



CHARLOTTESVILLE
Acting on Climate Together

Climate Action Update

July 7, 2025

Agenda

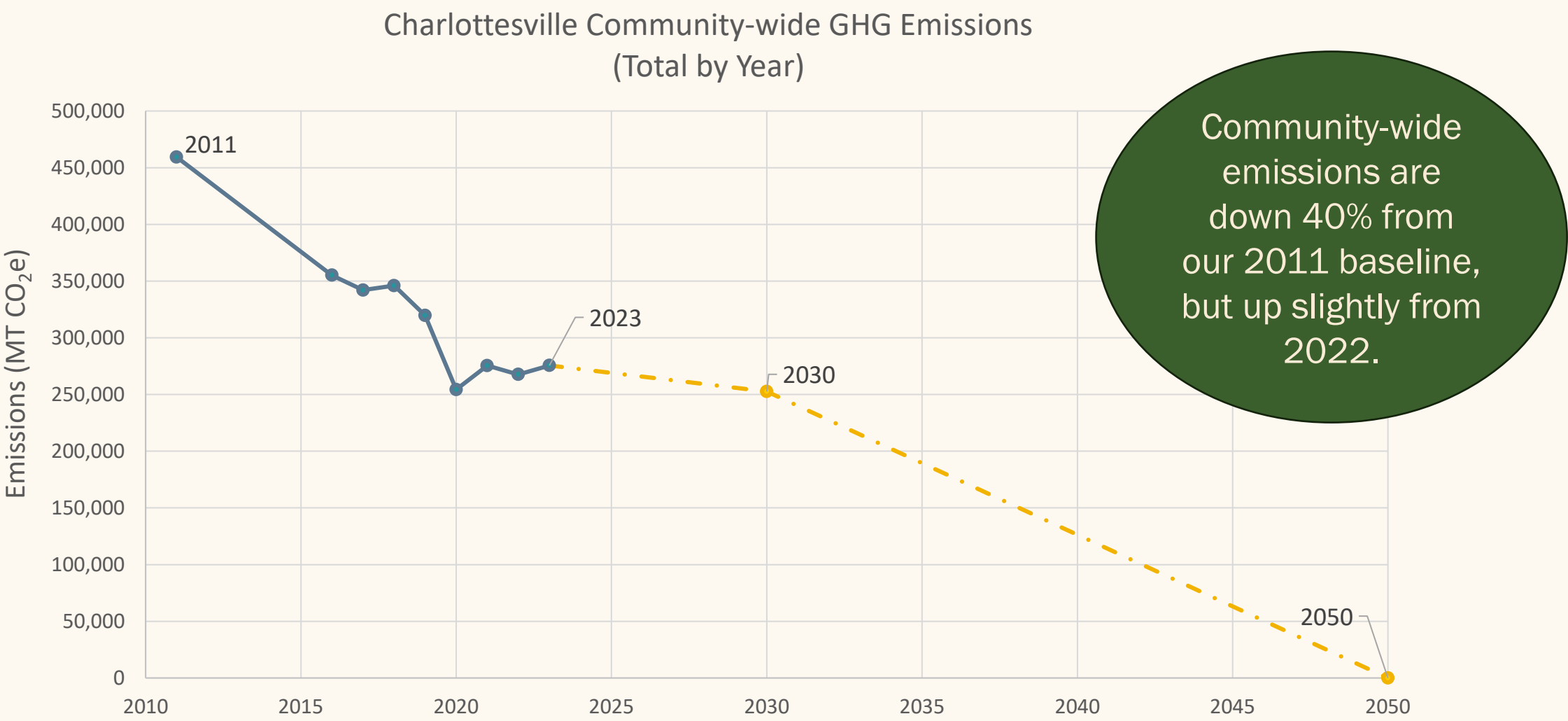
- Introduction
- GHG Inventory Update
- Resilient Together
- Climate Action Update
- FY25: Looking Forward
- Questions



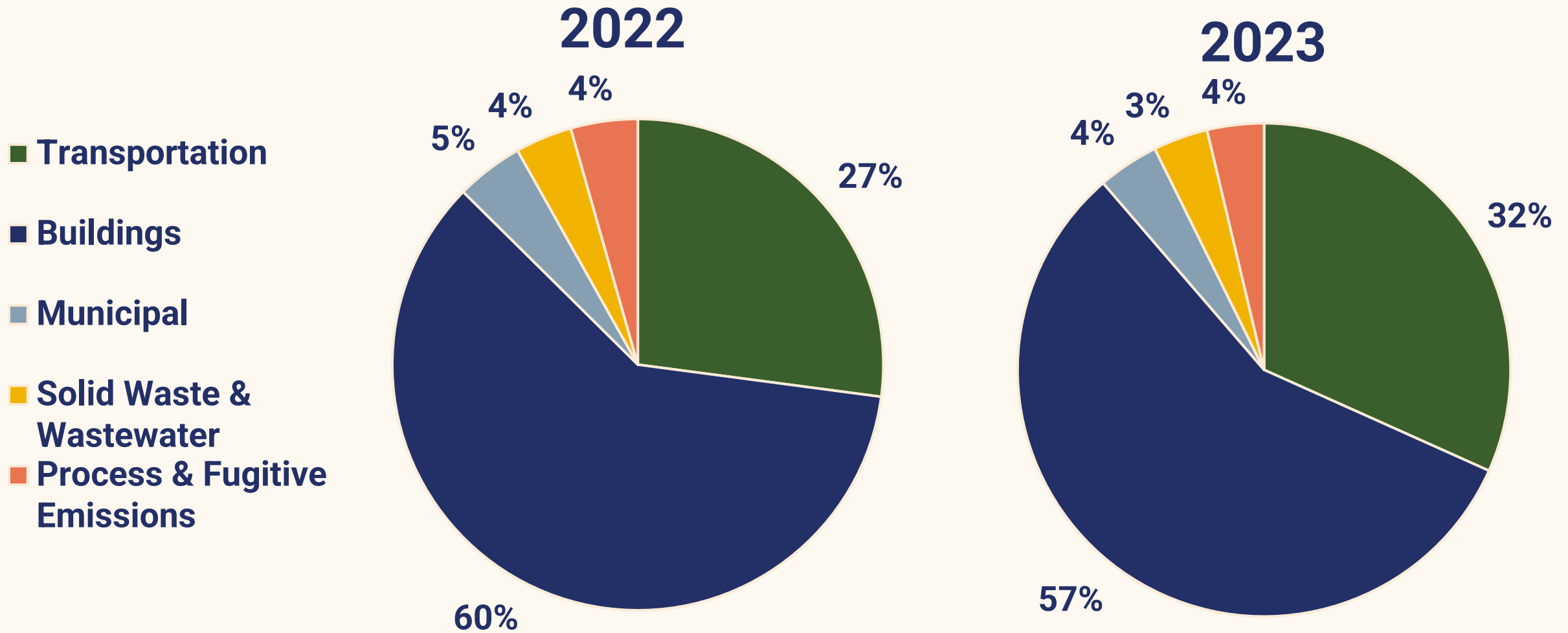


GHG Inventory Update

Updated GHG Inventory – 2023 Emissions Data



Source Comparison – 2022 to 2023



Community-wide Inventories

Sector	CO ₂ e (MT)								2023
	2011	2016	2017	2018	2019	2020	2021	2022	
Transportation & Mobile Sources	128,835	92,648	92,218	90,938	91,205	73,995	74,183	75,874	90,902
Solid Waste	24,694	16,302	16,687	16,721	16,425	5,509	9,066	10,289	9,870
Water & Wastewater	-	271	271	271	271	196	286	196	196
Commercial Energy *	170,003	123,838	118,810	115,046	101,688	80,820	89,583	88,804	83,689
Industrial Energy	372	195	190	208	200	197	237	180	165
Residential Energy	135,405	108,393	100,986	107,699	96,389	82,891	89,475	79,962	79,680
Process & Fugitive Emissions	-	13,556	12,857	15,078	13,555	10,753	12,583	12,343	11,550
Total	459,309	355,203	342,019	345,961	319,733	254,361	275,413	267,648	276,052
% change from 2011		-23%	-26%	-25%	-30%	-45%	-40%	-42%	-40%

* The Commercial Energy Sector includes Municipal and Non-Municipal Government energy consumption

Municipal Inventories

Sector	CO ₂ e (MT)								2023
	2011	2016	2017	2018	2019	2020	2021	2022	
Buildings & Facilities **	11,430	8,702	8,746	8,436	7,711	5,631	6,422	6,833	6,253
Street Lights & Traffic Signals	2,001	1,301	1,211	1,108	987	892	929	921	862
Vehicle Fleet	6,015	6,030	6,031	5,769	5,374	4,952	4,803	4,681	4,394
Total	19,446	16,033	15,988	15,313	14,072	11,475	12,154	12,435	11,509
% change from 2011		-18%	-18%	-21%	-28%	-41%	-37%	-36%	-41%

** Includes City Government and City School Buildings and Facilities

Inventory Takeaways

- **Community emissions are up from the last inventory by 2%**
 - Continued decline in emissions from buildings by 3%
 - Increase in emissions from transportation by 20%
 - VMT is up to 99% of 2019 levels
- **Municipal emissions are down 41% since 2011 baseline**
 - Municipal emissions are down ~7.5% from 2022
- **“Grid-greening” continues to be a major influence**
 - On a per-kWh basis, emissions from electricity have declined 45% since 2011
 - Emissions intensity of electricity is down over 7% from 2022



Reporting

- Global Covenant of Mayor's Commitment
- Annual reporting through CDP
- 2024 CDP score: A-
- 2023 CDP score: A-
- 2022 CDP score: B
- 2021 CDP score: C



CHARLOTTESVILLE, VA



MITIGATION

Inventory

Target

Plan



ADAPTATION

Assessment

Goal

Plan



ENERGY

Assessment

Goal

Plan



COMPLIANCE

CITIES EARN THE COMPLIANCE BADGE WHEN THEY COMPLETE THE MITIGATION AND ADAPTATION PILLARS. THE ENERGY PILLAR IS CURRENTLY NOT REQUIRED TO EARN THE COMPLIANCE BADGE.



Resilient Together Update

DOWN
TOWN
CVILLE

UNCOMMON

DINING
SHOPPING
MUSIC
WELLNESS
ARTS
CULTURE

DOWN
TOWN
CVILLE

Regional Hazards & Risks



Extreme Heat



Heavy Rainfall and Flooding



Drought



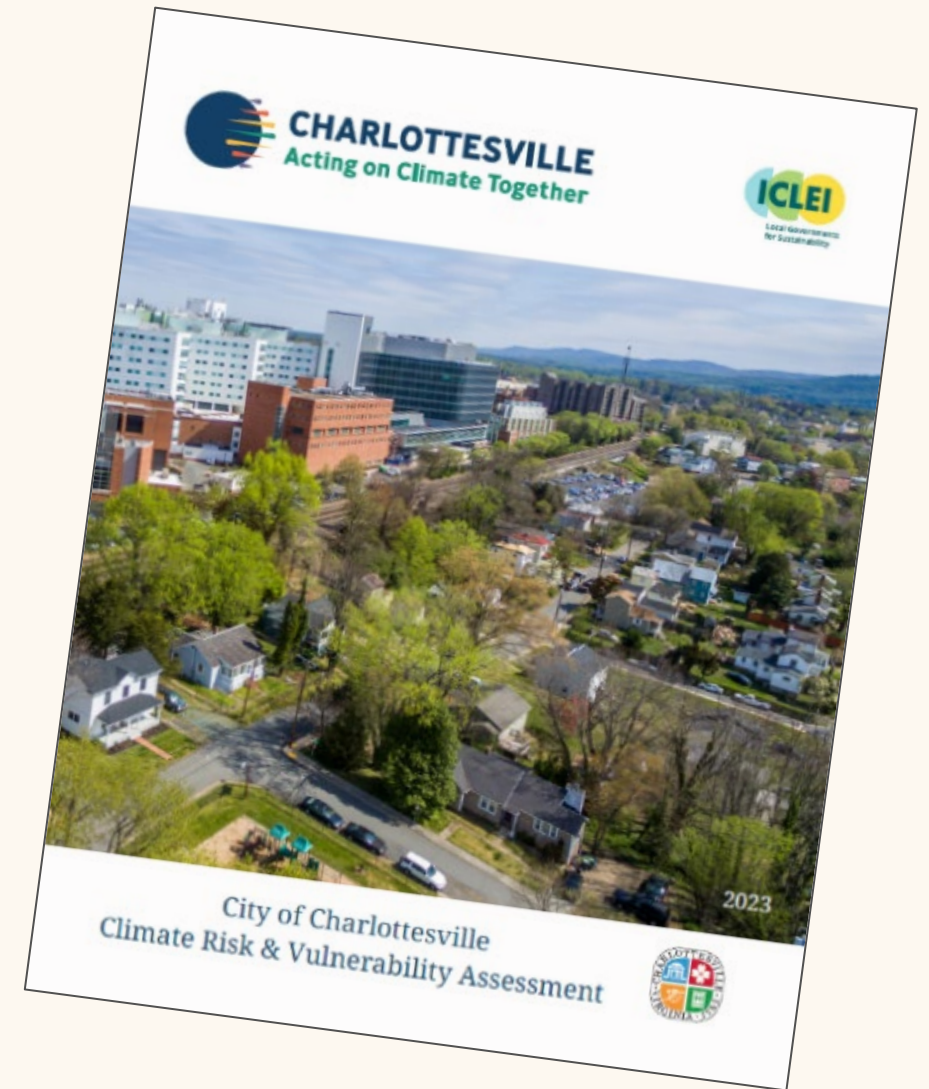
Shifting Seasons



Pests & Disease



Wildfire & Smoke



Extreme Heat

Number of Days per Year above 95°F

Current Climate

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

5 Days



Observed 30 Year
Average (1990-2020),
Monticello Station

2050

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

25-35 Days



Lower Emission Scenario
(steep emission reductions)

2075

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

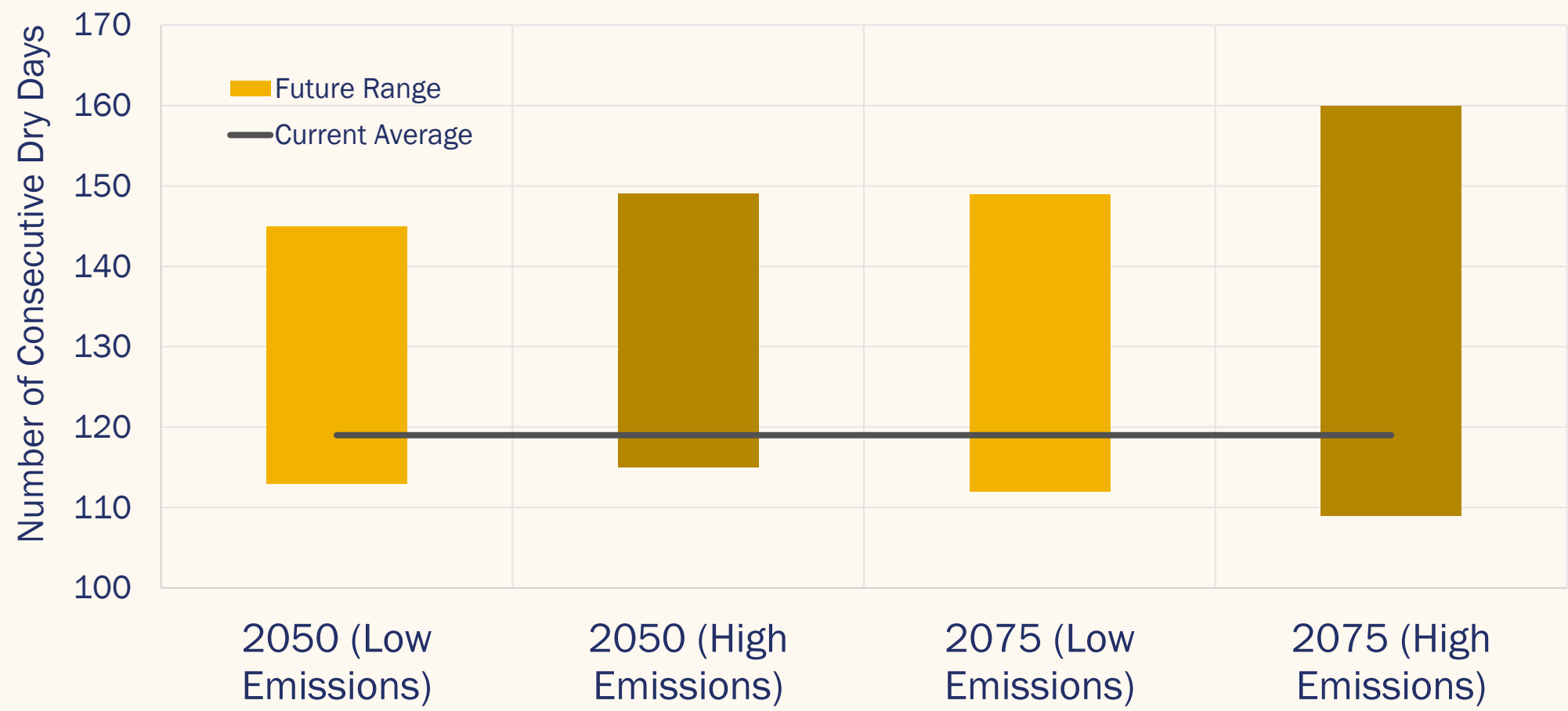
32-56 Days



Higher Emission Scenario
(business as usual)

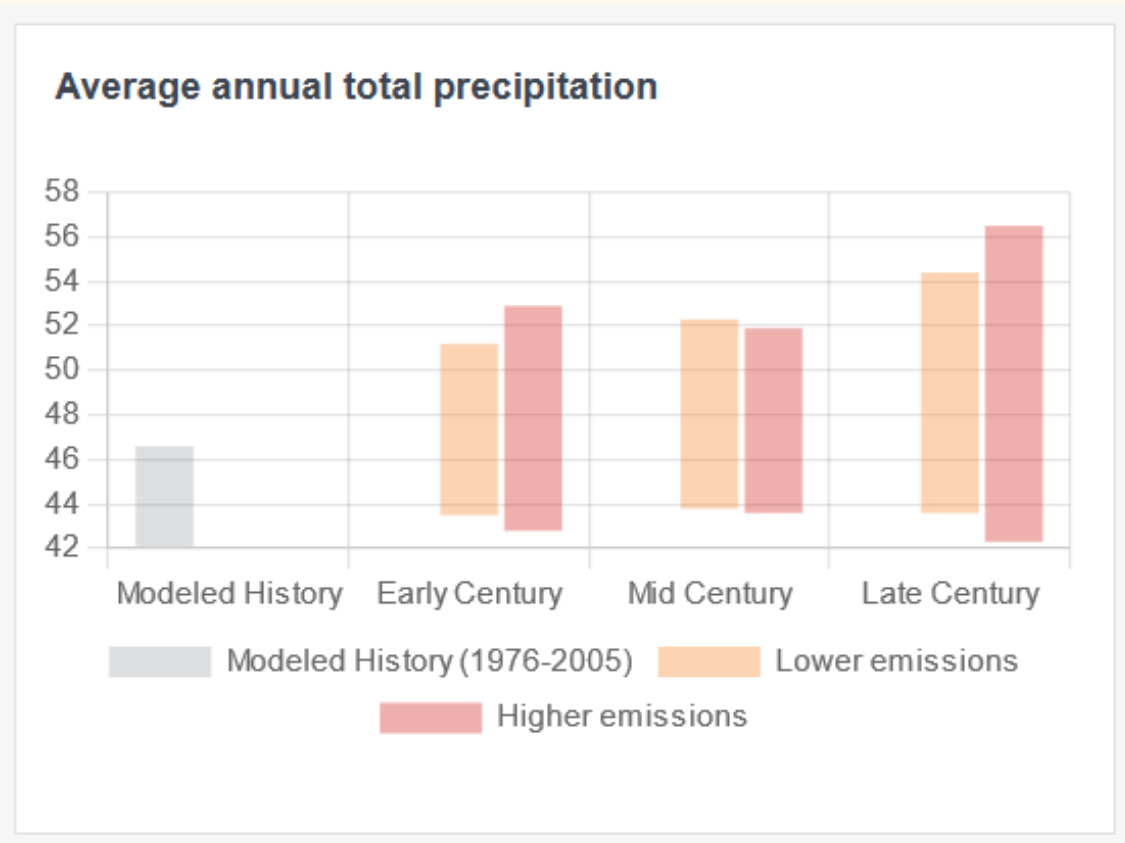
Drought

Dry periods are predicted to increase



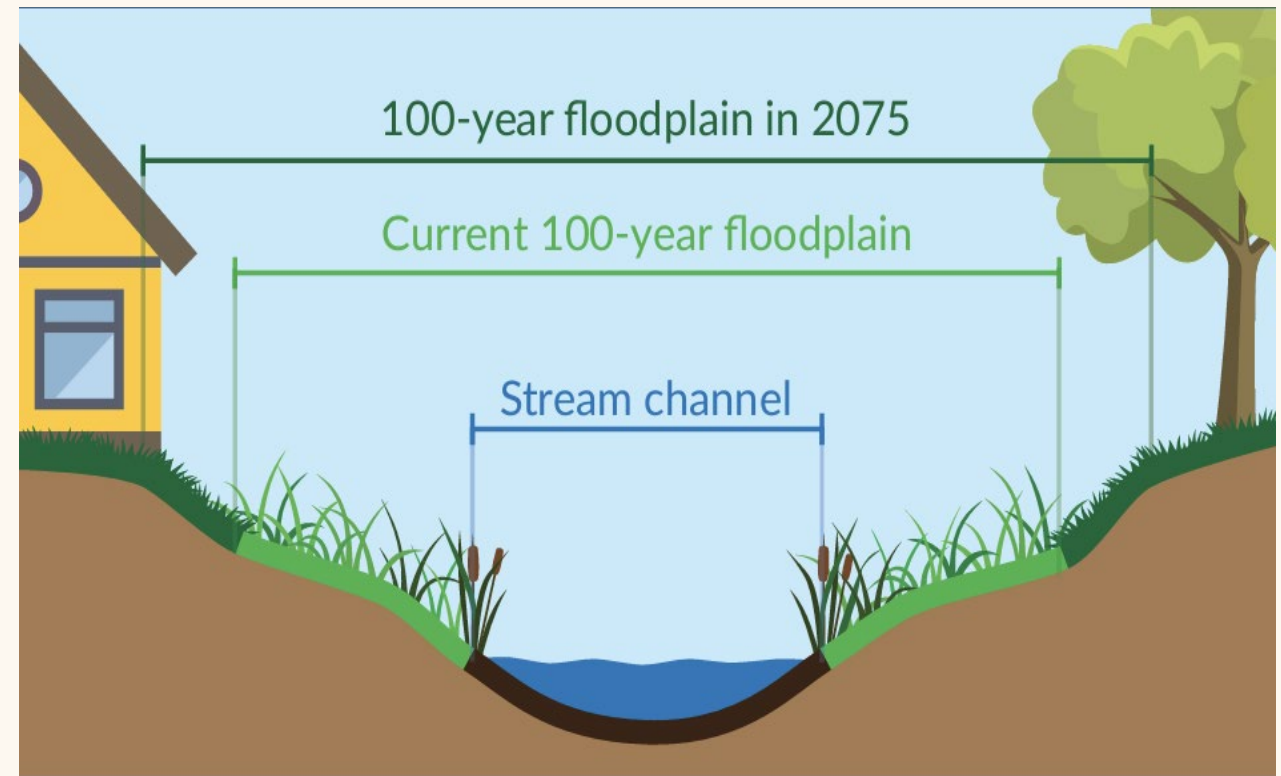
Increased Flooding

Precipitation is increasing...



Data for Albemarle County, Climate Mapping for Resilience and Adaptation Tool (CMRA)

...and our floodzones are growing.



Note: Illustrative graphic; not an actual local stream channel

Changing Seasons

Frost Days: Number of Days per Year with Minimum Temperature below 32°F

Current Climate

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	3

63 Days

2050


1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		


49 Days

2100

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

29 Days

 Observed 30 Year Average
(1990-2020), Charlottesville

 Higher Emission Scenario
(business as usual)

Pests & Disease



Wildfire & Smoke



Resilient Together

Project Vision: A community that is strong, safe, and healthy in the face of the changing climate now and in the future.

- Ongoing Adaptation & Resilience planning project in partnership with Albemarle County & UVA
- Discover & Define Phases complete
- Currently in the Design Phase
 - Conversation Kits still available/open
- Soon transitioning to “Decide Phase”
- Final “Do Phase” = Implementation
- Impact of federal grant cancellation

www.resilient-together.info







Climate Action Update

Municipal EE & Use Reduction

- **Municipal Energy Performance Program**
- **Energy & Water Management Program**
- **City & School Solar PV Program**
- **Power Purchase Agreements**
- **High Performance Building Standards**
- **LED Streetlight Conversion**
- **Parks & Rec Equipment Electrification Pilot**
- **Energy Demand Response Program Participation**







Community EE & Use Reduction

- Energy Resource Hub (New)
- Energy Efficiency & Conservation Block Grant (2nd Round)
- Residential Retrofit Mini-Grant Program (New)
- Utilities-led Efficiency Programs (Expanded)
- C-PACE Program Establishment (New)





What content is most popular?

Page title	Views ▾	Engagement rate
Homeowner Services - Energy Resource Hub	2,072	87.31%
Energy Resource Hub - Charlottesville & Albemarle County	523	63.02%
Attic Insulation Rebate - Energy Resource Hub	433	17.83%
Connect - Energy Resource Hub	220	86.7%
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Free Energy Walkthroughs - Energy Resource Hub	179	19.08%
Commercial Services - Energy Resource Hub	83	91.46%
Residential Solar Property Tax Credit - Energy Resource Hub	81	60.71%
Services - Energy Resource Hub	75	97.37%
Charlottesville Residential Retrofit Mini-Grants - Energy Resource Hub	69	85.51%

www.energyresourcehub.com

Transportation

- Zero Emission Bus (ZEB) Transition
- Electric School Buses
- EV Charging Infrastructure Study
- E-bike Incentive Programs
- Bicycle & Pedestrian Infrastructure
- Micromobility





ALBEMARLE COUNTY PUBLIC SCHOOLS

EV1



UVA
PARKING AND
TRANSPORTATION
UNIVERSITY
TRANSIT SERVICE

CHARLOTTESVILLE, ALBEMARLE, & UVA SUSTAINABILITY STAFF
INVITE YOU TO AN
**Electric Vehicle
SHOWCASE**
COME DISCOVER HOW OUR ORGANIZATIONS'
CURRENT EVs MIGHT BE SUITABLE FOR THE WORK
YOU DO.
ALBEMARLE COUNTY OFFICE BUILDING
Middle Parking Lot
June 11, 2025
10am - 1pm
Featuring electric
trucks, buses, work vans,
and more.
LOOK, LEARN, RIDE

Ask an
EVCover
(me)

EMANN





Nature Based Solutions

- Urban Forest Management Plan
- Urban Tree Planting
- Invasive Species Management
- Charlottesville Invasive Plant Partnership
- Energy Saving Trees





Other Actions

- Composting Programs
- Community Education & Outreach
- WISE Program
- Policy & Regulatory Activity
- Resilience Building Projects
- Collaboration with other departments







Public Transit
BUS WRAP
ART CONTEST

Charlottesville area transit (CAT) along with the Office of Sustainability invite local artists to design eco-themed bus wraps.

2 winners will receive \$750 each and their artwork will be featured on CAT buses for at least two years with credit.

Submissions open April 22-June 3, 2025
Community and panel voting: June 8-13, 2025 | Winners announced June 16, 2025

JOIN US IN PROMOTING A GREENER FUTURE THROUGH ART!

Get involved: Spread the word to fellow artists and community members. Stay updated via social media channels. Encourage community participation during the voting period.

Theme: Sustainability & Environmental benefits of public transit.

Eligibility: Local artists aged 16+

How to enter: 1. Download the digital bus outline (template) from www.caththecat.org. 2. Create original artwork suitable for a bus wrap. Keep in mind specs of the bus and all four sides! 3. Submit your design and a brief description explaining its sustainability message at caththecat.org.

For templates, official guidelines, and terms and conditions, visit CAT's website caththecat.org





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BOOK ROOM





Looking Ahead: FY26 Workplan

FY26 Workplan Highlights

- Ongoing implementation of the Climate Action Plan
- Continued involvement with the Energy Resource Hub
- CATEC Solar System
- Power Purchase Agreements
- Completion of the Climate Adaptation & Resilience Plan
- Integration of first Electric School Buses
- Delivery of Energy Efficiency Projects:
 - City Hall, City Hall Annex, Key Rec
- Expansion of E-bike program
- Repurposing of CHS solar panels from original project



Thank You!

Questions?

