

# Manager's Update

[raleighnc.gov](http://raleighnc.gov)



Issue 2022-05

February 4, 2022

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### **Work Session - Tuesday, February 8 - 4:00 P.M.**

Reminder that Council will meet next **Tuesday** in a scheduled work session at **4:00 P.M.**

The agenda for the work session was posted to the electronic agenda management system Thursday.

**You will be receiving information on joining the WebEx Events session on Monday; staff will be available to assist with log ins and joining the virtual City Council meeting.**

## INFORMATION:

### **Use Class Audit of Utility Accounts**

*Staff Resource: Gregory Jenkins II, Raleigh Water, 996-3475, [gregory.jenkins@raleighnc.gov](mailto:gregory.jenkins@raleighnc.gov)*

Raleigh Water recently completed an audit of the Use Class data for approximately 200,000 utility accounts. A *Use Class* can be defined as “who” (the type of utility customer) is using the water and how they use it, to include consumption. The purpose of the audit was to verify the accuracy of the *Use Class* data within the utility billing system. Audit results will assist staff with the Cost-of-Service Study which includes a potential rate structure change. *Use Class* designations are one of the factors that determine what utility rate accountholders are charged; there are nine different *Use Classes* with specific definitions.

The two-year audit yielded positive results, with a systemwide error rate of just 0.03%. Results showed that 596 accounts were incorrectly designated in the billing system; 533 of those accounts are within the City or the Raleigh Extraterritorial Jurisdiction (ETJ). The impact on utility accounts show that some accounts were either overbilled or underbilled, based on *Use Class*. Overbilled customers will be receiving a credit on their utility account; credit will be based on up to three years of usage. Underbilled customers will not be back billed for any charges. All accounts will be billed accurately moving forward. One example error identified during the audit was a Residential Multi-Family account being mislabeled as a Residential Single-Family account.

Staff will be communicating with impacted customers via letters in February with regard to *Use Class* corrections resulting from the audit process. Future instances of *Use Class* errors will be mitigated as staff works to create and uphold Standard Operating Procedures entailing the routine review of utility accounts and associated *Use Classes*.

*(No attachment)*

### **Termination of Economic Development Agreements – Arch Capital and Ipreo**

*Staff Resources: Evan Raleigh, City Manager's Office, 996-4656, [evan.raleigh@raleighnc.gov](mailto:evan.raleigh@raleighnc.gov)  
Brandon Poole, City Attorney's Office, 996-6560, [brandon.poole@raleighnc.gov](mailto:brandon.poole@raleighnc.gov)*

Staff has received requests from Ipreo and Arch Capital to terminate the Business Investment Grant (BIG) agreements authorized by City Council in May 2018 and August 2018, respectively. Both companies have indicated that they will be unable to meet the job creation requirements necessary to entitle them to grant payments. The State and Wake County have already terminated grant agreements with Arch Capital; Ipreo expects the State to act on its termination request later this month. Pursuant to these requests, instruments will be executed on behalf of the City to formally terminate the agreements.

Given the impacts of the pandemic on expansion and job creation plans, staff anticipates that City Council may receive future requests from other BIG grant recipients to terminate or modify the terms of original grant agreements. Staff will continue to provide Council with updates; any requests such as agreement modifications requiring Council action will be placed on an appropriate agenda for consideration.

*(No attachment)*

### **Weekly Digest of Special Events**

*Staff Resource: Sarah Heinsohn, Special Events Office, 996-2200, [sarah.heinsohn@raleighnc.gov](mailto:sarah.heinsohn@raleighnc.gov)*

Included with the *Update* materials is the special events digest for the upcoming week.

*(Attachment)*

## Council Member Follow Up Items

### General Follow Up Item

#### **Accessory Dwelling Unit Permit Applications**

*Staff Resource: Jonathan Edwards, City Manager's Office, 996-4672, [jonathan.edwards@raleighnc.gov](mailto:jonathan.edwards@raleighnc.gov)*

A recent media report referenced Accessory Dwelling Units (ADU) and construction permits. In follow up to that media report, a council member requested a listing of addresses; included with the *Update* materials is a listing of addresses where an application for an ADU permit has been submitted. Voided permits are not included with this listing.

*(Attachment)*

### Follow Up from the January 4 City Council Meeting

#### **Dix Edge Affordable Housing and RHA Heritage Park Project (Council Member Forte)**

*Staff Resources: Travis Crane, Planning & Development, 996-2656, [travis.crane@raleighnc.gov](mailto:travis.crane@raleighnc.gov)*

*Larry Jarvis, Housing & Neighborhoods, 996-6947, [larry.jarvis@raleighnc.gov](mailto:larry.jarvis@raleighnc.gov)*

During the meeting Council requested additional information regarding housing efforts around the Dix Park Edge area. The Planning & Development Department is conducting the Dix Edge area study. Included with the *Update* materials is a staff memorandum which provides information on the Dix Edge study as well as information related to the Heritage Park property.

In addition to the above, staff has included an "Access Hub" flyer that provides information and guidance for residents in need of housing.

*(Attachment)*

### Follow Up from the January 18 City Council Meeting

#### **Research on Carbon Emissions by Building Type (Council Member Cox)**

*Staff Resource: Jason Hardin, Planning and Development, 996-2657, [jason.hardin@raleighnc.gov](mailto:jason.hardin@raleighnc.gov)*

During the meeting Council requested additional information on the rezoning and area planning staff report section that addresses carbon emissions. Specifically, the question involved the analysis of carbon emissions by building type. Significant research and U.S. government-published data on energy use show that detached houses consume the most energy per unit, followed by townhouses, with missing middle housing and larger apartments the most energy-efficient types.

Included with the *Update* materials is a memorandum which provides additional information and context.

*(Attachments)*

**Board and Commission Events (Council Member Branch)**

*Staff Resource: Tiesha Hinton, Community Engagement Office, 996-2707, [tiesha.hinton@raleighnc.gov](mailto:tiesha.hinton@raleighnc.gov)*

During the meeting staff provided a presentation covering support provided to boards and commission from the Communications Department and the Office of Community Engagement. During discussion Council requested that staff provide a list of official city events. Included with the *Update* materials is a list of large scale, regularly scheduled events as provided by staff liaisons.

*(Attachment)*

## Weekly Events Digest

Friday, February 4 – Thursday, February 10

City of Raleigh Office of Emergency Management and Special Events  
[specialevents@raleighnc.gov](mailto:specialevents@raleighnc.gov) | 919-996-2200 | [raleighnc.gov/special-events-office](http://raleighnc.gov/special-events-office)

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### Permitted Special Events

No permitted special events are scheduled at this time.

### Other Upcoming Events

#### [First Friday Raleigh](#)

Friday, February 4  
Downtown Raleigh

#### [Romeo and Juliet – Carolina Ballet](#)

Friday, February 4 – Sunday, February 20  
Fletcher Opera Theater

#### [Panel Discussion: Public Art Public Memory](#)

Saturday, February 5  
Virtual

#### [NC State vs. Notre Dame](#)

Saturday, February 5  
PNC Arena

#### [The FABBA Show – A Tribute to ABBA](#)

Tuesday, February 8  
Fletcher Opera Theater

#### [Daddy Daughter Date Night Box](#)

Wednesday, February 9  
Laurel Hills Community Center (for box pick-up)

#### [NC State vs. Wake Forest](#)

Wednesday, February 9  
PNC Arena

#### [Imagine Dragons](#)

Thursday, February 10  
PNC Arena

#### [Dancing in the Street: The Music of Motown – North Carolina Symphony](#)

Thursday, February 10 – Saturday, February 12  
Meymandi Concert Hall

### Public Resources

**[Pilot Text Alert Program](#)**: Sometimes spontaneous events happen downtown and in other areas that could affect local businesses. If you'd like to receive notifications when those events happen, including unpermitted ones, sign up for text alerts.

**[Event Feedback Form](#)**: Tell us what you think about Raleigh events! We welcome citizen and participant feedback and encourage you to provide comments or concerns about any events regulated by the Office of Emergency Management and Special Events. We will use this helpful information in future planning.

**[Road Closure and Road Race Map](#)**: A resource providing current information on street closures in Raleigh.

**[Online Events Calendar](#)**: View all currently scheduled events that impact City streets, public plazas, and Dorothea Dix Park.

# Council Member Follow Up

# Applications for ADU Permits by Address

509 N Boundary St 2813202 Raleigh, NC 27604	1012 Parker St 2672943 Raleigh, NC 27607
3536 Brentwood Rd 2655533 Raleigh, NC 27604	1805 Chester Rd 2760623 Raleigh, NC 27608
2111 1/2 St Marys St 5472251 Raleigh, NC 27608	1025 Holmes St 5476315 Raleigh, NC 27601
2320 Derby Dr 2677173 Raleigh, NC 27610	705 Van Buren Rd 2783746 Raleigh, NC 27604
1011 S Person St 2745055 Raleigh, NC 27601	1408 1/2 Glenwood Ave 5478390 Raleigh, NC 27605
115 1/2 Hudson St 5464448 Raleigh, NC 27608	3103 Woods Pl 5487007 Raleigh, NC 27607
422 Camden St 5463407 Raleigh, NC 27601	603 Okelly St 2781547 Raleigh, NC 27607
418 1/2 Fenton St 5465211 Raleigh, NC 27604	608 Rosemont Ave 2783372 Raleigh, NC 27607
600 N King Charles Rd 2724083 Raleigh, NC 27610	308 Furches St 5490781 Unit: REAR 100 Raleigh, NC 27607
5410 Springfield Dr 5465604 Raleigh, NC 27609	3709 Burt Dr 5491276 Unit: REAR 100 Raleigh, NC 27606
2629 St Marys St 2704907 Raleigh, NC 27609	726 Darby St 5491275 Raleigh, NC 27610
201 E Lee St 5467422 Raleigh, NC 27601	202 Ashe Ave 5492047 Raleigh, NC 27605
3609 Marcom St 2751291 Raleigh, NC 27606	1601 Barley Pl 5492508 Raleigh, NC 27615
4517 Drexel Dr 2718878 Raleigh, NC 27609	2809 Grant Ave 5492509 Raleigh, NC 27607
209 1/2 Haywood St 5468557 Raleigh, NC 27601	765 E Whitaker Mill Rd 5494039 Raleigh, NC 27608
314 Seawell Ave 2678462 Raleigh, NC 27601	616 Royal St 2688925 Raleigh, NC 27607
8611 Cold Springs Rd 5470369 Raleigh, NC 27615	3814 Kelford St 5494135 Raleigh, NC 27606
700 Monroe Dr 2688547 Raleigh, NC 27604	4800 Metcalf Dr 2688498 Raleigh, NC 27612
3205 1/2 Clark Ave 5470884 Raleigh, NC 27607	612 Scotland St 5496884 Raleigh, NC 27609
701 Glascock St 2745578 Raleigh, NC 27604	4417 Wingate Dr 5497369 Raleigh, NC 27609
302 1/2 Hill St 5473002 Raleigh, NC 27610	



To	Marchell Adams-David, City Manager
Thru	Patrick O. Young, AICP, Planning and Development
From	Travis R. Crane, Assistant Director, Planning and Development Larry Jarvis, Director, Housing and Neighborhoods
Department	Planning and Development/Housing and Neighborhoods
Date	January 20, 2022
Subject	City Council Follow Up Item/Affordable Housing

During the January 4, 2022 City Council meeting, CM Forte asked for additional information regarding affordable housing issues in District D. This request for additional information was prompted by a story published on January 1, 2022 in the News and Observer [“Raleigh Renters Given One Month to Move Out Ahead of Development Near Dix Park”](#)) that reported on affordable housing adjacent to Dix Park in the “Dix Edge” study area. This memorandum provides background and information on the Dix Edge study, and an update on the Heritage Park property. Additionally, a flyer is attached which directs tenants whose leases are not being renewed or otherwise advised to vacate to a centralized access hub that coordinates with non-profits receiving funds from the City to assist people experiencing a housing crisis.

### **Dix Edge Study**

The Dix Edge study is a city-initiated area plan that examines the impact of growing demand in the area related to implementation of the Dix Park Master Plan, implementation of Bus Rapid Transit (BRT), and the sustained growth of the city on the surrounding area; specifically, to the south at the Lake Wheeler Road edge, including South Saunders Street north of I-40. This area planning effort is in the drafting phase (known as “Phase Later”) where issues such as affordable housing, land use and transportation improvements are being examined after a robust public process. Ultimately, a final report and associated Comprehensive Plan amendments will be delivered to the City Council in the spring of 2022.

The study area includes residential neighborhoods of Caraleigh, Fuller Heights, Wheeler Crossing, Carolina Pines, Wheeler Park, Walnut Terrace and Gateway Park. Planning and Development is the lead department for this effort, with support from Raleigh Department of Transportation, Housing and Neighborhoods, Parks, Recreation, and Cultural Resources, and Raleigh Stormwater. One of the primary points of focus in the draft plan is how to mitigate gentrification and displacement of existing residents. The most effective way the City can influence this outcome is through property ownership in the area. While the City does not own a large amount of property in the study area, there are two city-owned parcels that have been identified as candidates for affordable housing.

The City owns the property located at 1500 Fayetteville Street, which is almost 42 acres in size. The city also owns 15 Summit Avenue, which is approximately 0.66 acres. The Fayetteville Street parcel

represents a significant opportunity for affordable housing, even with the presence of floodplain and some topographic challenges. The Summit Avenue property, while much smaller in size, could be rezoned for small-scale multi-family.

The Draft Plan does include data and strategies to inform to ultimate goal of housing retention and creation of additional units. The Plan:

- Identifies the breakdown of renter versus owner-occupied units in the study area.
- Identifies the demand for affordable housing (based on different thresholds of area median income) in the study area.
- Pursues partnerships with local developers/builders who wish to construct affordable housing units.
- Increases awareness / educate residents on displacement pressures.
- Pursues opportunities for new affordable housing units.
- Directs affordable housing funds to higher-intensity locations (such as areas served by Bus Rapid Transit).
- Provides rezoning and land use guidance for future development

### **Heritage Park Property**

This property is located at the southeast corner of South Street and South Saunders Street and is owned by the Raleigh Housing Authority. The property contains 122 dwelling units, ranging from 1 to 5 bedrooms in two story buildings. Located to the north and east of Dix Park, the property was developed in 1975. Redevelopment of the site is planned and RHA has hired consultants to assist with communications and community engagement during the development of the master plan. RHA is currently working through the selection process to bring on a co-developer for Heritage Park which they anticipate to be completed in February. Once they have finalized the developer selection, RHA will initiate the public process which will include substantial resident and community engagement, including City Council and City staff. To date, there is no development plan application or rezoning petition filed for this property.

### **- Redevelopment at Dix Edge**

The News and Observer article from January 1, 2022 identified a pending \$600 million dollar project as the impetus behind the residential evictions. One of the addresses cited (1215 Lake Wheeler Road) was included in a larger rezoning that was recently approved. This rezoning request ([Z-60-20](#)) changed the zoning from Residential-6 (R-6) and Industrial Mixed Use-3 stories (IX-3) to Commercial Mixed Use-20 stories-Urban Limited-Conditional Use CX-20-UL conditional use. The new zoning designation will permit up to 20 stories of mixed-use development on the south side of Lake Wheeler Road. This property is directly to the west of another recent rezoning, which is located between South Saunders and Dawson/McDowell. This property was rezoned in 2019 from Residential Mixed Use-3 stories (RX-3) and Industrial Mixed Use-3 stories (IX-3) to Planned Development ([Z-32-18/MP-3-18](#)) and permits 20 story mixed use development. The first phase of this project, called Park City South, has received administrative approval. Phase 1-A of Park City South comprises an 11-story building with 16,800 square feet of retail and office use and 336 residential units and improvements to the adjacent greenway.

Two other rezoning requests were approved in 2021. Rezoning [Z-55-20 Lake Wheeler and Batts](#) rezoned 4.75 acres from Residential-4 (RX-4) and Residential Mixed Use-3 stories (RX-3) to Neighborhood Mixed

Use-3 stories-Conditional Use. Rezoning [Z-23-21 Kirkland Road](#) rezoned 1.5 acres from Residential-4 (R-4) to Industrial Mixed Use-3 stories-Conditional Use (IX-3-CU).

There is currently one active zoning case in the Dix Edge study area. Rezoning case Z-72-21/Lake Wheeler, is a request to rezone nearly 18 acres of land near Lake Wheeler, Daladams, Moring Mercury and Maywood from Residential-6 (R-6) and Industrial Mixed Use-3 stories (IX-3) to Commercial Mixed Use-20 stories-Urban Limited-Conditional Use (CX-20-UL-CU). This request is currently under staff review and will not proceed through the rezoning process until a Traffic Impact Analysis is submitted, reviewed, and approved by Transportation Staff. A second neighborhood meeting is also required to advance the request through the rezoning process.

# Is Your Lease Ending? Have You Received a Notice to Move?

The Access Hub can help.

State law allows landlords to not renew leases or to provide tenants without leases a notice to move out by a specified date. What happens if your lease is ending, but you haven't secured a new place to live?

The City of Raleigh provides funding to local nonprofit organizations that provide services for people that are experiencing a housing crisis or facing homelessness.

In partnership with Wake County, resources are available through the Access Hub. The Access Hub is a helpline that can point you in the right direction.

## About the Access Hub

When you contact the Access Hub, a trained specialist will collect information about your situation and refer you to a local program that may be able to help. The Access Hub will determine eligibility for a referral to the following programs:

- Emergency Shelter
- Street Outreach
- Financial assistance programs to prevent homelessness

## Access Hub CAN:

- Provide friendly and compassionate service
- Assess your needs
- Assist in coming up with creative solutions
- Assist in figuring out what resources are available to you
- Provide referrals to shelters, street outreach projects, or prevention programs, if necessary
- Eliminate the need to constantly call shelters for bed space



## Access Hub CAN NOT:

- Provide financial assistance
- Provide immediate shelter (referrals may be placed on a waitlist)
- Provide hotel vouchers
- Provide housing vouchers or low income housing
- Determine or guarantee eligibility of community resources
- Provide transportation or bus passes
- Act as landlords, housing providers, or housing navigators/locators

## Access Hub

Monday-Friday

8:00 a.m. – 5:00 p.m.

(919) 443-0096

1430 S Wilmington St, Raleigh, NC 27603

[AH@partnershipwake.org](mailto:AH@partnershipwake.org)

[www.partnershipwake.org/access-hub](http://www.partnershipwake.org/access-hub)

*Spanish Speaking Specialists available!*

To	Marchell Adams-David, City Manager
Thru	Patrick O. Young, AICP, Director
From	Jason Hardin, Senior Planner
Department	Planning and Development
Date	January 25, 2022
Subject	City Council information request on carbon emissions

**Z-53-21 Tryon Road**, approximately 10.57 acres located at [2300 and 2310 Tryon Road](#).

At its meeting on January 18, 2022, Council requested additional information on the rezoning and area planning staff report section that addresses carbon emissions. Specifically, the question involved the analysis of carbon emissions by building type. This memo provides that information and additional context.

Staff began including analysis of carbon emissions in rezoning and area plan staff reports in 2019, following Council's establishment of a goal of reducing emissions by 80 percent by 2050. Because emissions are highly tied to land use, reaching that goal requires close consideration of local land use decisions.

At a broader scale, this relationship can easily be seen in a comparison of per capita [emissions by country](#). The United States produces far more carbon than other countries with similar climates and levels of development. While electricity and fuel sources affect that metric, the auto-dependent and spread out development pattern typical in the United States since World War II is a major factor. Similar European countries produce anywhere between two-thirds to half or less amounts of carbon emissions as does the United States.

Significant research exists to demonstrate the relationship at a local level as well, both in terms of carbon emissions by housing type and the link between land use decisions and transportation-related emissions. Staff reports address this relationship in two ways. First, staff reports use the publicly available Walk Score (and Transit Score) calculator. The scores are used as a means of assessing the carbon impacts related to transportation. Locations with a high walk score mean that destinations (residences, workplaces, shopping, schools, parks) are nearby. In addition to making walking viable, this also means vehicular trips on average are shorter than locations with a low walk score. Making it legal for more people to live or work in a location with a high walk score, then, results in decreased per capita carbon emissions. On a broader level, because Raleigh's walk score, and especially transit score, are higher than nearby municipalities, a similar result applies at a regional scale.

The relationship between housing type and carbon emissions may be less immediately obvious, but significant amounts of federally-published and independent research has shown the connection.

The relationship can be seen in the table below, published by the U.S. Department of Energy as part of its [survey of residential energy use](#).

Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015

	Number of housing units (million)	Total site energy consumption <sup>1</sup> (trillion Btu)						Average site energy consumption <sup>1</sup> (million Btu per household using the end use)						
		Total South <sup>2</sup>	Total	Space heating <sup>3</sup>	Water heating	Air conditioning	Refriger- ators	Other <sup>4</sup>	Total	Space heating <sup>3</sup>	Water heating	Air conditioning	Refriger- ators	Other <sup>4</sup>
All homes	44.4	3,064	949	562	479	117	957	68.9	22.7	12.7	11.3	2.7	21.5	
Housing unit type														
Single-family detached	28.7	2,373	785	389	385	87	727	82.7	28.5	13.6	14.1	3.1	25.3	
Single-family attached	2.3	129	42	27	19	5	36	56.5	19.7	11.6	8.6	2.3	15.9	
Apartments in buildings with 2–4 units	2.4	101	26	25	13	4	33	42.1	12.4	10.5	6.0	1.7	13.6	
Apartments in buildings with 5 or more units	7.2	244	42	72	32	12	86	34.0	6.7	10.0	4.6	1.7	12.0	
Mobile homes	3.9	216	53	49	30	9	75	55.6	14.9	12.7	8.4	2.2	19.3	

The box outlined in green shows the average per unit energy use in the South by housing type. Single-family detached houses consume the most, followed by single-family attached (what Raleigh’s code calls townhouses), missing middle-style small apartments, with larger apartments using the least energy per unit. The differences are significant, with detached houses consuming nearly 50 percent more energy than townhouses and nearly two and a half times more than units in larger apartments.

The reason for those differences is straightforward. Detached houses are much larger on average than the other housing types. They also have more surfaces exposed to the elements. Detached houses are open on all sides to the air, while townhouses share walls, and apartments share, potentially, walls, ceilings, and floors.

This research has been duplicated by a number of studies, including [“Life-cycle energy implications of different residential settings: Recognizing buildings, travel, and public infrastructure,”](#) [“Location Efficiency and Housing Type: Boiling it Down to BTUs,”](#) and [“Apartments in buildings with 5 or more units use less energy than other home types,”](#) and [“Households and the Environment: Energy Use.”](#) One study, [“Life-Cycle Energy Implications of Downtown High-Rise vs. Suburban Low-Rise Living: An Overview and Quantitative Case Study for Chicago,”](#) found a contrary result. However, it compared a rail-transit served suburb with a relatively tall (10 story) building with eight units per floor, an unusual and less energy-efficient form that is not common in Raleigh or elsewhere. In the final analysis, staff relied on the findings of the U.S. Department of Energy, which also make logical sense given the differences in exposure and units size noted above.

While the challenge of addressing climate change is daunting, an optimistic note may be found in the fact that local governments have significant ability to address the issue. Indeed, many of

the core contributors to climate change – transportation- and building-related emissions (see graphic on following page) – are largely or entirely within the control of local government. Simply legalizing more energy-efficient buildings in more places and removing barriers to allowing people to live and work in places where walking and transit use is more likely and car trips are shorter will make significant contributions to carbon reduction. Raleigh’s inclusion of these factors in local decisions has made it a leader in this area, with other local governments reaching out to learn from the city’s approach. As urgency grows around the issue, staff will continue to explore ways to minimize the city’s carbon footprint in order to meet Council’s goal of significant reductions by 2050.

Attachments:

U.S. Department of Energy data on energy use by building type  
2019 staff memo

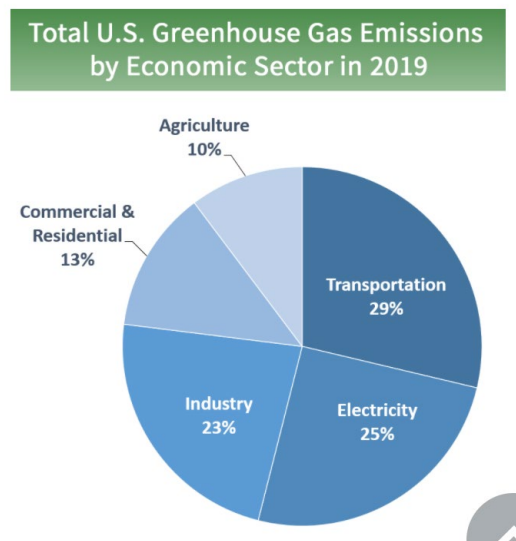


Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015

	Number of housing units (million)	Total site energy consumption <sup>1</sup> (trillion Btu)						Average site energy consumption <sup>1</sup> (million Btu per household using the end use)					
		Total South <sup>2</sup>	Total	Space heating <sup>3</sup>	Water heating	Air conditioning	Refrigerators	Other <sup>4</sup>	Total	Space heating <sup>3</sup>	Water heating	Air conditioning	Refrigerators
All homes	44.4	3,064	949	562	479	117	957	68.9	22.7	12.7	11.3	2.7	21.5
Census division													
South Atlantic	23.5	1,584	497	294	238	61	494	67.5	23.2	12.5	10.7	2.6	21.1
East South Central	7.2	498	168	96	61	18	156	69.2	23.6	13.3	9.0	2.5	21.7
West South Central	13.8	981	284	173	179	38	307	71.3	21.6	12.5	13.7	2.8	22.3
Census urban/rural classification <sup>5</sup>													
Urban	33.4	2,267	689	420	370	85	702	67.8	22.1	12.6	11.7	2.6	21.0
Urbanized area	28.1	1,930	569	357	326	73	605	68.8	22.0	12.7	12.2	2.6	21.6
Urban cluster	5.4	336	121	63	44	12	97	62.9	22.7	11.7	8.9	2.4	18.1
Rural	11.0	797	260	142	109	31	255	72.3	24.5	12.9	10.4	2.9	23.1
Metropolitan or micropolitan statistical area													
In metropolitan statistical area	34.7	2,391	711	438	395	93	755	68.9	22.0	12.6	12.0	2.7	21.7
In micropolitan statistical area	6.3	432	164	79	48	15	127	68.6	26.1	12.5	8.0	2.5	20.2
Not in metropolitan or micropolitan statistical area	3.4	240	75	45	36	9	76	69.9	23.1	13.2	10.8	2.6	22.0
Climate region <sup>6</sup>													
Very cold/Cold	Q	Q	Q	Q	Q	Q	Q	92.0	42.9	16.3	3.8	2.3	26.6
Mixed-humid	21.3	1,636	641	304	155	55	481	77.0	30.5	14.3	7.7	2.6	22.6
Mixed-dry/Hot-dry	N	N	N	N	N	N	N	N	N	N	N	N	N
Hot-humid	22.4	1,352	273	245	321	59	454	60.5	13.7	10.9	15.1	2.7	20.3
Marine	N	N	N	N	N	N	N	N	N	N	N	N	N

U.S. Energy Information Administration  
2015 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables

Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015

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Single-family attached	2.3	129	42	27	19	5	36	56.5	19.7	11.6	8.6	2.3	15.9	
Apartments in buildings with 2–4 units	2.4	101	26	25	13	4	33	42.1	12.4	10.5	6.0	1.7	13.6	
Apartments in buildings with 5 or more units	7.2	244	42	72	32	12	86	34.0	6.7	10.0	4.6	1.7	12.0	
Mobile homes	3.9	216	53	49	30	9	75	55.6	14.9	12.7	8.4	2.2	19.3	
Ownership of housing unit														
Owned	28.5	2,295	748	378	369	86	713	80.6	27.7	13.3	13.5	3.0	25.1	
Single-family	24.8	2,099	705	336	339	77	641	84.8	29.6	13.6	14.2	3.1	25.9	
Apartments	0.8	33	5	7	6	2	14	39.4	8.2	8.2	7.0	2.3	16.3	
Mobile homes	2.9	163	38	35	24	7	58	56.5	14.9	12.2	8.7	2.3	20.2	
Rented <sup>2</sup>	16.0	769	201	184	109	31	244	48.1	13.6	11.5	7.4	2.0	15.3	
Single-family	6.2	403	122	79	64	15	122	64.8	20.9	12.8	11.2	2.4	19.6	
Apartments	8.7	312	64	90	39	14	105	35.7	8.1	10.3	4.8	1.6	12.0	
Mobile homes	1.0	53	14	14	6	2	17	53.3	15.1	14.2	7.4	2.0	16.6	

U.S. Energy Information Administration  
2015 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables



Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015

	Number of housing units (million)	Total site energy consumption <sup>1</sup> (trillion Btu)						Average site energy consumption <sup>1</sup> (million Btu per household using the end use)						
		Total South <sup>2</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>
All homes	44.4	3,064	949	562	479	117	957	68.9	22.7	12.7	11.3	2.7	21.5	
Year of construction														
Before 1950	3.9	299	134	49	38	8	69	76.8	35.5	12.7	10.6	2.2	17.7	
1950 to 1959	3.6	259	94	44	45	9	68	71.2	27.3	12.2	12.5	2.4	18.6	
1960 to 1969	4.5	308	105	51	56	11	85	68.8	24.9	11.4	13.4	2.5	19.0	
1970 to 1979	7.2	470	157	88	72	18	135	65.4	23.1	12.2	10.5	2.6	18.7	
1980 to 1989	7.3	473	128	85	76	20	164	64.5	19.0	11.6	11.3	2.8	22.3	
1990 to 1999	7.7	538	154	105	81	21	177	69.7	21.5	13.6	11.2	2.7	22.9	
2000 to 2009	8.2	585	142	111	92	24	215	71.6	18.5	13.7	11.5	3.0	26.4	
2010 to 2015	2.0	132	35	29	19	5	44	65.2	18.4	14.1	9.8	2.5	21.9	
Total square footage <sup>8</sup>														
Fewer than 1,000	8.5	340	74	92	48	15	111	39.8	9.6	10.8	6.1	1.8	13.0	
1,000 to 1,499	12.2	670	169	147	105	27	222	54.8	15.1	12.0	9.1	2.2	18.1	
1,500 to 1,999	8.2	573	185	101	101	23	162	69.5	24.1	12.3	12.9	2.9	19.6	
2,000 to 2,499	4.9	391	129	66	62	14	119	79.8	27.4	13.6	13.4	2.9	24.3	
2,500 to 2,999	3.3	307	113	45	47	11	92	93.7	34.6	13.8	14.8	3.3	28.0	
3,000 or greater	7.3	783	278	110	115	27	252	107.8	38.9	15.2	16.3	3.8	34.7	
Number of household members														
1 member	10.9	526	193	66	88	23	156	48.3	19.3	6.1	8.6	2.2	14.3	
2 members	15.9	1,074	344	167	180	44	340	67.3	22.8	10.5	11.8	2.8	21.3	
3 members	7.5	572	174	118	88	21	172	76.8	24.9	15.8	12.2	2.8	23.1	
4 members	6.0	526	143	119	74	17	173	87.3	24.9	19.7	12.9	2.9	28.7	
5 members	2.7	237	62	59	34	7	75	87.5	24.4	22.0	13.3	2.7	27.5	
6 or more members	1.4	128	33	33	16	4	42	90.3	24.1	23.5	12.2	3.0	29.2	

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Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015

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		Total South <sup>2</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>
All homes	44.4	3,064	949	562	479	117	957	68.9	22.7	12.7	11.3	2.7	21.5	
2015 annual household income														
Less than \$20,000	9.1	469	143	104	69	18	134	51.4	16.7	11.5	8.4	2.0	14.7	
\$20,000 to \$39,999	11.1	651	198	127	99	27	200	58.6	19.6	11.4	9.7	2.4	18.0	
\$40,000 to \$59,999	7.7	521	165	97	85	19	154	67.7	22.8	12.6	11.4	2.5	20.0	
\$60,000 to \$79,999	5.0	341	99	64	56	13	109	68.6	20.9	12.9	11.5	2.8	21.9	
\$80,000 to \$99,999	3.3	256	77	43	46	10	80	76.8	25.0	13.0	13.7	3.0	23.9	
\$100,000 to \$119,999	2.6	215	68	37	36	9	66	81.3	26.7	13.9	13.8	3.2	24.8	
\$120,000 to \$139,999	1.7	159	49	25	27	6	53	92.9	29.2	14.5	15.9	3.4	30.7	
\$140,000 or more	3.9	452	149	65	61	15	162	116.8	39.5	16.8	16.1	3.9	41.9	
Payment method for energy bills														
All paid by household	41.8	2,953	918	533	463	112	927	70.7	23.5	12.8	11.7	2.7	22.2	
Some paid by household, some included in rent or condo fee	0.8	37	12	8	6	2	10	45.0	14.2	9.9	6.9	2.0	12.3	
All included in rent or condo fee	1.5	56	15	16	7	2	16	38.0	10.7	10.8	5.0	1.7	10.5	
Some other method	0.4	17	4	5	2	1	5	47.1	11.5	14.5	6.8	1.6	13.0	
Main heating fuel														
Natural gas	13.7	1,318	510	216	181	40	371	96.3	37.3	15.8	13.7	3.0	27.1	
Electricity	24.9	1,354	315	277	234	62	466	54.5	12.7	11.2	9.9	2.5	18.7	
Fuel oil/kerosene	0.8	82	46	11	6	2	17	99.4	55.5	13.5	8.0	2.5	20.1	
Propane	1.9	173	71	26	17	6	53	93.0	38.3	13.8	9.4	3.1	28.7	

U.S. Energy Information Administration  
2015 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables

**Table CE3.4 Annual household site end-use consumption in the South—totals and averages, 2015**

	Number of housing units (million)	Total site energy consumption <sup>1</sup> (trillion Btu)						Average site energy consumption <sup>1</sup> (million Btu per household using the end use)						
		Total South <sup>2</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>	Total	Space heating <sup>3</sup>	Water heating	Air condi- tioning	Refrig- erators	Other <sup>4</sup>
All homes	44.4	3,064	949	562	479	117	957	68.9	22.7	12.7	11.3	2.7	21.5	

<sup>1</sup>Consumption and expenditures for biomass (wood), coal, district steam, and solar thermal are excluded. Electricity consumption from on-site solar photovoltaic generation (i.e., solar panels) is included.

<sup>2</sup>Total South includes all primary occupied housing units in the South Census Region. Vacant housing units, seasonal units, second homes, military houses, and group quarters are excluded.

<sup>3</sup>Includes main (primary) and secondary space heating.

<sup>4</sup>Includes end uses not shown in this table. A more detailed breakout of end uses is shown in the Series 5 tables.

<sup>5</sup>Housing units are classified using criteria created by the U.S. Census Bureau based on 2010 Census data. Urbanized areas are densely settled groupings of blocks or tracts with 50,000 or more people. Urban clusters have at least 2,500 but less than 50,000 people. All other areas are rural.

<sup>6</sup>These climate regions were created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE).

<sup>7</sup>Rented includes households that occupy their primary housing units without paying rent.

<sup>8</sup>Total square footage includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage for some housing units was calculated based on measurements taken by the interviewer. For households responding without the presence of an interviewer, square footage was imputed based on characteristics of the housing unit. See 2015 RECS Square Footage Methodology for full details about data collection and processing.

Q = Data withheld because either the Relative Standard Error (RSE) was greater than 50% or fewer than 10 cases responded.

N = No cases responded.

Notes: Because of rounding, data may not sum to totals. See RECS Terminology for definition of terms used in these tables.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, C, D, E, F, G of the 2015 Residential Energy Consumption Survey.

U.S. Energy Information Administration  
2015 Residential Energy Consumption Survey: Energy Consumption and Expenditures Tables



TO: Ruffin L Hall, City Manager  
FROM: Jason Hardin, AICP and Ken Bowers, AICP  
DEPARTMENT: City Planning  
DATE: June 24, 2019  
SUBJECT: Climate Change and Affordability in Planning Staff Reports

To better capture the impact of planning decisions, the Department of City Planning is adding a new section to its rezoning and Comprehensive Plan amendment staff reports that will provide objective analysis of sustainability- and affordability-related issues. The new section will, to the extent possible, analyze the impact of a proposed rezoning or plan amendment with respect to climate change – carbon and other greenhouse gas emissions – and housing affordability.

The change will assist City Council in making decisions that address these critical community issues and help meet the city's goal of an 80 percent reduction in greenhouse gases by 2050. It will also make Raleigh a leader nationally in terms of embedding sustainability into its routine decision-making processes.

#### Background

The Department of City Planning routinely produces staff reports that analyze rezoning requests, proposed Comprehensive Plan amendments, and other planning-related questions. These reports typically contain both policy analysis and impact analysis. The policy analysis considers whether a rezoning or plan amendment is consistent with the city's goals as expressed in the Comprehensive Plan. The impact analysis considers questions such as whether a rezoning would add additional vehicle trips, whether the property is in a floodplain, and similar objective data.

The theme of sustainability is woven throughout the Comprehensive Plan and is addressed by numerous policies. However, while impact section of staff reports contains specific estimates of metrics such as wastewater demand, has not directly focused on carbon emissions or other similar sustainability metrics. That meant that analysis of consistency with specific policies such as Environmental Protection 1.1 Greenhouse Gas Reduction, Land Use 4.4 Reducing VMT Through Mixed Use, or Housing 1.8 Zoning for Housing was difficult or clearly based on objective measures. This addition to the staff reports addresses this information gap.

#### Methodology

Staff explored various methods for capturing carbon emissions and affordability. Because rezoning proposals typically somewhat general in nature, often permitting different uses, building types, price points, and other variables, precise measurements are not possible or would be vulnerable to challenge. However, relatively simple yes/no or more/less evaluations are quite feasible and defensible.

For instance, with respect to transportation – the category responsible for the largest share of carbon emissions – development that produces fewer and shorter vehicle trips per resident, employee, customer, or visitor produces less carbon. Additionally, it is clear that travel patterns vary by area. In downtown, for instance,

trips are more likely to be made on foot or transit than in areas where uses are separated by greater distances and transit is infrequent or not present. The same is true for other walkable centers and neighborhoods with a mix of uses, short block lengths, a connected grid, and similar features. In these areas, vehicle trips will be fewer and shorter than in less walkable areas.

However, estimating *exact* mode shares and trip lengths for a given area or zoning category is difficult. Variables include the location, street infrastructure, building or housing type, and more. Instead of providing a precise estimate, then, the staff report contrasts the area in question to the city as a whole, a comparison that can be made with much more confidence. In other sections of the report, similar methods are used. They are briefly described below.

#### Transportation

The analysis uses Walk Score, a publicly available service that measures pedestrian friendliness by analyzing population density and road metrics such as block length and intersection density. The service has been used by other municipal governments for planning purposes. The report uses Walk Score to assess walkability and transit service for a given location and to compare that with the average for the city as a whole. Development in an area with a higher walk or transit score than the city's average, then, will decrease the city's carbon emissions on a per capita basis.

#### Building Efficiency

This section uses data from the U.S. Department of Energy that captures annual energy use by housing type. Because units that share walls are more energy-efficient than other buildings, this analysis proves a means of considering the carbon footprint of housing types included or excluded in any particular rezoning proposal or plan amendment.

#### Other Sustainability Metrics

The report includes a more open-ended section intended to capture any other carbon-related impacts of a rezoning or plan amendment. These could include, for instance, whether a rezoning includes a condition that specifies the adaptive reuse of existing buildings or that provides bikeshare memberships or transit passes to residents.

#### Affordability

This section includes a summary of the impact of a rezoning proposal or plan amendment on various housing metrics. It notes whether a proposal adds or subtracts from the housing supply, whether it includes any subsidized units, and other yes/no measurements.

#### Using the New Section

The city has long been a leader in addressing sustainability in city facilities and fleets through a focus on energy-efficient buildings, electric vehicles, and more. However, carbon emission from the private sector are many times larger than those from the public sector. Because city decisions about planning and zoning already are directly correlated with private sector emissions, the new section simply provides more information about those impacts when decisions are made.

The new section will not determine whether a particular rezoning request or plan amendment is consistent with the Comprehensive Plan overall. However, it can provide additional support for why a particular request is or is not consistent with a specific policy, and it can bring currently little-used policies into the analysis by providing a clearer and less subjective rationale for their application.

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1 Exchange Plaza, Suite 1020  
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City of Raleigh  
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North Carolina 27602-0590  
(Mailing Address)

## **Board & Commission Events**

### **January**

Human Relations Commission- National Day of Healing

Stormwater Management Advisory Commission- Art Contest Registration Opens

### **February**

Human Relations Commission- Mayor's Unity Day

Human Relations Commission- Awards Banquet

Stormwater Management Advisory Commission- Art Contest Registration Closes (a part of Environmental Awards)

Stormwater Management Advisory Commission- Rain Garden/Rain Barrell Workshop

### **March**

Stormwater Management Advisory Commission- Stormwater Cleanup & Medicine Drop Off at Chavis Park

Stormwater Management Advisory Commission- Stormwater Stream Monitoring Workshop

### **April**

Fair Housing Board- Fair Housing Conference

Environmental Advisory Board- Environmental Awards (Stormwater Art Contest Winner Announcement/Celebration)

Substance Use Advisory Commission- Medicine Drop Off #1

### **May**

Parks, Recreation, & Greenway Advisory Board- Fred Fletcher Awards

### **June**

### **July**

### **August**

### **September**

Stormwater Management Advisory Commission- Fall Rain Garden/ Rain Barrell Workshop

### **October**

Arts Commission- Medal of Arts

Mayor's Committee for Person's with Disabilities- Award Ceremony

Substance Use Advisory Commission- Medicine Drop off #2

### **November**

### **December**