ENVIRONMENTAL ADVISORY BOARD

The Environmental Advisory Board of the City of Raleigh held a meeting on Thursday, December 13, 2018 at 5:00 p.m. in Room 303, Raleigh Municipal Building, 222 West Hargett Street, Avery C. Upchurch Government Complex, Raleigh, North Carolina, with the following present:

BOARD MEMBERS
Graham Smith, Chair
Brian Starkey, Vice Chair
Linda Watson
Beverly Clark
Brian Starkey
Anya Gordon
Jamie Cole
Justin Senkbeil (via telephone)

STAFF
Megan Anderson, Sustainability Office
Cindy Holmes, Sustainability Office
Nicole Goddard, Sustainability Office
Greg Sponseller, Sustainability Office

ABSENT
Aranzazu Lascurain
Benjamin Bobay

CITY COUNCIL
David Cox

I. Call to Order
Mr. Graham Smith called the meeting to order at 5:00 p.m.

II. Approval of Meeting Minutes
The minutes from the November meeting were approved as written.

III. Introduction of New Member

a. Ms. Jamie Cole, the new Environmental Advisory Board member, provided a brief introduction including her background and the existing Board members introduced themselves.

IV. Public Comment
No public comments were provided.

V. Announcements/Member Comments

a. Ms. Linda Watson made a statement as a member of the public. Ms. Watson reviewed the fourth national climate assessment providing relevant excerpts from the document citing the potential risks and impacts of climate change threats to the City. She recommended reviewing the October Report of the IPCC for other information. A copy of Ms. Watson's comments is attached to the minutes.
b. In addition, Council Member David Cox indicated that he has asked staff to investigate the Sierra Club's Ready for 100 Initiative among other programs. Council Member Cox encouraged everyone to come to Council meetings to inform and petition Council on these issues.

VI. Staff Updates

a. Review of FY19 Work Plan Schedule
    i. Mr. Graham Smith reviewed the presentation of the Work Plan to City Council. There was discussion at the Council meeting regarding urban agriculture which is no longer included in the Work Plan and social justice which is included in other

items. Urban agriculture has been incorporated into the City-wide Strategic Plan in SVHC 4.1. The work plan was adopted by Council as written. He also requested consideration of funds for future Environmental Awards celebrations ($10,000) in the FY20 budget.

ii. Ms. Cindy Holmes provided the Board with the FY19 meeting schedule and the extended work plan. Ms. Holmes requested that the May 2019 meeting be rescheduled as Ms. Anderson and Ms. Holmes will be at a conference in Florida.

iii. The January meeting will be held at the Wilders Grove Solid Waste Services Center.

b. Regional Resiliency Assessment Overview

i. Ms. Nicole Goddard provided a review of the Triangle Regional Resilience Project. This was a series of workshops that brought six jurisdictions together to assess regional climate and non-climate stressors, threats, and options to address threats at a regional level. A final report is now available on the TJCOG website. A copy of the executive summary was provided to all Board members. A copy of the presentation is attached to the minutes.

c. CCAP Project Update

i. Ms. Anderson provided an update on the Community-wide Climate Action Plan (CCAP) and Council questions regarding the Sierra Club's Ready for 100 Initiative and establishing a renewable energy goal. A copy of the presentation is attached to the minutes.

d. 2019 Environmental Awards

i. Ms. Goddard reminded the Board members about the venue and that the promotional video has been uploaded to the website. The awards jury will meet February 7th.

VII. Other Business

a. The Board requested that the next meeting at Wilders Grove be moved to 4:30 p.m.

VIII. Upcoming Meetings/Events

i. Next Meeting – January 10, 2018 at City of Raleigh's Wilders Grove Solid Waste Services, 630 Beacon Lake Drive, Raleigh, NC 27610.

ii. The Environmental Awards will be held on April 4, 2019 at 6 p.m. at Market Hall.

IX. Adjournment

The meeting concluded at 6:50 p.m.

Attachments:

Overview of US Fourth National Climate Assessment prepared by Ms. Linda Watson
Environmental Advisory Board Working Document
Environmental Advisory Board Meeting Schedule
TRRP Presentation
CCAP Project Update Presentation

The EAB and Raleigh City Government should be aware of the US Fourth National Climate Assessment, which was released on Black Friday. Here are excerpts that which highlight the changes cities will experience from climate breakdown, particularly in the South East. I'm also attaching a longer version which has more detail but is still much shorter that report itself. I made these comments at the Environmental Advisory Board meeting on December 13th. Please note that although I am a member of the EAB, I made this presentation during the public comment period so that Council Cox would still be present.

Overview of the US Fourth National Climate Assessment

Cities across the Southeast are experiencing more and longer summer heat waves. Nationally, there are only five large cities that have increasing trends exceeding the national average for all aspects of heat waves (timing, frequency, intensity, and duration), and three of these cities are in the Southeast region—Birmingham, New Orleans, and **Raleigh**. The urban heat island effect (cities that are warmer than surrounding rural areas, especially at night) adds to the impact of heat waves in cities. Southeastern cities including Memphis and **Raleigh** have a particularly high future heat risk.

The growing number of extreme rainfall events is stressing the deteriorating infrastructure in the Southeast. Many transportation and storm water systems have not been designed to withstand these events.

The impacts of climate change are already being felt in communities across the country. More frequent and intense extreme weather and climate-related events, as well as changes in average climate conditions, are expected to continue to damage infrastructure, ecosystems, and social systems that provide essential benefits to communities.

While mitigation and adaptation efforts have expanded substantially in the last four years, they do not yet approach the scale considered necessary to avoid substantial damages to the economy, environment, and human health over the coming decades. Future risks from climate change depend primarily on decisions made today.

Climate change can exacerbate existing challenges to urban quality of life, including social inequality, aging and deteriorating infrastructure, and stressed ecosystems.

In addition to temperature extremes, climate change adversely affects urban population health through air and water quality and vector-borne diseases. Climate change also threatens the integrity of personal property, ecosystems, historic landmarks, playgrounds, and cultural sites such as libraries and museums, all of which support an urban sense of place and quality of life.

Incorporating climate projections into infrastructure design, investment and appraisal criteria, and model building codes is uncommon. Building codes and rating systems tend to be focused on current short-term, extreme weather. Investment and design standards, professional education and licensing, building codes, and zoning that use forward-looking design can protect urban assets and limit investor risk exposure.

City governments use a variety of policy mechanisms to achieve adaptation and mitigation goals. They adopt building codes, prioritize green purchasing, enact energy conservation measures, modify zoning, and buy out properties in floodplains. A number of cities are conducting GHG inventories to inform decisions and make commitments to reduce their emissions.

Urban adaptation and mitigation actions can provide near-term benefits to cities, including co-benefits to the local economy and quality of life. Tree canopies and greenways increase thermal comfort and improve storm water management. They also enhance air quality, recreational opportunities, and property values.

Conclusion

For a world-wide look at the urgency and impacts, see the October report on Global Warming by 1.5°C by the International Panel on Climate Change (IPCC). It concludes that we have twelve years to essentially remake civilization or lose it.

I urge the EAB and the City of Raleigh to act with urgency to help reverse climate breakdown, protect our most vulnerable citizens, and help all of us thrive.

Sincerely yours,

Linda Watson, 919-607-1000, 1421 Dellwood Drive, Raleigh NC 27607

Environmental Advisory Board Meet

(2nd Tuesday of Each Month, Room 303, 5PM to 7PM)

Date	Topic (at Top Tier of Planning)
December 13, 2018	EAB Meeting • Update on work plan and year-end report to Council, CCAP • Review EAB calendar
January 10, 2019 (location: SWS) Wilders Grove Solid Waste Services 630 Beacon Lake Drive Raleigh, NC 27610	EAB Meeting • Meet at Solid Waste Services o Current SWS programs o Operations o Opportunities for the future Work plan item #1
February 1, 2019	Environmental Awards Applications Close Work Plan item #2
February 7, 2019 (location: Walnut Creek) Walnut Creek Wetlands Center 950 Peterson St Raleigh, NC 27610	Environmental Awards Jury Event (Walnut Creek Wetlands Center) 1-4pm (EAB subcommittee only, + other board reps) Work Plan item #2
February 14, 2019	EAB Meeting- Update on Yard Waste Operation • Continue Waste work o Discuss current yard waste operations, challenges, opportunities, questions and feedback Continue working on #1 • EAB confirms Award Winners Work Plan item #2
February 19, 2019	City Council Reviews Award Winners Work Plan item #2
March 14, 2019	EAB Meeting • Complete Waste Work o Discuss effective strategies for communication waste reduction strategies to the public Work Plan item #1
April 4, 2019 (location: Market Hall) Market Hall 215 Wolfe Street Raleigh, NC 27601	SAVE THE DATE – 2019 Environmental Awards Celebration 6-8PM & Arbor Day Celebrating our 12th EA, Bee City USA 2 years, Tree City USA city 24 years Work Plan item #2
April 11, 2019	EAB Meeting • Greenhouse Gas Emissions Work Item o Development Services to review current programs, operations and opportunities for a potential paperless review process Work Plan item #3*
April 22, 2019	Earth Day

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May 9, 2019 Reschedule?	Megan and Cindy out of town at a conference
June 13, 2019	EAB Meeting • BeeCity USA – National Pollinator Week • Greenhouse Gas Emissions Work Item Work Plan item #3*
July 11, 2019	EAB Meeting • Greenhouse Gas Emissions Work Item Work Plan item #3*
August 8, 2019	EAB Meeting • Greenhouse Gas Emissions Work Item Work Plan item #3*
September 12, 2019	EAB Meeting • Prepare Annual Report • Prepare FY20 Work Plan • Election of Officers
October 10, 2019	EAB Meeting
November 14, 2019	EAB Meeting

*Work Plan item #3: City Council Member Stewart's request: Consider under Raleigh GHG piece of your work plan: Climate adaptation and Resiliency—how do we create communities that can prosper through a changing climate? Within that, the social and environmental justice implications to our underestimated communities in a changing climate.

DRAFT

Raleigh

Triangle Regional R

A partnership of
Raleigh, Cary, Durham (City and Co

Facilitated by
the National Environmental Modeli
Triangle J Council of Govern

Assessment workshops to det
Regional Vulnerabilities, Impacts and Risks
Major Threats
Regional Solutions
Address those thr

July 2017

November 2018

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RESILI

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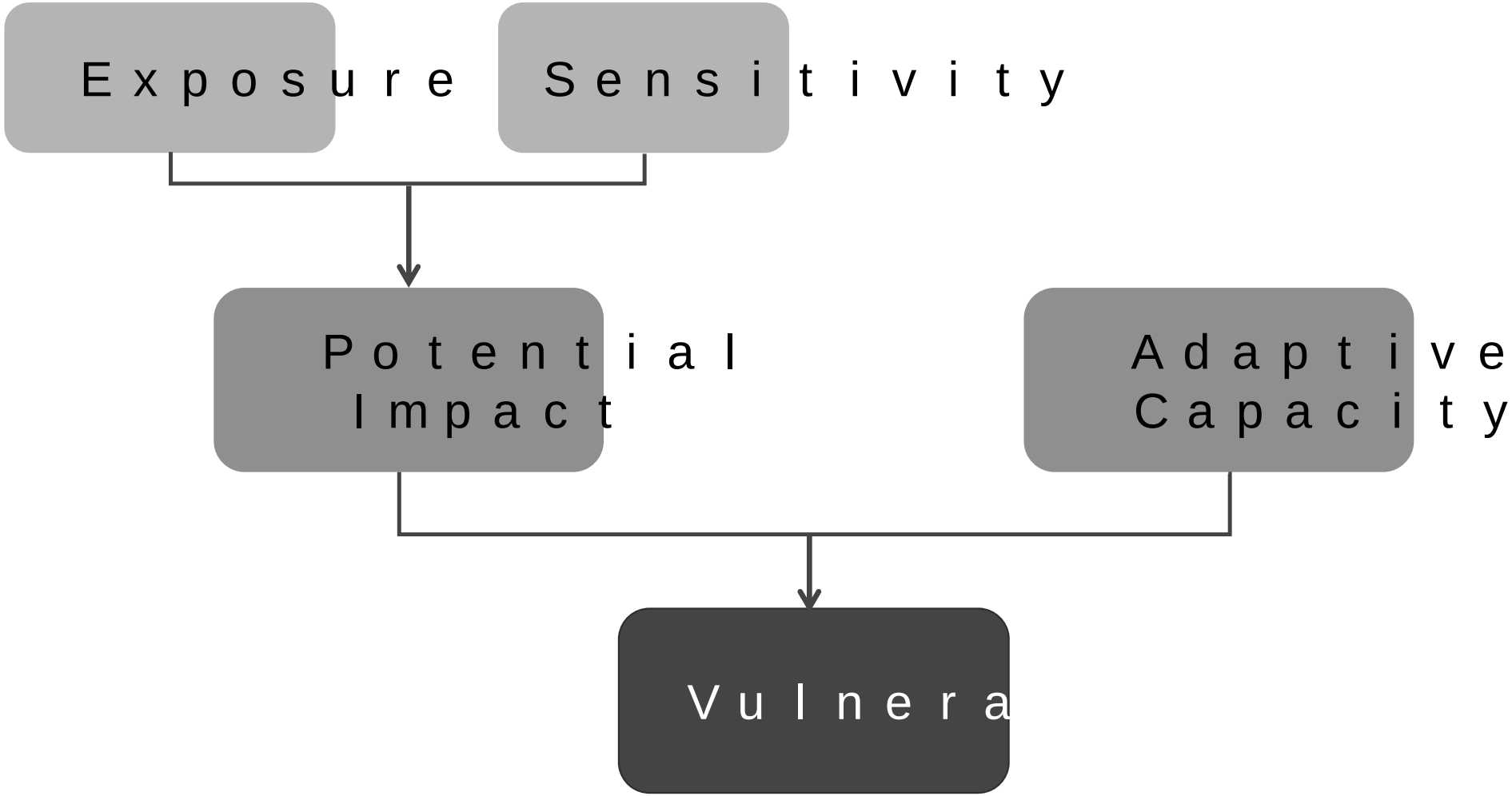
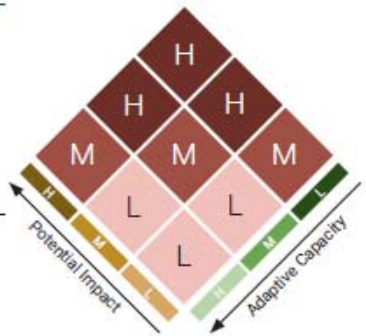

Exposure
Sensitivity
Potential Impact
Adaptive Capacity
Vulnera

Benjamin Lowy for the New York Times www.nytimes.com/2017/04/18/magazine/when-rising-seas-transform-risk-into-certainty.html

Vulnerability

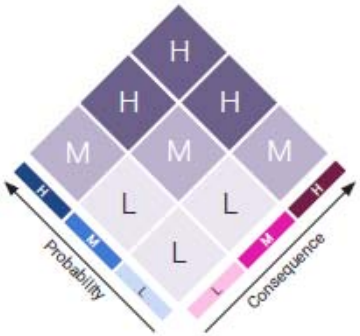
	Potential Impact	Adaptive Capacity
High	Structure in floodplain and multifamily residence, apartment, manufactured house, group home, nursing home, retirement home, or mobile home park	Structure is built out of floodplain or building elevation 2 feet above base flood elevation
Medium	Structure in floodplain and single residence	Structure in floodplain building elevation at or 1 foot above base flood elevation
Low	No structure in floodplain (land only)	Structure in floodplain built before floodplain development ordinance

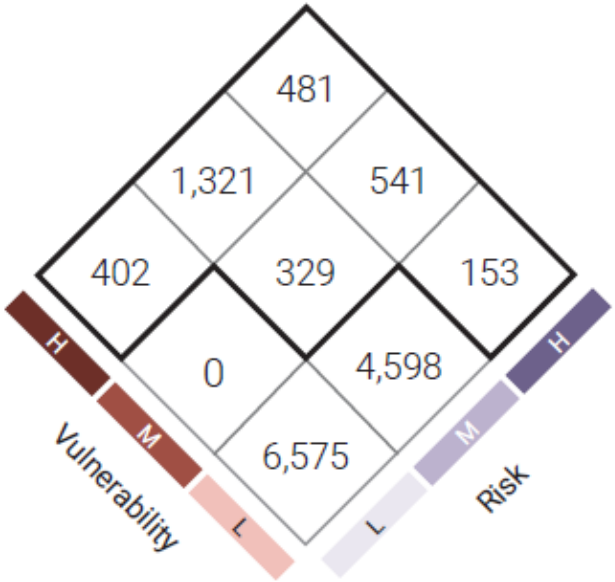


Benjamin Lowy for the New York Times
www.nytimes.com/2017/04/18/magazine/when-rising-seas-transform-risk-into-certainty.html

Risk

	Probability of Threat Event	Consequence of Threat Event
High	In floodway	Structure exposed and above median value
Medium	In 100-year floodplain	Structure exposed and below median value
Low	In 500-year floodplain	No structure exposed





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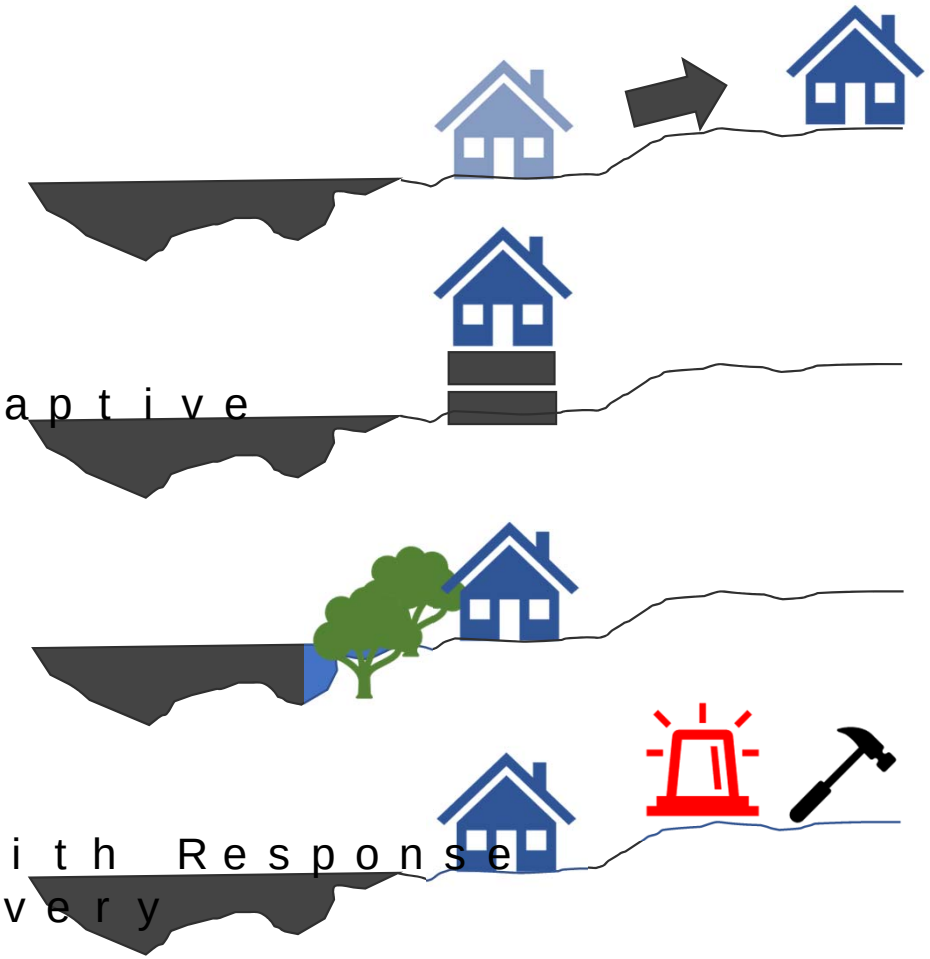


Reduce Exposure

Build Adaptive Capacity

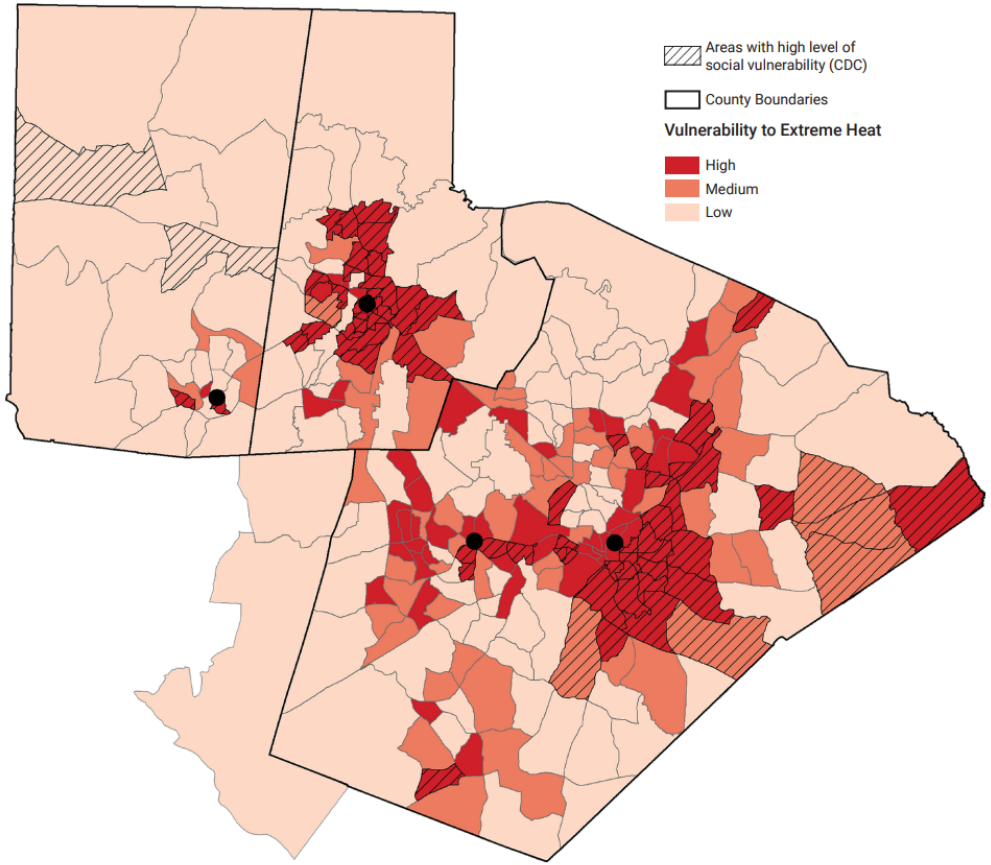
Reduce Sensitivity

Assist with Response and Recovery

Vulnerability

	Potential Impact	Adaptive Capacity
High	• Facilities in which critical building systems are not shielded • Roof type and materials that are absorptive • Facilities built at a time during which building codes did not ensure sufficient levels of insulation and HVAC capacity • Facilities that serve sensitive or large populations	• Facilities with full power redundancy • Good auxiliary cooling sources available to be deployed • High-performing and highly efficient buildings • Accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or similar accreditation • Facilities having a state license
Medium		• Facilities with partial power redundancy • Facilities having only a state license without additional accreditation • Center for Medicaid/Medicare system
Low	• Facilities in which critical building systems are well-protected or inside • Roof type and materials that are reflective • Facilities built at a time during which building codes ensure sufficient levels of insulation and HVAC capacity • Facilities that serve populations that are small or not sensitive	• Facilities with no power redundancy • No auxiliary cooling sources available • Low-performing or inefficient building • No license

Figure 51. Vulnerability to Extreme Heat



B u i l d i n g R e s i l i

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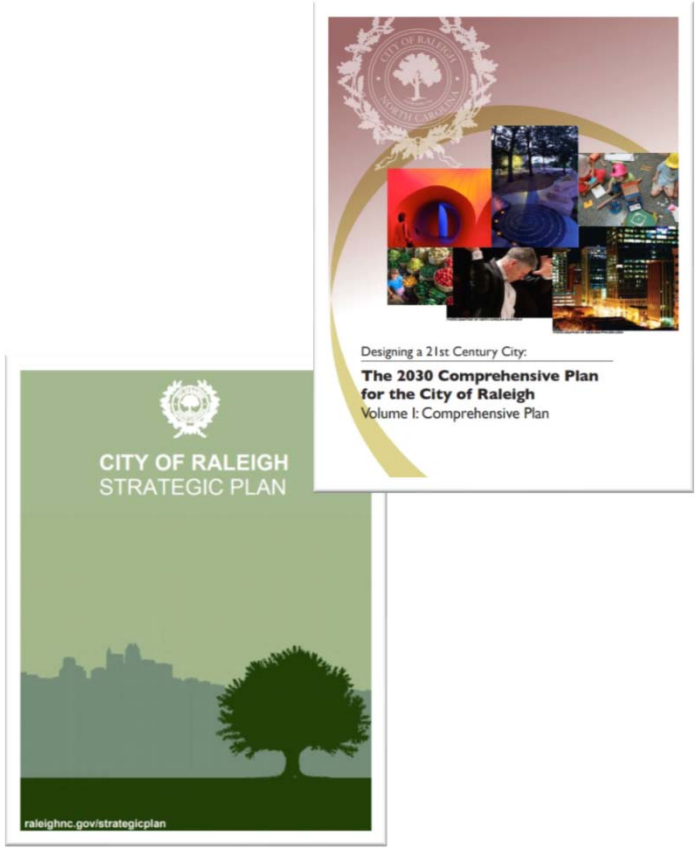
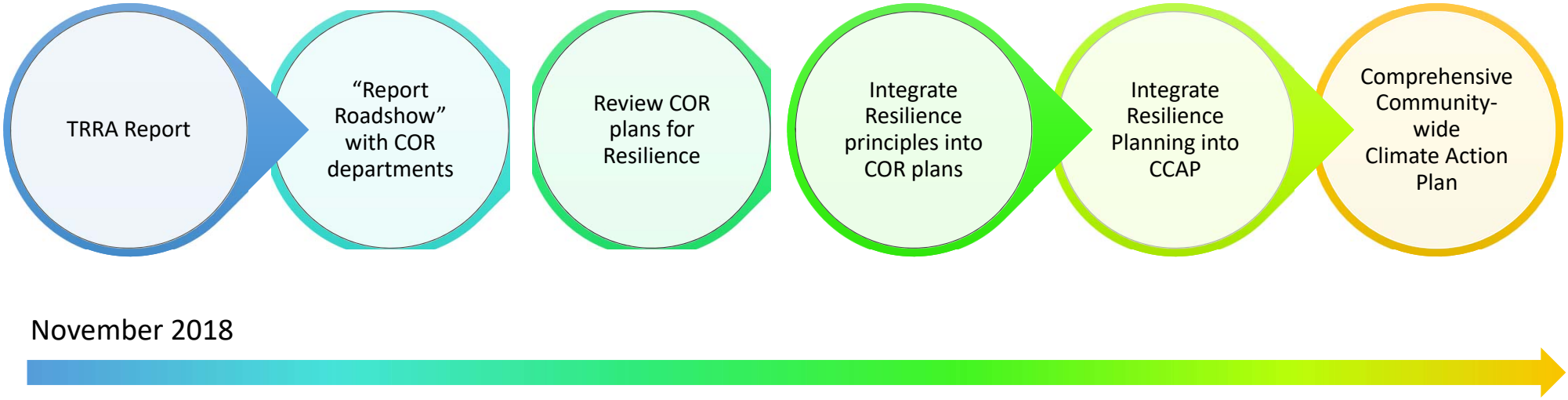
- 2030 Comprehensive plan
  "Preparing residents and infrastructure will be a hallmark of successful cities in the 21st century"

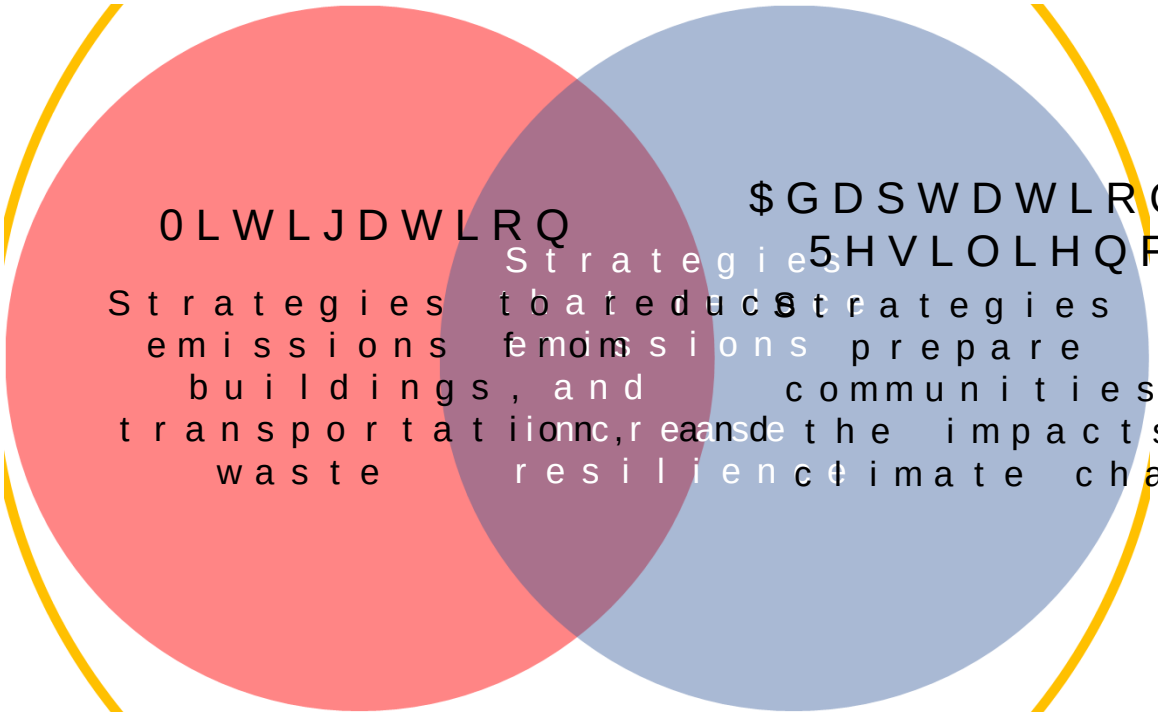
- Strategic plan: Growth and Natural Resources
  - 1.1 Water and Air Quality Protection
  - 2.2 Greenspace Expansion
  - 3.1 Climate Action
  - 3.3 Green Infrastructure Inventory and Policy
  - 4.5 Infill Development

- Department Plans and Policies
  - Stormwater
  - Transportation
  - Public Utilities
  - Emergency Management
  - Housing and neighborhoods
  - Planning




TRRA Report
"Report Roadshow" with COR departments
Review COR plans for Resilience
Integrate Resilience principles into COR plans
Integrate Resilience Planning into CCAP
Comprehensive Community-wide Climate Action Plan
November 2018

Climate Action



Climate Action & Renewable Energy Update

November 20, 2018

Raleigh

Key Questions

1. Raleigh's eligibility to participate in Sierra Club's Ready for 100 campaign

2. Request to discuss the scope and objectives of the upcoming Community Climate Action Plan (CCAP)

Climate Action & Renewables

Background

2007:

Raleigh City Council endorsed the U.S. Conference of Mayors' Climate Protection Agreement

2010:

Raleigh's first GHG emissions inventory (municipal operations only)

2012:

Climate Energy Action Plan for Raleigh's municipal operations

Raleigh's first Community-wide GHG emissions inventory

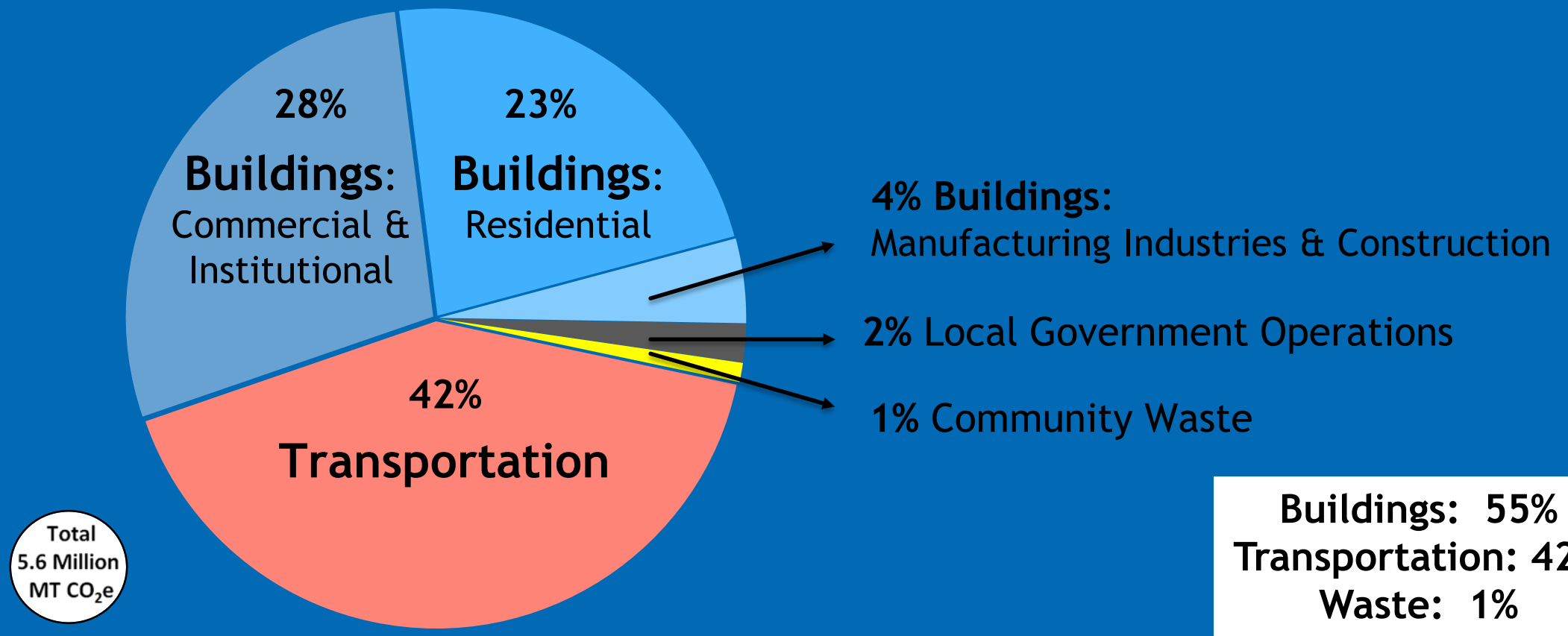
2016:

Renewable Energy Overview with the North Carolina Sustainable Energy Association

Updated Municipal and Community-wide GHG emissions inventories

Climate Action & Renewables

Community Top Sources of GHG Emissions in Raleigh



Buildings: 55%
Transportation: 42%
Waste: 1%

Community-Wide GHG Emissions

Community-wide Climate Action Plan (CCAP) Overview

Objectives:

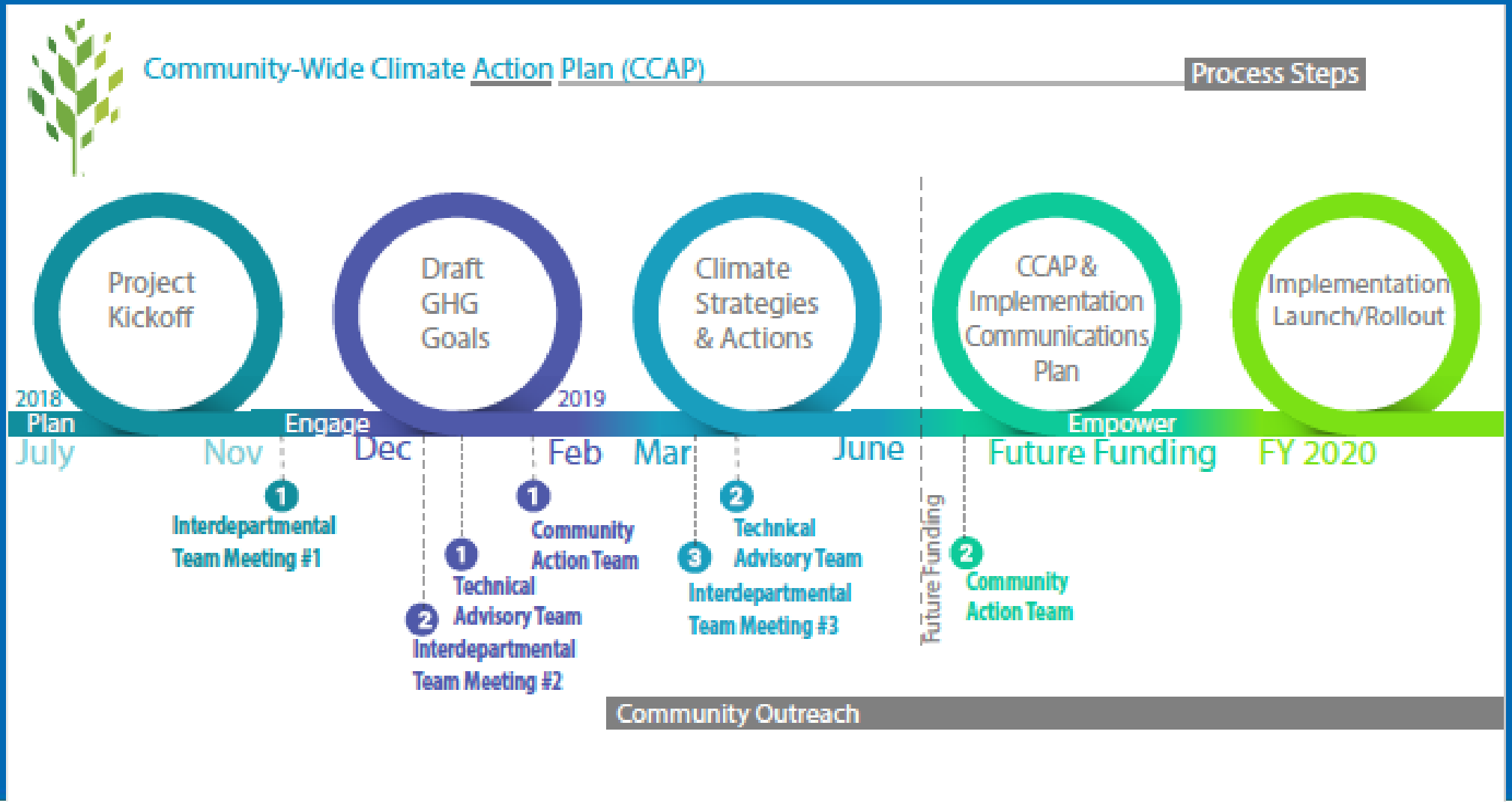
- Evaluate setting goals- climate/GHG emissions, renewable energy, etc.
- Evaluate Renewable Energy
- Robust Community Engagement
- Define Raleigh's climate challenges opportunities
- Forecast future GHG emissions and set goals for reductions
- Apply national best practices in climate action planning
- Engage scientific, business and grassroots community leaders to develop strategies
- Analyze the needs and potential impacts of climate change to vulnerable communities
- Educate, Engage and Empower residents, businesses and institutions to implement positive actions to reduce emissions

CCAP Overview

Community-wide Climate Action Plan Teams

Team	Roles/Responsibilities
Project Team	CORE team; oversee CCAP process; ongoing
Interdepartmental Team	Represent city divisions; share resources, data, goals input; identify cross-program opportunities
Technical Advisors	Key external partners; contribute expertise and input on targets, community goal, & strategies; energy, business development; education, non-profit leaders
Community Action Team	Community stakeholder groups; provide input on community-based strategies; serve as advocates; lead grassroots outreach for CCAP; community, environmental, energy, and non-profit groups

Teams


Community-Wide Climate Action Plan (CCAP)
Process Steps
Project Kickoff
Draft GHG Goals
Climate Strategies & Actions
CCAP & Implementation Communications Plan
Implementation Launch/Rollout
2018
2019
Plan
Engage
Empower
July
Nov
Dec
Feb
Mar
June
Future Funding
FY 2020
1 Interdepartmental Team Meeting #1
1 Technical Advisory Team
2 Interdepartmental Team Meeting #2
1 Community Action Team
3 Interdepartmental Team Meeting #3
2 Technical Advisory Team
Future Funding
2 Community Action Team
Community Outreach

Process

Other Climate Initiatives

Urban Sustainability Directors Network- High Impact Practices study
NC Cities Initiative- governments/stakeholders working on Climate across NC
Department of Environmental Quality
- Executive Order 80
- Stakeholder in CCAP and Electric Vehicle Study
- GHG calculations and future work alignment

Triangle Regional Resilience Assessment – climate and non-climate impacts

Raleigh Climate Initiatives

Fully transition to 100% renewable energy sources to power community electricity by 2050

Renewable energy sources: carbon and pollution-free, include: wind, solar, tidal, geothermal, some biomass, small hydro

Commitment can be integrated into a community's climate/energy plan or through a stand-alone Resolution or Proclamation

Other municipalities have refined the goal to include all energy sectors (electricity, natural gas, propane, fuel) and transportation

100% Renewable Energy

Considerations:

Further analysis may help in evaluating:

- Site feasibility and land availability
- Significant financial, operational and staff resources for the city to consider
- NC regulations, and limited service options available from electric utility
- Sierra Club's definition for renewable energy may not include the city's plans or investments
- In our research, 6 jurisdictions have achieved this goal- they vary from Raleigh with small populations, utility service options, renewable viability, purchasing credits from elsewhere, economic incentive
- Several Cities that have made renewable goals vary in their criteria: target year, community-wide or municipal, energy generation definitions, etc..

100% Renewable Energy

Options

CCAP will likely result in renewable goal and strategy recommendations, but Council could take action in advance. Some options could include:

- Reinforce expectations for staff to set a renewable goal through the CCAP
- Request a Budget Note for the cost of a feasibility study for a 100% renewable (or alternative) goal
- Add an initiative to the City's Strategic Plan for a study to evaluate the feasibility and cost of implementing a 100% Renewable Energy Goal (or alternative)
- Set an aspirational 100% Renewable Energy Goal in conjunction with or independently from the Sierra Club, and later define specific objectives and resourcing

City Council Options