

Wake Water Trend #3: Increased Flooding

Flooding is expected to increase due to land use changes and changing weather patterns.



Flooding

Drivers and Expected Impacts

Modeled projections indicate increased flooding from extreme weather events, which could put communities at risk for flooding, infrastructure damage (e.g., water supply reservoir dams) and loss of life. In addition, land use changes that create more impervious surfaces are projected to contribute to more flooding events in Wake County (Tetra Tech and RTI 2025).¹

Related Trends



Higher stormwater volume



Increased runoff



Less baseflow



Less groundwater recharge

Future Trends

Future land use projections indicate that, while there will be an increase in the frequency of high-flow events throughout the County, the duration of the events will change little (Tetra Tech and RTI 2025).² Increasing magnitudes of precipitation within storm events lead to an increased risk of flooding from both stormwater runoff and high water levels in lakes, streams and rivers during and after storms.



Flash flooding at Bond Park, Cary, NC in Wake County after several inches of rain. (Source: Meteorologist Cruz Medina's Facebook Post)

1, 2 Source: Tetra Tech and RTI (Research Triangle Institute International). 2025. *Baseline Analysis Memorandum*. Report 2.3.5. Prepared for Wake County Government by Tetra Tech and RTI, Research Triangle Park, NC.