2300 acres
- Identify your Key Spaces and Important Places – Prioritize, look for partners

# Open Space Increases Land Value

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- Conservation has negligible impact on property tax base
- Studies show permanent open space increases value
- Land desirable adjoining future parks and nature preserves

# Conservation Pays

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- \$5 million (\$13 million leveraged) in grants to conserve natural and cultural resource lands / parks
- One priority – prime and threatened farmland
- Conserve the farm, but also help the farmer



# Conservation Pays – Case Studies

- Carls-Beth Farm in NW Orange County
- Maple View Farm in SW Orange County
- Both used tax credits and/or easement purchase to re-capitalize and diversify
- Both successfully “branded” local food products (dairy/ice cream, beef)



# Carls-Beth Farm – Protect, Recapitalize, Diversify

- 1<sup>st</sup> and 2<sup>nd</sup> generation sold conservation easements
- 2<sup>nd</sup> and 3<sup>rd</sup> generation used funds to recapitalize from dairy to grass-fed beef, other products
- 3<sup>rd</sup> generation markets locally and regionally



# Farmer's Markets & Value-Added Center

- Tremendous and growing interest in local foods
- Food safety, sustainability, health and local economy benefits
- **6** groceries now sell local foods
- **6** operating farmers markets
- New multi-county Value-Added Center opening in 2010 = more local products



# Building Blocks

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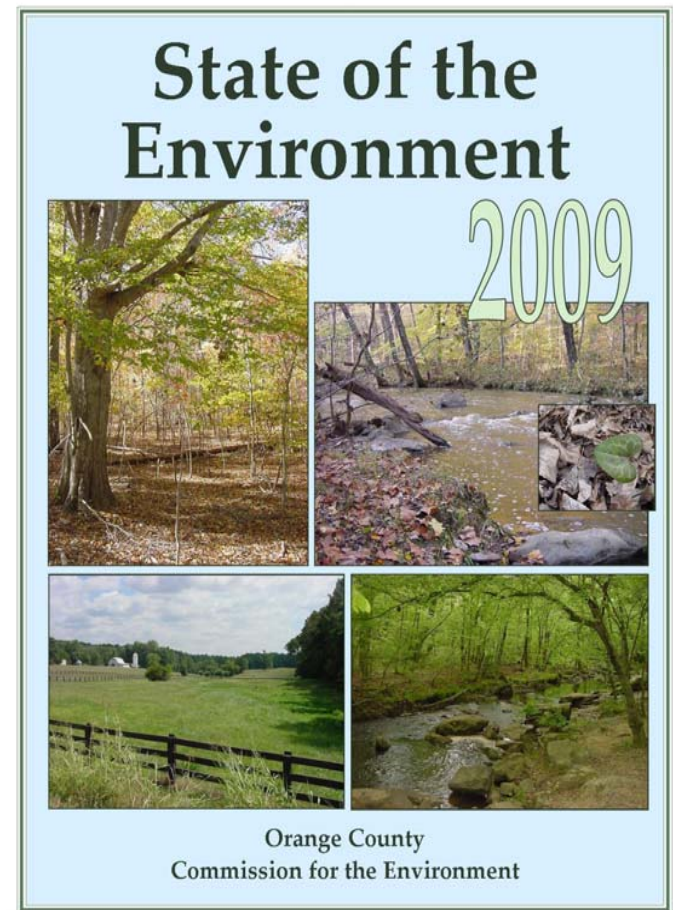
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# State of the Environment

- How are we doing?
- Produced every 4 years
- 20 indicators measure progress or loss
- Air/Climate, Biological and Water Resources
- Available as a download from Web or by CD



# Practice Green Education

- Educate architectural community about your expectations
- Educate employees
- Educate the public
- Educate the regulators
- Educate decision makers



# Community Dialogue

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- Active and engaged citizenry
  - around 50 committees and task Forces
- Opportunities for engagement increase transparency in government
- Opportunities for dialogue beyond the conventional methods of communication
  - Newspapers in transition, emerging technologies

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# Little River Park

- Proposed C&D Landfill
- Community opposition
- Two counties, two land trusts started a conversation
- Award-winning park and natural area (almost completely funded by grants)



# Political Perspective

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- Cost and value
- Engage School Boards
- Oops
- Look where you're going
- Be open to collaboration
- Educate and involve others
- Agreements and ordinances codifying policies

# Links

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RRMO: <http://www.co.orange.nc.us/recycling/ordinance.asp>

3RFEE: <http://www.co.orange.nc.us/recycling/3rfee.asp>

HHW: <http://www.co.orange.nc.us/recycling/hhw.asp>

SOE: <http://www.co.orange.nc.us/ercd/index.asp>

High Performance Buildings:

<http://www.tjcog.dst.nc.us/regplan/highbuild.shtml>

Lands Legacy: [http://www.co.orange.nc.us/ercd/lands\\_legacy.asp](http://www.co.orange.nc.us/ercd/lands_legacy.asp)

Orange County Farms: [www.orangecountyfarms.org](http://www.orangecountyfarms.org)

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