NC MOVES 2050
CONNECTING YOUR COMMUNITY, YOUR VOICE AND YOUR FUTURE

DRIVERS AND OPPORTUNITIES

Environmental Hazards and Resiliency

Environmental hazards pose varying risks to roads and bridges across the state. These risks can impact system operations that have real consequences to transportation users.

Floods

can cause landslides, mudslides, blocked roadways and damaged bridges.

Winter Storms

can lead to dangerous conditions with high wind that affect visibility. Significant snowfall can bring travel to a standstill.

Wildfires

produce smoke which affects how far travelers can see. Rain after wildfires can create sedimentation issues that clog and impact bridges.

Heat Events

can impact the health of construction workers, cause pavement to buckle and weaken bridge joints.

Coastal Flooding*

can block roadways, wear away road beds, and weaken and damage bridges.

**including storm surge and sea level rise*

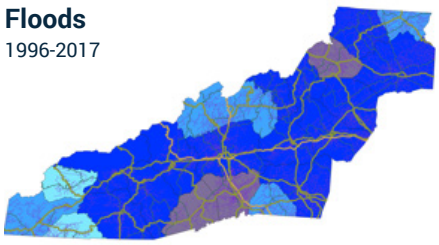
Dam Failures, Earthquakes, Tornadoes

cause catastrophic damage to bridges and roads and leave a lot of debris that can block travel.

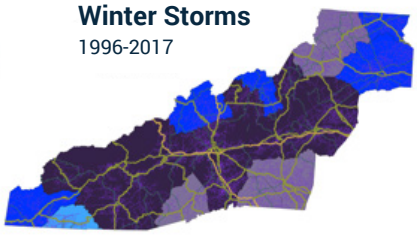
Some hazards are expected to happen more often or be stronger when they do happen over the next 100 years because of changes in the climate.

Mountain Region: Floods and winter storms can create challenging conditions, damage roads and bridges or limit travel. Heavy rains can trigger mudslides and landslides which close parts of the highway and isolate communities. There are several counties with high-risk dams that could impact roadways and communities if they fail and some counties have experienced earthquakes.

Floods
1996-2017



Winter Storms
1996-2017



LEGEND (ALL MAPS)

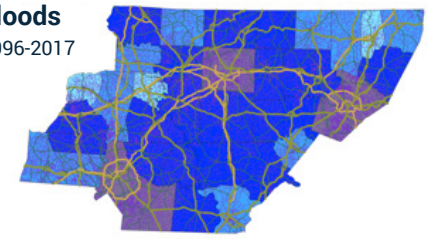
- Interstate
- US Route
- NC Route
- Secondary Route

Annual Occurence

- 0
- 0.1 to 0.2
- 0.2 to 0.5
- 0.5 to 1
- 1 to 3
- 3 to 7
- 7 to 20

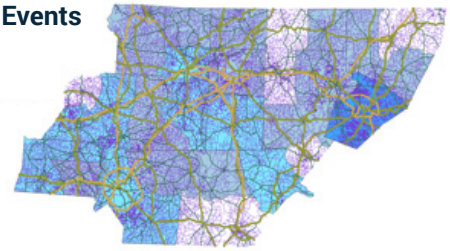
Piedmont Region: Floods, winter storms and tornadoes can impact roadways and bridges. There are numerous counties with high-risk dams that could damage roadways and communities if they were to fail.

Floods
1996-2017



Winter Storms
1996-2017

Tornado Events
1950-2017

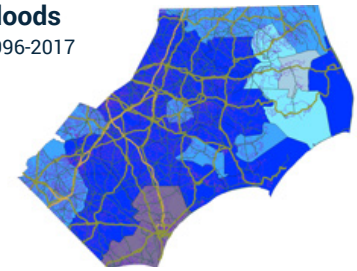


LEGEND (ALL MAPS)

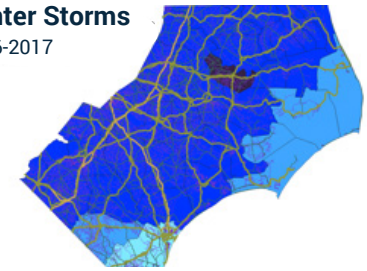
	Annual Occurence	
Interstate	0	1 to 3
US Route	0.1 to 0.2	3 to 7
NC Route	0.2 to 0.5	7 to 20
Secondary Route	0.5 to 1	

Coastal Region: Floods, winter storms, tornadoes, wildfires, hurricanes and sea level rise can damage roads and bridges and disrupt travelers. A few counties have high-risk dams that could impact roadways and communities if they were to fail.

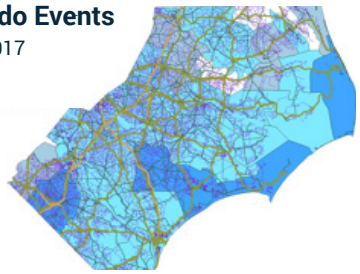
Floods
1996-2017



Winter Storms
1996-2017



Tornado Events
1950-2017



Future Conditions

- Heavy rainfall is expected to increase under a warming atmosphere and could lead to more flash flooding.
- There are increases in the projected risk for large wildfires for portions of the state.
- The projections suggest an increase in the frequency and intensity of severe thunderstorms. This could increase the possibility of tornadoes.
- It is likely there will be an increase in major hurricanes with higher amounts of rainfall.
- The number of extremely warm days is likely to increase at a faster rate.
- Sea level is projected to rise over the next 100 years. A moderate global sea level rise scenario suggests sea level along the North Carolina coast could increase by 4 to 5 feet.

Future Directions

- Information and data collected by North Carolina agencies can help evaluate risks. This information can support and inform funding decisions for future projects.
- NCDOT has a strong working relationship with North Carolina's Emergency Management staff and continues to develop state-of-the-art technology for sharing information with the public as events happen.
- Risk-based analysis that supports solutions can help develop investment recommendations and decisions for a more resilient system. This will help North Carolina prepare for uncertainty in weather events happening today and in the future.

Learn more at **ncmoves.gov**

For information about the NC Moves 2050 Plan:
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