

# Water System

04/23/2025

Asheville Leadership Forum

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City of Asheville



# Presentation Outline

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- System Background
- Asheville Water System - Helene Impacts and Response
- Resilience Measures

# Water System Background

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- The City of Asheville's water system provides potable water to the City of Asheville, Town of Biltmore Forest, Town of Woodfin, Black Mountain, and the majority of unincorporated Buncombe County, as well as Northern Henderson County.
- The service area encompasses approximately 183 square miles & serves 160,000 customers.
- The system consists of three water treatment plants (WTP). North Fork WTP with a rated capacity of 31 million gallons per day (MGD), the William Debruhl WTP with a rated capacity of 5 mgd. Mills River WTP with a rated capacity of 7.5 mgd. Combined rated capacity for all these WTPs is 43.5 mgd.
- The average daily water demand is 23.5 mgd.
- The Asheville water distribution system consists of approximately 1,700 miles of water lines, over 20,000 water control valves, 37 water storage tanks, 42 booster pump stations, and over 50 pressure zones.

# AVL Water System - Helene Impacts and Response

# Water System - Helene Impacts and Response

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- Service to 80 percent of Water Resources customers was disrupted mid-morning on Sept. 27. Helene caused catastrophic damage to our production and distribution systems.
- Partial service was restored to every customer who could receive it within 18+/- days, although a Boil Water Notice was issued due to water quality.
- Potable water was restored within 52 days.
- The Water system is fully operational and capable of meeting typical demand.

# North Fork 36" Bypass Waterline

## SEP 30



# North Fork 36" Bypass Waterline

## OCT 8



# North Fork 36" Bypass Waterline OCT 10





# Auxiliary Spillway



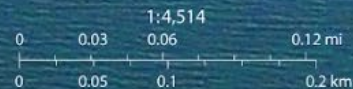
**North Fork Reservoir**  
**OCT 10**



# North Fork Water Treatment Plant Chemical Application Areas

Turbidity Curtain –  
500' foot radius  
from intake tower

75' wide secondary  
dosing location  
inside curtain  
(100' from shore)  
(~4 acres)



# Diffused Air Floatation (DAF) Sedimentation Units



# Water System - Resilience Measures

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- Three projects stand out for the resilience they would provide:
  - Sediment basins for filters at North Fork and DeBruhl WTPs
    - Cost: \$150 million
  - Alternate bypass line at North Fork
    - Cost: \$50 million
  - Long term, a new treatment facility in West Service Area
    - Cost: \$150-\$200 million

# Questions?