



Water main breaks are a critical issue that affects both our water system and our community. These breaks occur when underground water pipes, known as water mains, crack or burst due to a variety of factors such as age, shifting ground, changes in water pressure, or sudden temperature fluctuations.

The most challenging period for water main breaks is what we call “main break season” (October – February). This season typically coincides with colder months when temperatures fluctuate dramatically, causing the ground to shift. The repeated expansion and contraction put stress on aging pipes, making them more susceptible to failure. While breaks can happen at any time of year, they are far more frequent during this period, placing a significant strain on our repair crews and resources.

This year, we’ve had 195 breaks so far, compared to 208 breaks at this time last year and a three-year average of 219 breaks. Most of these breaks occur during main break season. From October to now, we have recorded 67 breaks down from 112 during the same period last year.

Table/Graph: Water Main Breaks Over Time

Table 1: Break occurrences this year (2024) compared to the previous year and the three-year average.

Table 2: Total water main breaks this fiscal year (July 2024 – Current) vs. total breaks during main break season.

Graph 1: A comparison of Table 2, illustrating the high frequency of water main breaks in November and December across FY22 – FY25 (Current).

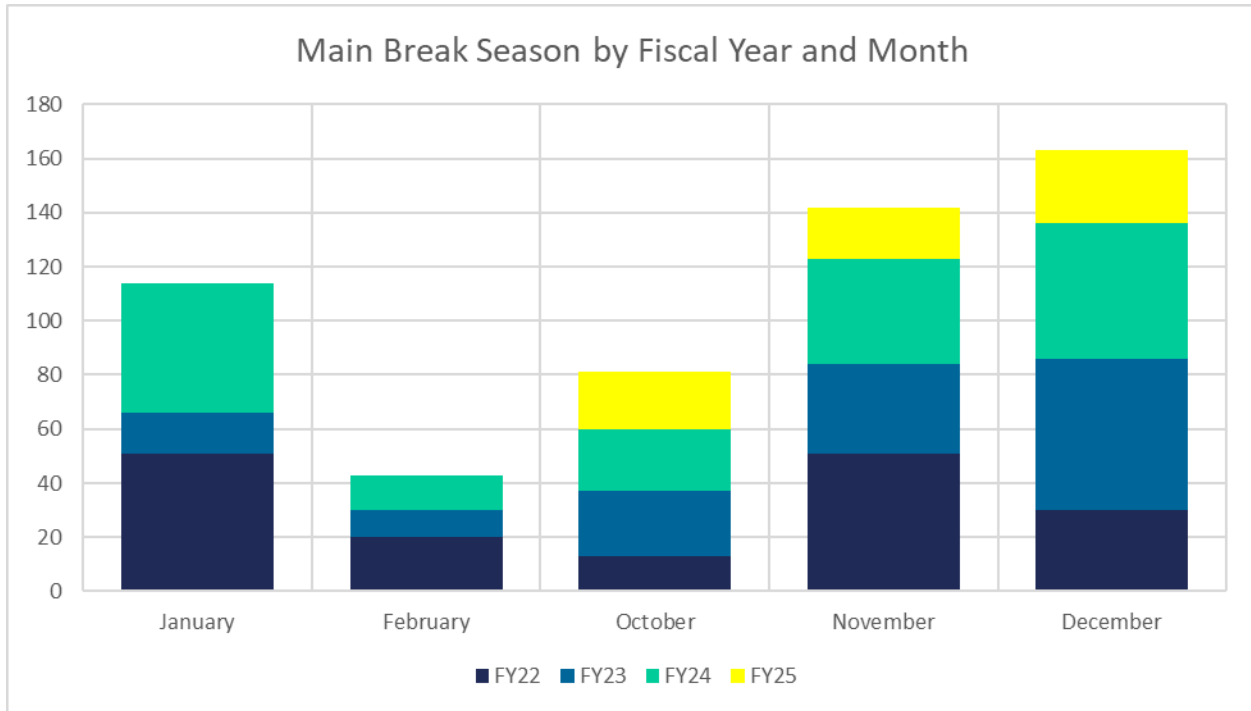
Year	Number of Breaks
Current Year	195

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Previous Year	208
3-Year Avg	219

Fiscal Year	Number of Breaks	Number of Breaks during Main Break Season
Current Fiscal Year	106	67 (Current)
Previous Fiscal Year	228	173
3-Year Fiscal Avg	231	159



When a water main breaks, the impact on the system and our customers is immediate, making a swift response essential. Service disruptions may require a system pressure advisory

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to ensure the water is safe to consume after repairs are completed. Repair crews work tirelessly around the clock, often in harsh weather, to coordinate equipment, manage traffic, and complete repairs.

During main break season, the workload increases significantly as break frequency rises. “We run three call crews during these times, and sometimes that isn’t enough,” says Cecil Carlyle, a repair crew supervisor. “Crews may work on multiple breaks in a night and not come in the following day to stay home and rest. This creates a shortage for daytime staff, where we have to reach out to other programs to keep up the daytime work.”

The demands of main break season go beyond physical labor. “The main break season is a challenge for us all due to several key factors that take a toll both physically and mentally,” says Adam Stanley, a program manager of the repair program. “With a reduced number of staff on hand, employees must handle a heavy volume of calls, planned work, and emergency tasks, all while managing unexpected leaks that may arise during the night.” With all that comes in daily, repairs are prioritized based on impact severity and complexity. Skilled staff and careful planning ensure service is restored quickly while minimizing customer inconvenience.

When repair crews are out fixing breaks, how are we informed of what’s going on throughout the water distribution system? Our customers serve as our first eyes in the field, often spotting potential water main breaks before anyone else. Their reports to our customer care and billing division are a crucial way for us to identify these issues. Customers can assist by reporting signs such as unexpected puddles or drops in water pressure. Prompt reporting enables faster response times and minimizes the impact on service.

Raleigh Water is committed to reducing water main breaks head-on by tracking break frequency, identifying vulnerable areas, and investing in infrastructure improvements. While repair crews are busy fixing breaks across our 2,400 miles of pipe, predictive modeling technology helps us address potential issues before they become full-scale breaks. Looking ahead, Raleigh Water remains focused on improving water main infrastructure, enhancing our response times, and building a more resilient water system.

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One Exchange Plaza Building | 1 Exchange Plaza | Suite 600 | Raleigh, North Carolina 27601
City of Raleigh (mailing address) | Post Office Box 590 | Raleigh, North Carolina 27602-0590