

# **East Coast Greenway**

**Southeast Greenways & Trails Summit**  
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# Using Greenways to Combat Climate Change

Sarah Sanford

East Coast Greenway Alliance





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**East Coast Greenway Alliance**



















# Triple-digit heat shatters October temperature records in southern US

By **Brian Lada**, AccuWeather meteorologist and staff writer  
& **Chaffin Mitchell**, AccuWeather staff writer

Updated Oct. 4, 2019 7:40 PM



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## NEWS

# Thursday brings record temps to central NC, hitting 100 degrees in October





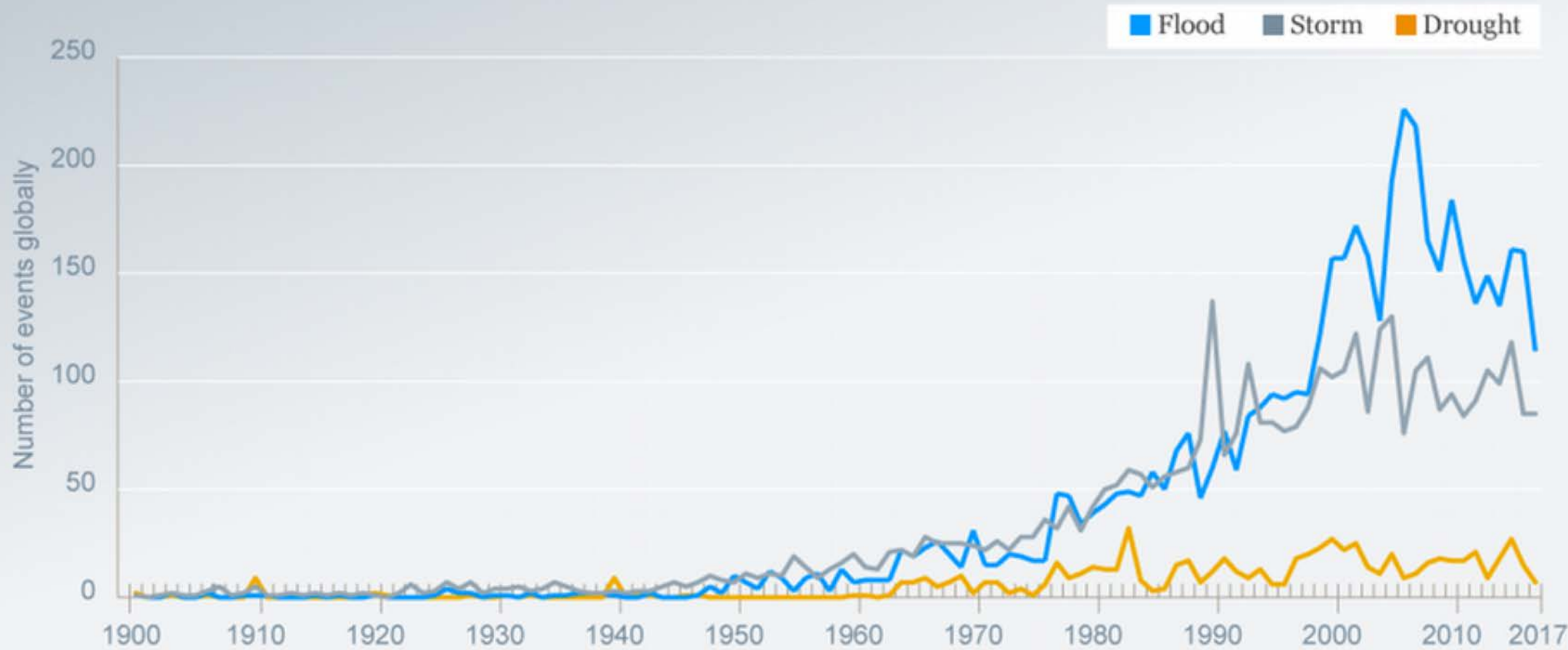
Capital Weather Gang

# At least three dead, thousands without power after **historic** snowstorm in North Carolina





# Extreme weather on the rise



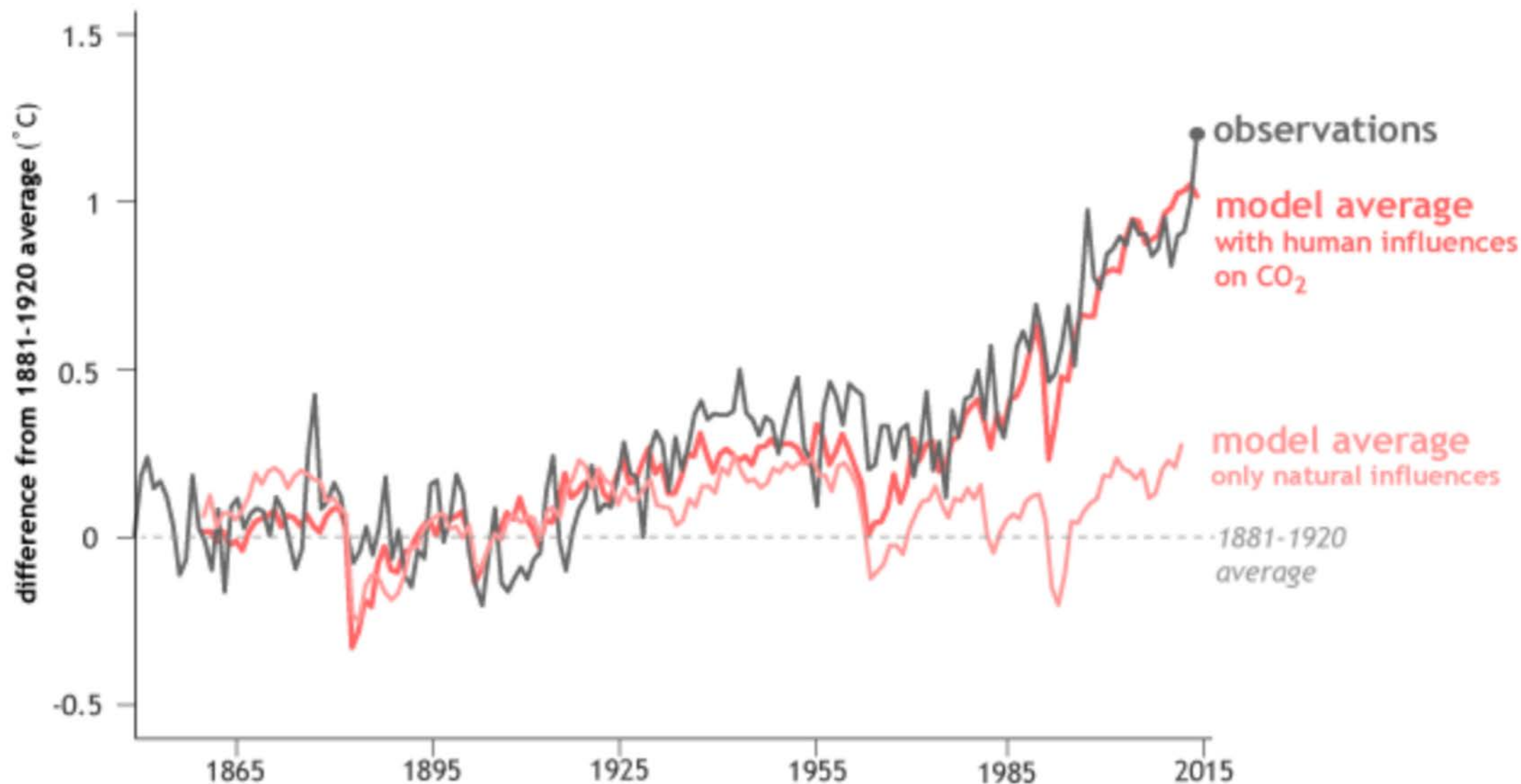
Source: The Emergency Events Database (EM-DAT) | [www.emdat.be](http://www.emdat.be)

© DW

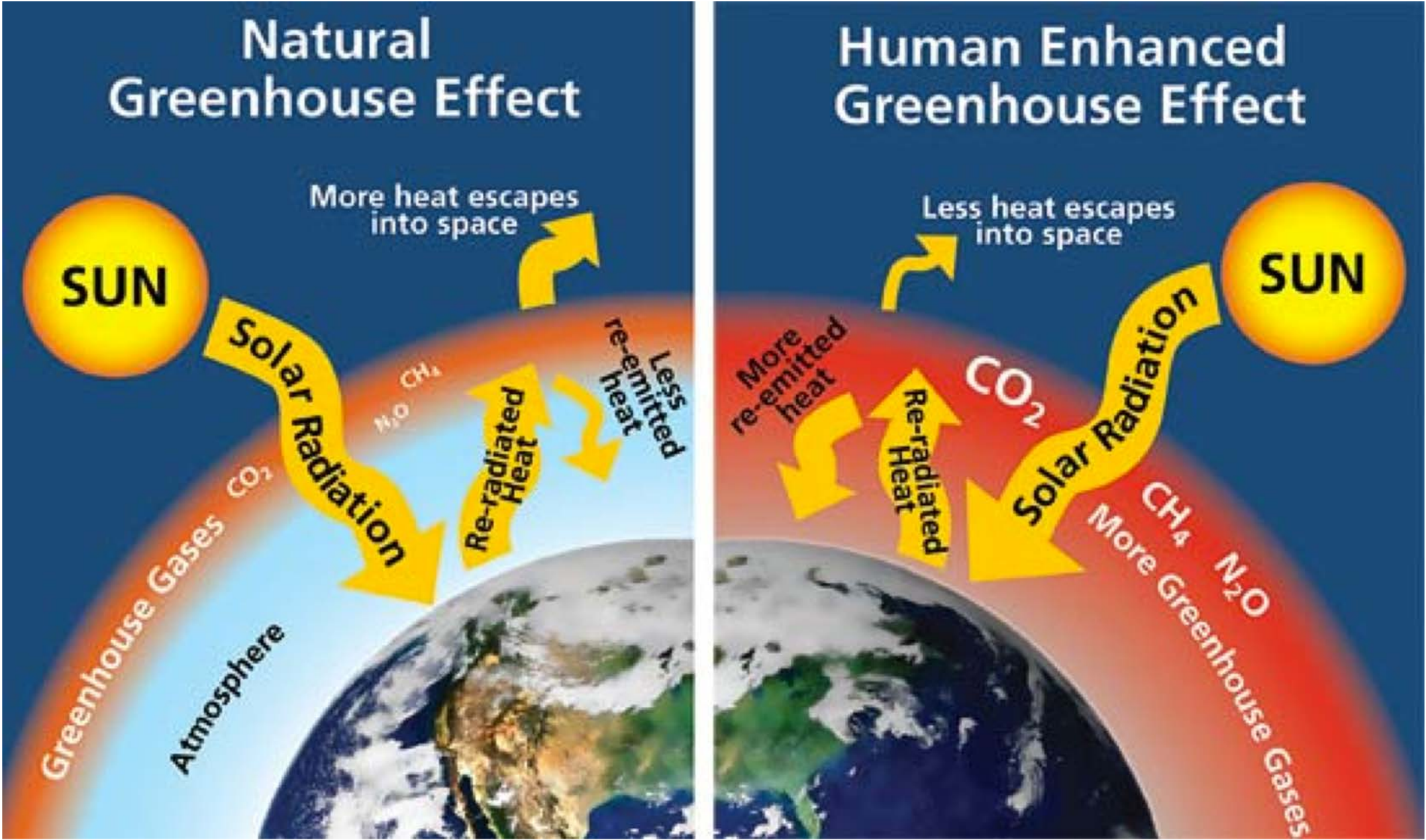




## 2015's extreme global heat can't be explained by natural variability alone





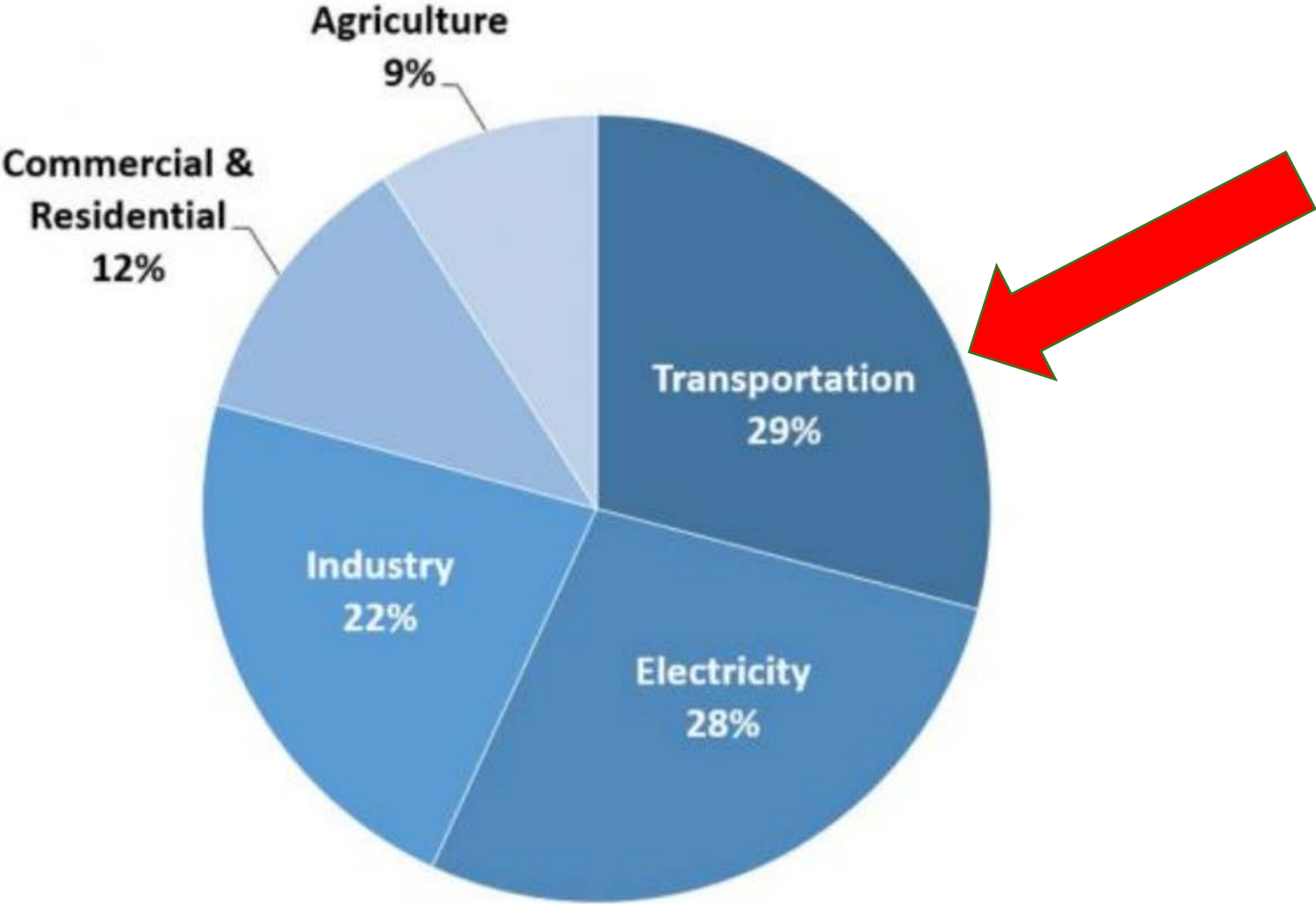


Climate change contributes to increases in the  
severity, frequency, and duration  
of extreme weather events.

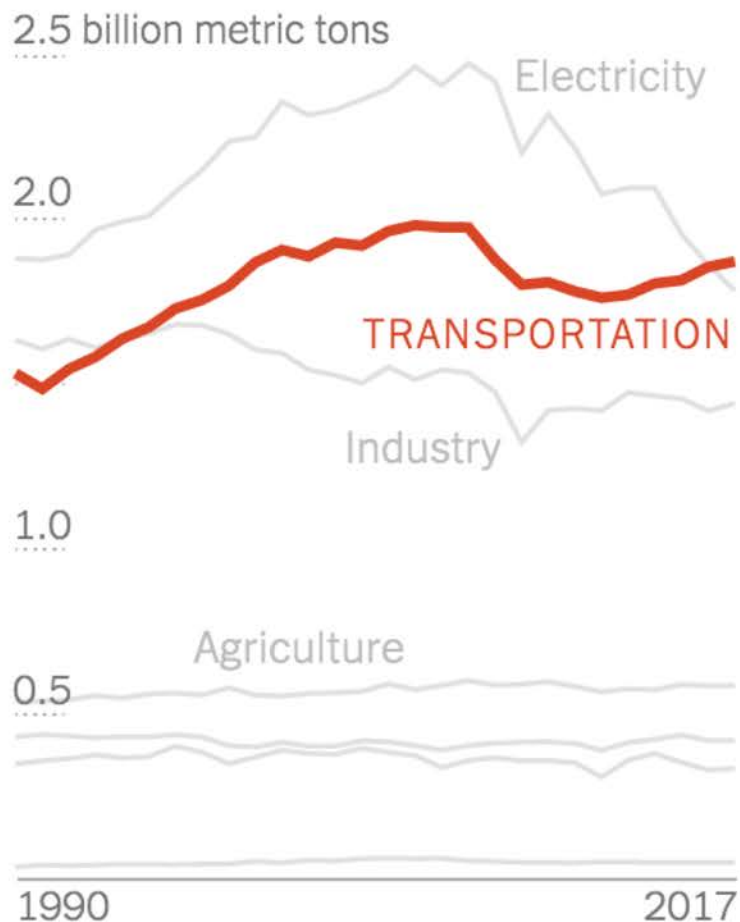




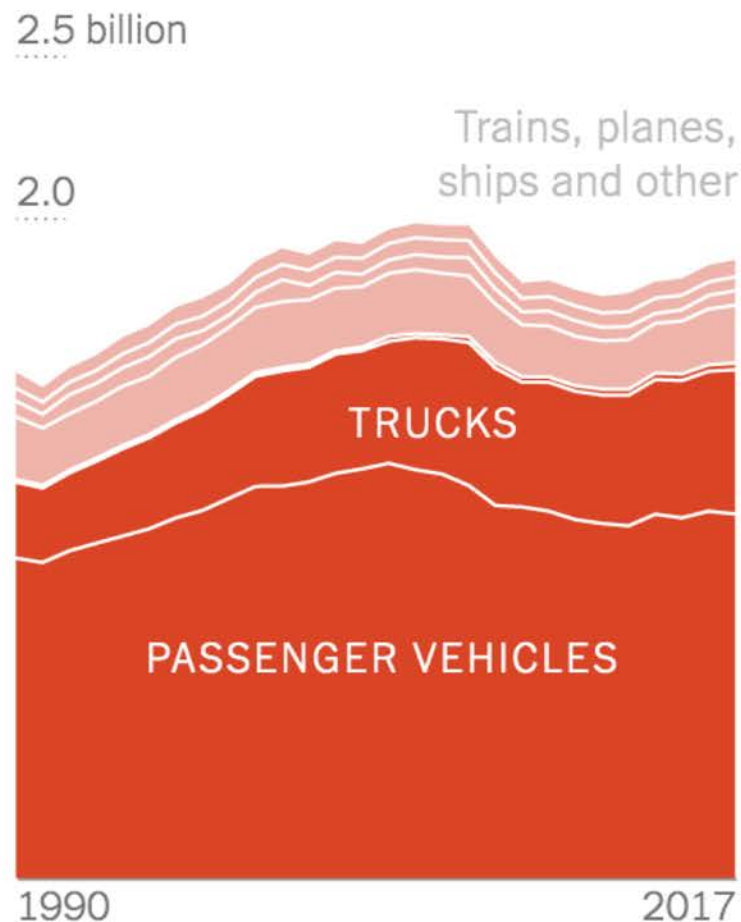
# Total U.S. Greenhouse Gas Emissions by Economic Sector in 2017



In 2017, **transportation** was the top source of greenhouse gases.



The vast majority of those emissions came from **driving**.

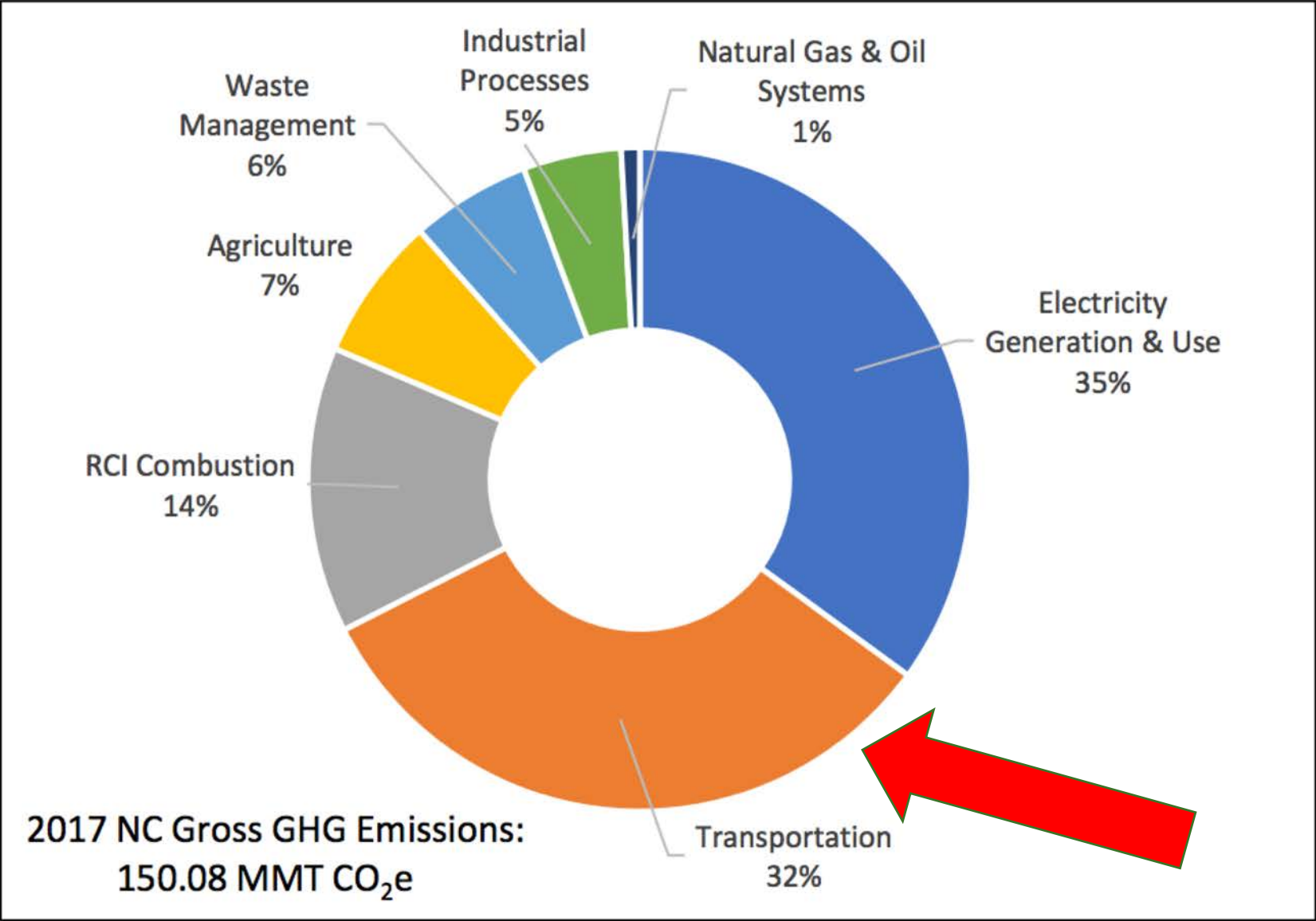


Charts show the carbon dioxide equivalent of greenhouse gas emissions. ■

Source: [Environmental Protection Agency](#)







**Figure 2-2: Percentage of North Carolina 2017 GHG Emissions by Source Sector**



# NCDOT Average Annual Storm Costs

2014 - 2016: \$65M

2017 - Present: **over \$222M**



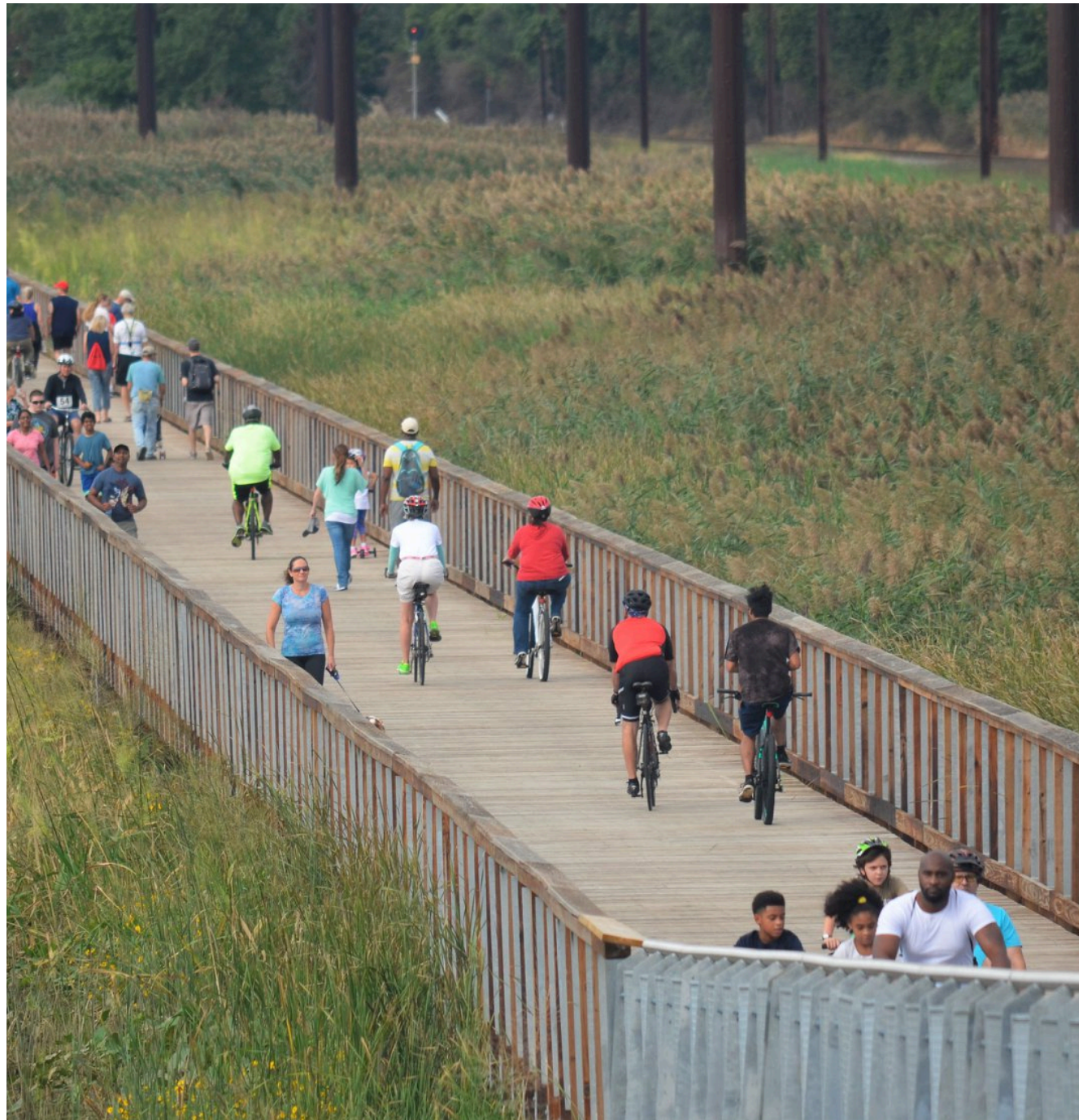


# solution: clean forms of transportation





# Greenways





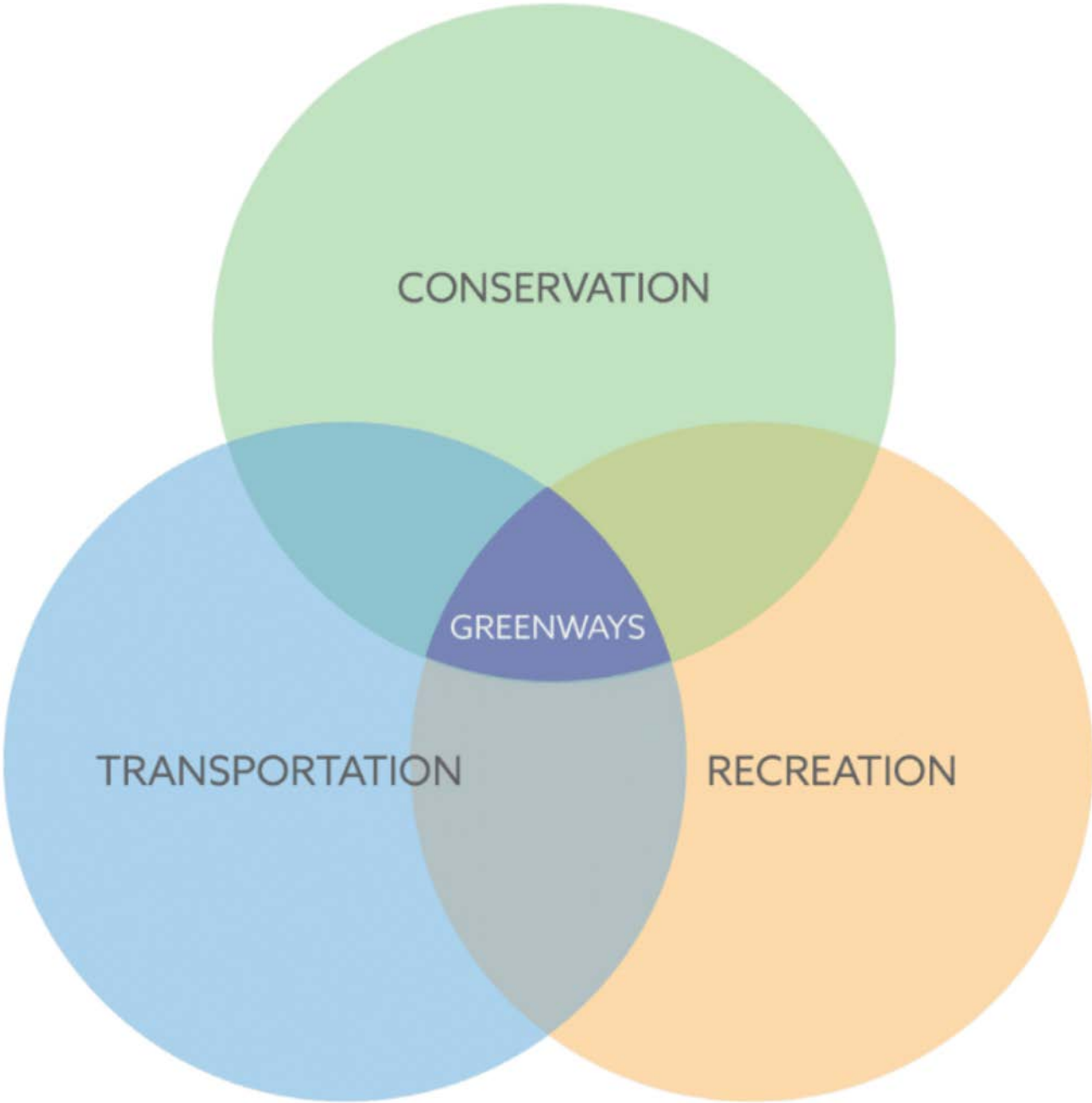


Image: NJ Greenways Guidebook





**The East Coast  
Greenway is a walking  
and biking route  
stretching 3,000 miles  
from Maine to Florida.**



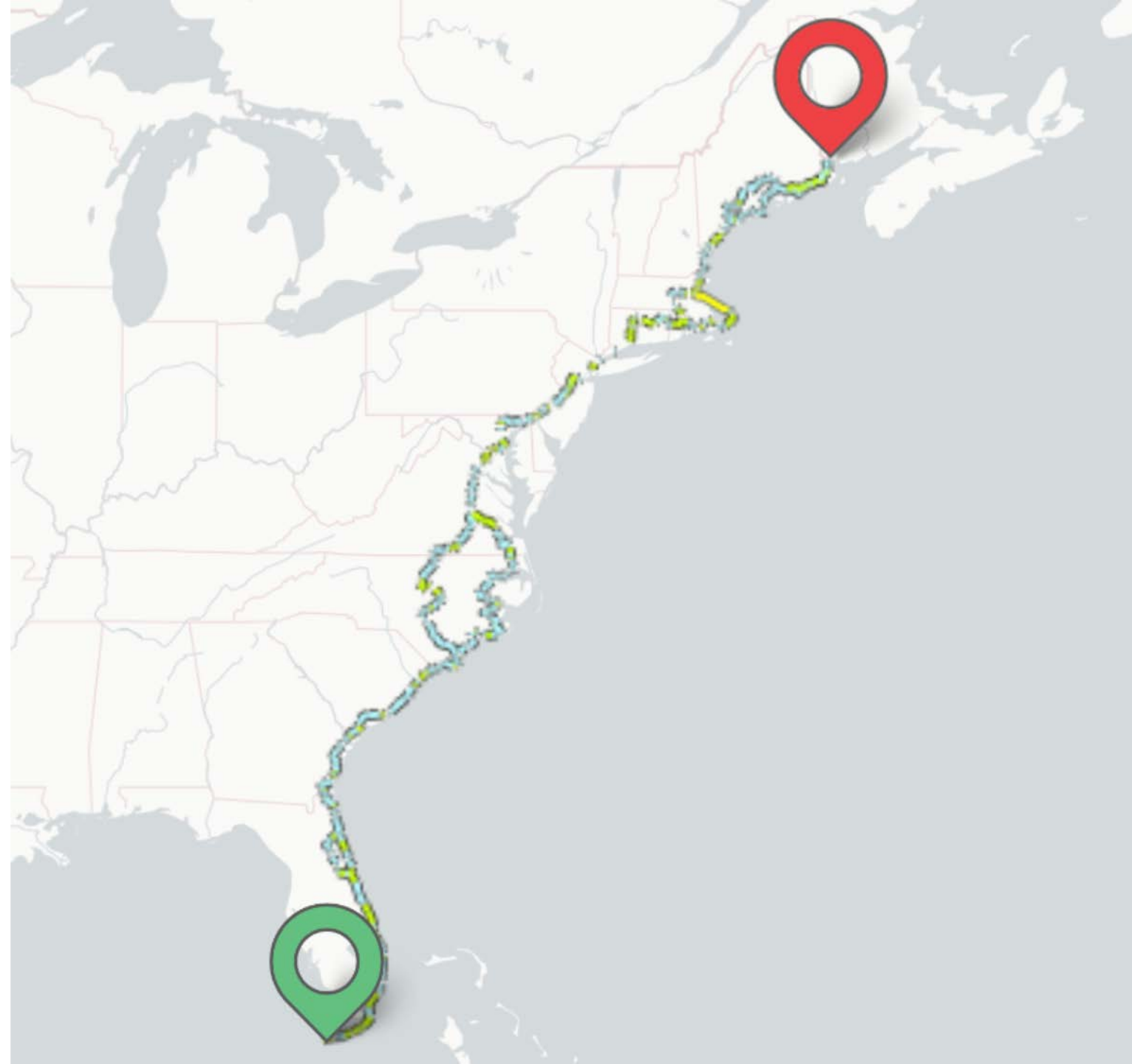




We connect urban and rural, north and south, along the most populated corridor of the United States.



**In 2019, we  
reached almost  
1,000 miles of  
traffic-protected  
trail.**





## East Coast Greenway by the numbers:



# THE IMPACT OF GREENWAYS *in the* TRIANGLE

*How the East Coast Greenway  
Benefits the Health and  
Economy of North Carolina's  
Triangle Region*

PREPARED BY:





# Transportation & Access Benefits



**1,402,000**  
Annual Fewer Miles Traveled by Car



# Transportation & Access Benefits



**1,402,000**

Annual Fewer Miles Traveled by Car

*Results in:*

**\$799,000**

Annual Reduction in Household Vehicle Costs

**\$702,000**

Annual Reduction in Collision-Related Costs

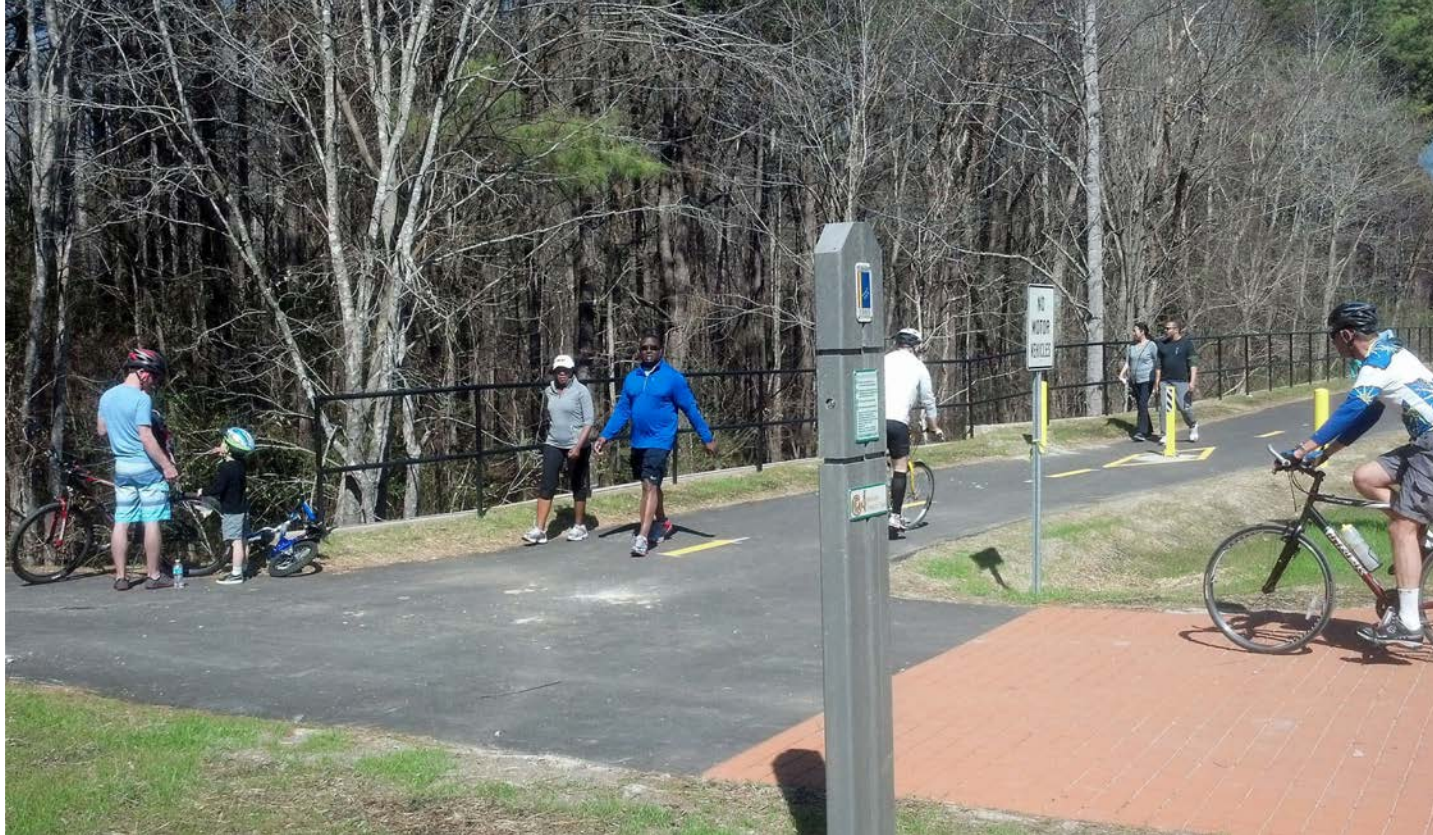
**\$98,000**

Annual Reduction in Congestion-Related Costs





# Health & Environmental Benefits



**11,225,000**

Miles Biked Per Year

**7,407,000**

Miles Walked Per Year

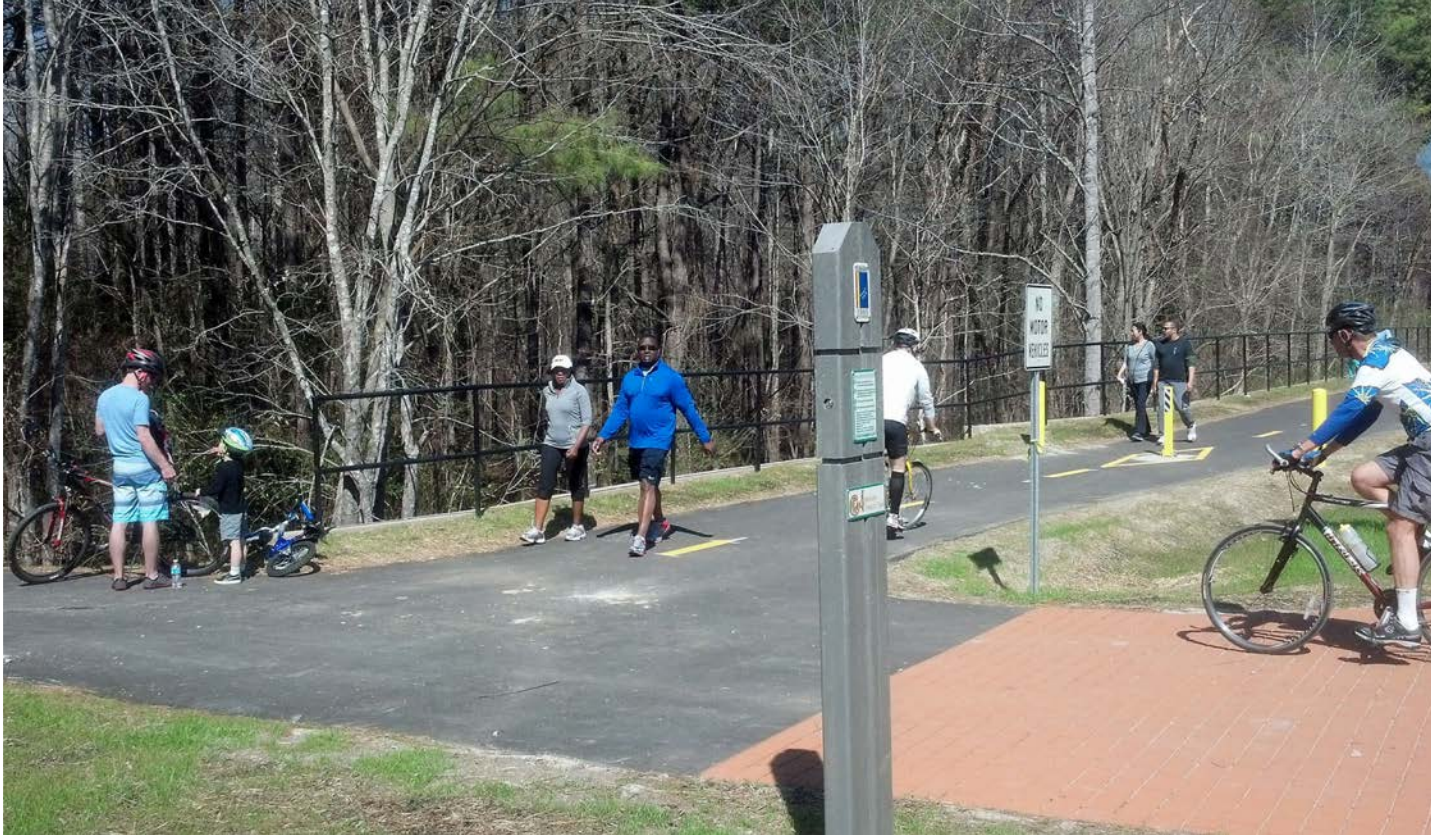
**3,592,000**

Annual Hours of Physical Activity





# Health & Environmental Benefits



**11,225,000**

Miles Biked Per Year

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*Results in:*

**\$1,457,000**

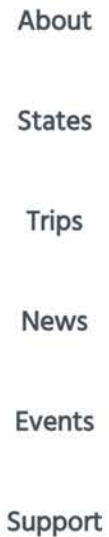
Annual Healthcare Cost Savings

**1,141,000 lbs.**


Annual Reduction in CO2 Emissions







In 2017, the East Coast Greenway Alliance commissioned a study to put numbers on what we know to be true: Greenways are good for economic growth. Prepared by Alta Planning + Design and sponsored by GSK, the report finds that the East Coast Greenway generates \$90 million in total benefits annually for the Triangle region, from gains in health and the environment to transportation and access benefits, economic gains, and increased property values.



# Why greenways?





Greenways are  
resilient.



# Greenways can be part of climate change legislation.





# Executive Order 80

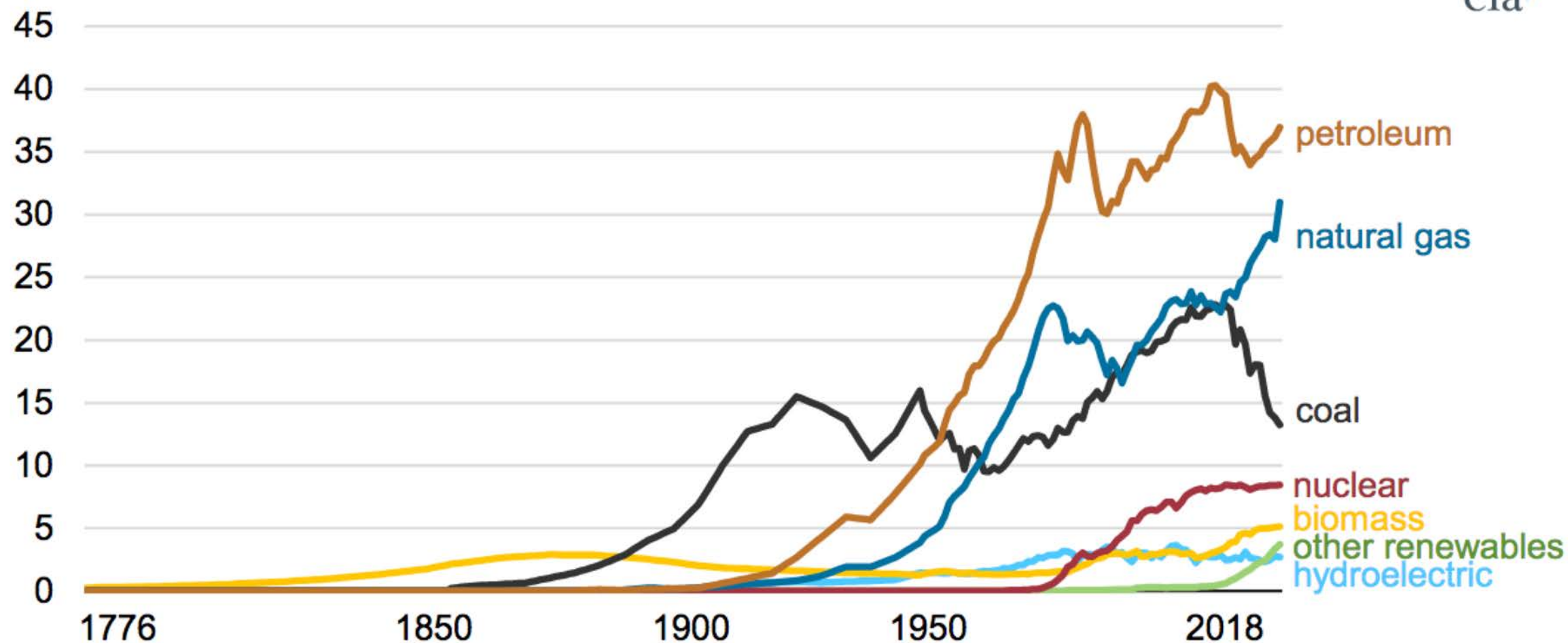
## 3 main directives:

- Reduce statewide GHG's
- Increase ZEV's
- Reduce energy consumption in state buildings



## Energy consumption in the United States (1776-2018)

quadrillion British thermal units



Source: U.S. Energy Information Administration, [Monthly Energy Review](#)





# Barriers to Using Greenways

Bike/ped infrastructure needs to be...

Safe

Connected

Convenient



# 1. Safety



193

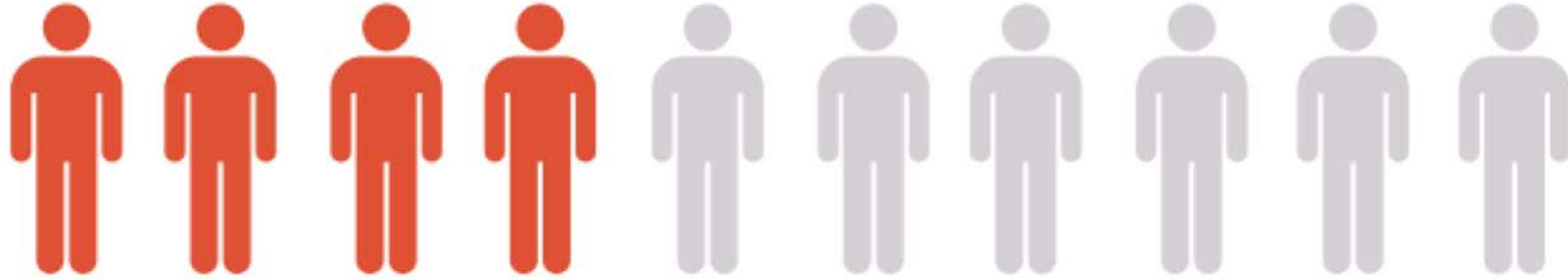
AVERAGE NUMBER OF BICYCLISTS AND  
PEDESTRIANS **KILLED** EACH YEAR IN  
NORTH CAROLINA

[169 PEDESTRIANS AND 24 BICYCLISTS]<sup>27</sup>





# 1. Safety



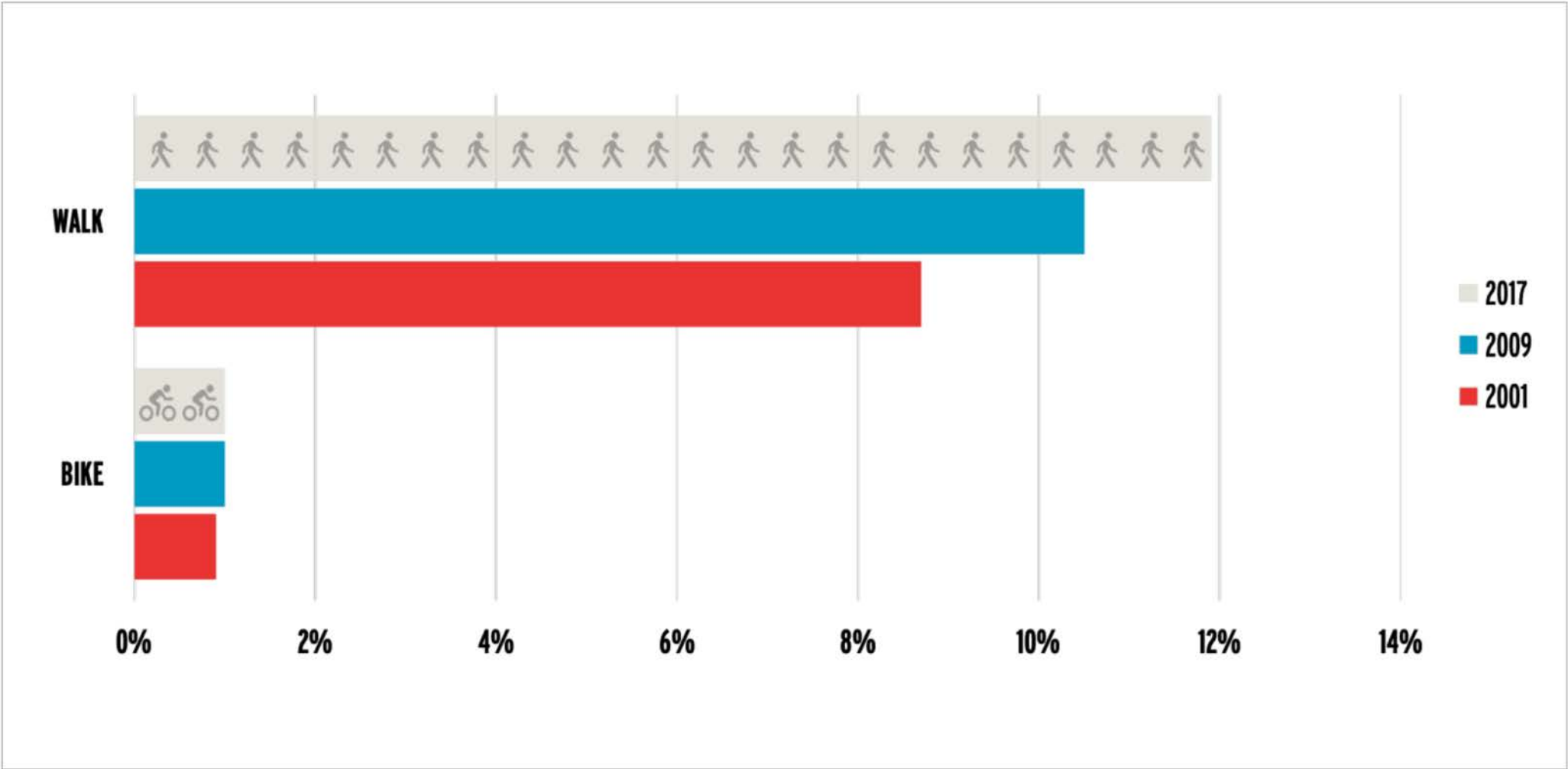
60%

SHARED USE PATHS (LIKE THE ECG) **REDUCE INJURY RATES**  
FOR CYCLISTS, PEDESTRIANS, AND OTHER NONMOTORIZED  
MODES BY 60% COMPARED WITH ON STREET FACILITIES<sup>28</sup>



# 2. Connectivity

FIGURE 1.1.1 - PERCENT OF ALL TRIPS BY WALKING OR BIKING





# 2. Connectivity

GEOGRAPHY	% OF COMMMUTERS WHO BIKE	CHANGE 2006-17	CHANGE 2011-17
NORTH CAROLINA	0.22%	-13%	-3%



## 2. Connectivity





## 2. Connectivity



### 3. Convenience





### 3. Convenience



**\$8,220**

AVERAGE COST OF  
**OPERATING A CAR**  
PER YEAR<sup>29</sup>



**\$308**

AVERAGE COST OF  
**OPERATING A BIKE**  
PER YEAR<sup>30</sup>



Bike/ped infrastructure needs to be...

Safe

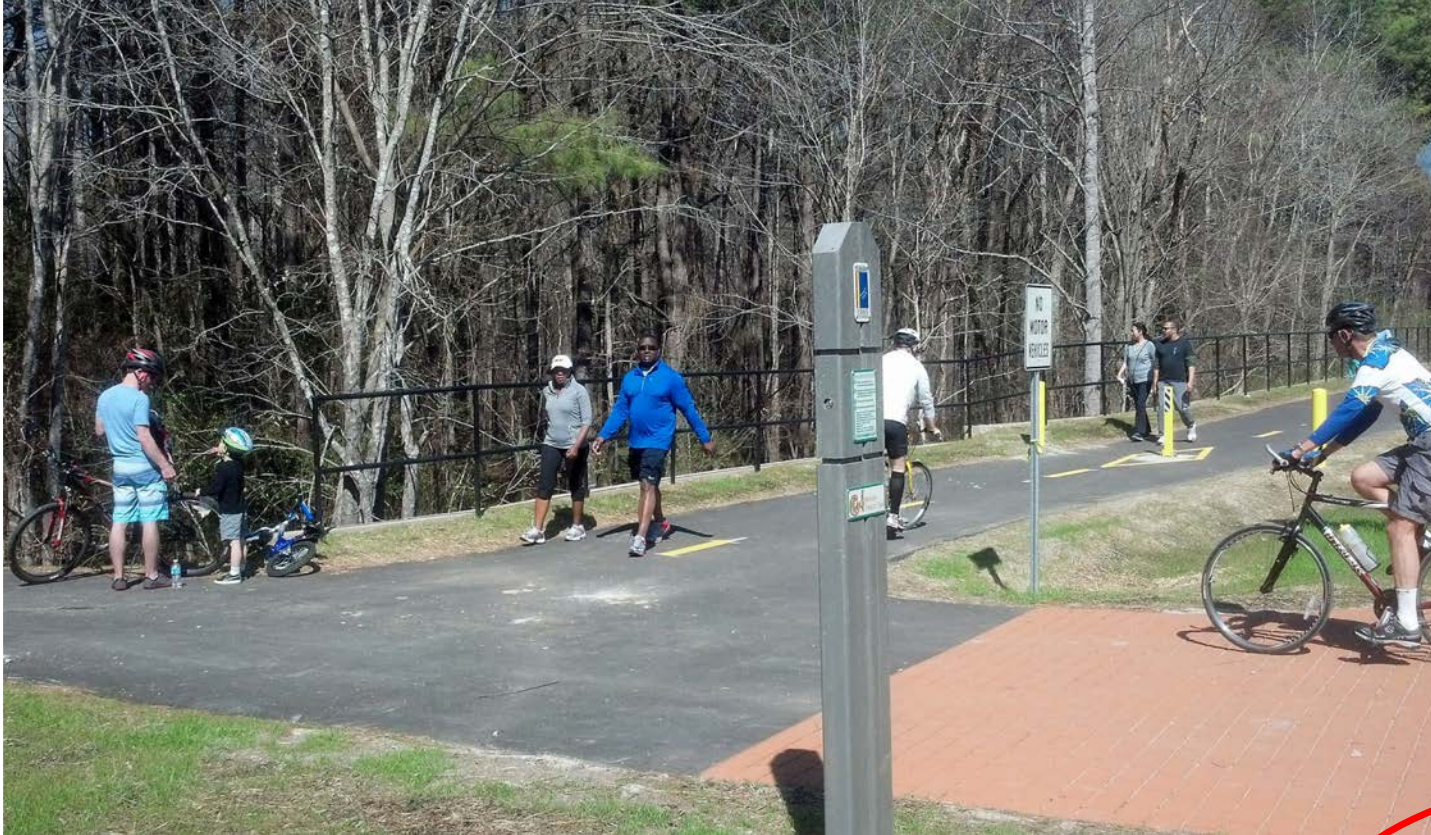
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Convenient





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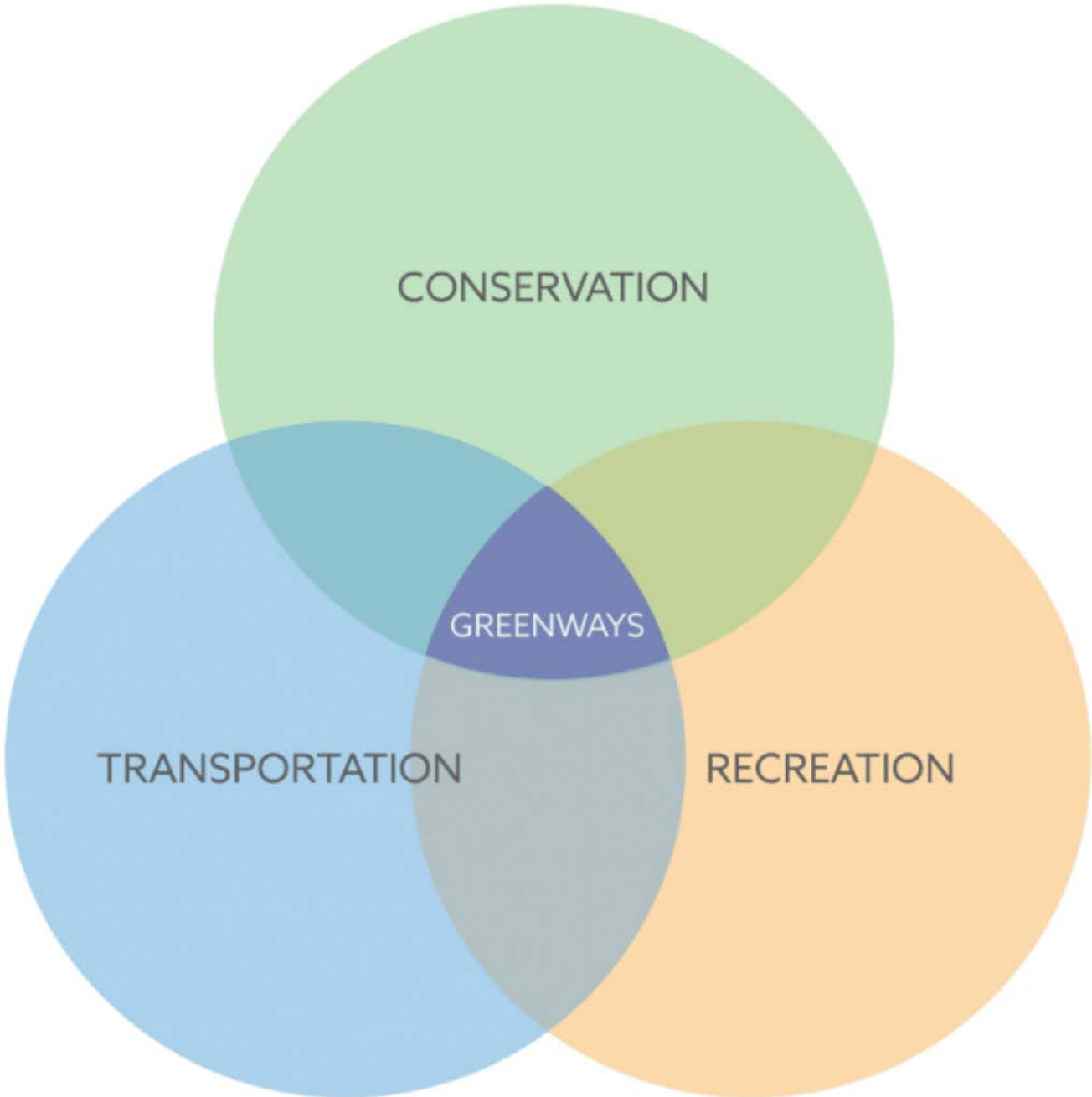


Image: NJ Greenways Guidebook





# Questions?

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Twitter: @Sarah\_D\_Sanford

#GreenwaySummit

