



**CITY OF HENDERSONVILLE**  
**WATER SEWER ADVISORY COUNCIL**  
City Hall Council Chambers | 160 6<sup>th</sup> Avenue E. | Hendersonville, NC 28792  
Monday, July 27, 2026 – 4:00 PM

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## MINUTES

- Present: City of Hendersonville Council Member & Chair Jennifer Hensley; City of Saluda Kevin Burnett; Village of Flat Rock Cheryl Stuller; Town of Laurel Park Travis Bonnema; Town of Mills River Councilwoman Sandra Goode; Chamber of Commerce Jay Frazier; Henderson County Water/Sewer Customer Representative Andrew Riddle and Town of Fletcher Amber McKinney
- Absent: City of Hendersonville Water/Sewer Customer Representative Chuck McGrady; Budget & Evaluation Director Adam Murr; Assistant City Manager-Public Works; Brent Detwiler and Partnership for Economic Development Michael Giblin
- Staff Present: City Manager John Connet; City Clerk Jill Murray; Utilities Director Adam Steurer; Communications Director Allison Justus; Finance Director Krystal Powell and Utilities Engineer II Devin Owen
- 

### 1. CALL TO ORDER

Chairwoman Jennifer Hensley called the meeting to order at 4:00 p.m. and welcomed those in attendance.

### 2. APPROVAL OF AGENDA

*Jay Frazier moved to approve the agenda as presented. A unanimous vote of the Committee Members present followed. Motion carried.*

### 3. APPROVAL OF MINUTES – April 27, 2026 - Jill Murray, City Clerk

*Amber McKinney moved to approve the minutes of April 27, 2026, as presented. A unanimous vote of the Committee Members present followed. Motion carried.*

### 4. OLD BUSINESS – None

### 5. NEW BUSINESS

#### A. Summary of Recent Quarter Activities - Adam Steuer, Utilities Director

Utilities Director Adam Steurer gave the following brief PowerPoint presentation.

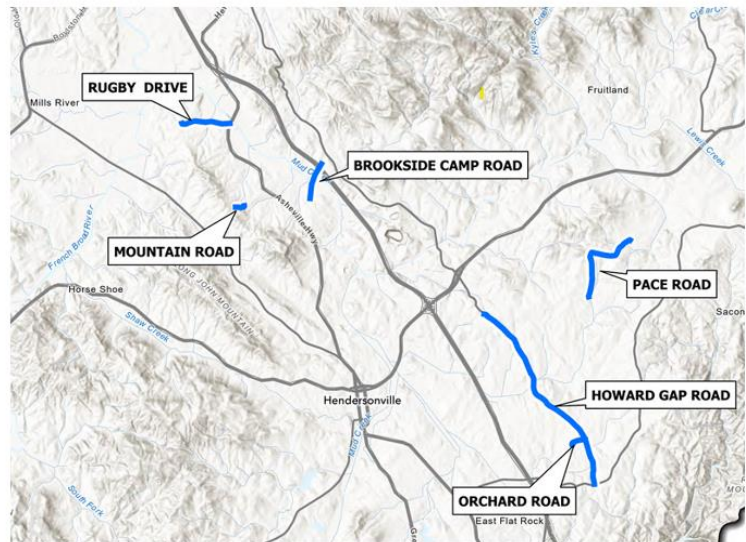
# Water and Sewer Department Update

- [2026 Quarter 2 Report](#)
- Project Updates



## Water Distribution System Resiliency Looping

- ~8 miles of water pipes
- Provide redundant water supply in areas of the distribution system
- Improve water service to Upward Road Area
- Status : Design
- Construction: Beginning Late 2027
- Funding
  - \$6.75M – SRF Grant
  - \$1.86M – CDBG Grant
  - \$1.94M – Golden LEAF Grant
  - \$6.75M – 0% interest SRF Loan
  - **\$17.3M – TOTAL**



# Wastewater Treatment Facility Improvements

## Flood Mitigation

- Elevate/Relocate/Protect
- Status: 90% Design
- Cost Estimate: \$102M

## Expansion

- 4.8 mgd to 6.0 mgd
- Status: 90% Design
- Cost Estimate: \$23M



## WWTF Funding

### WWTF Flood Mitigation - \$102M Estimate

| Funding Source           | Grant              | Loan                  |
|--------------------------|--------------------|-----------------------|
| SRF – Helene             | \$8M               | \$1M, 0% interest     |
| SRF/SRP - Traditional    | \$3M               | \$38M, “low-interest” |
| FEMA – Public Assistance | <i>TBD</i>         |                       |
| FEMA – Hazard Mitigation | <i>TBD</i>         |                       |
| CDBG – Disaster Recovery | <i>Up to \$15M</i> |                       |
| TOTAL SECURED            | \$11M              | \$39M                 |

### WWTF Expansion - \$23M Estimate

| Funding Source                 | Grant          | Loan |
|--------------------------------|----------------|------|
| US Economic Development Admin. | <i>\$20.1M</i> |      |
| Dogwood Health Trust           | \$2M           |      |
| TOTAL SECURED                  | \$2M           |      |

## B. Sewer Collection System Master Plan Update - Devin Owen, Utilities Engineer II

Utilities Engineer Devin Owen gave the following PowerPoint presentation.



### Sewer Collection System Master Plan Update

July 27, 2026

## Sewer Collection System Master Plan Update

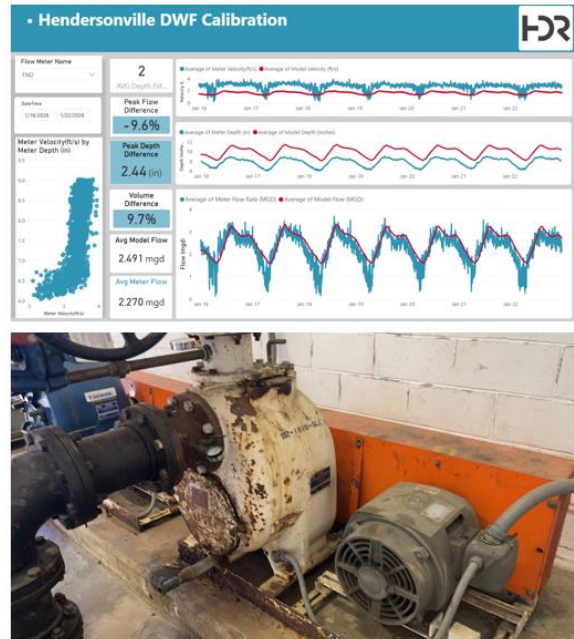
- Project will update our existing 2019 Master Plan
  - 2019 plan available at:
    - [www.hendersonvillenc.gov/water-sewer/about-us/utility-planning](http://www.hendersonvillenc.gov/water-sewer/about-us/utility-planning)
- 2026 Master Plan Update Includes 4 tasks:
  1. Sewer Collection System Data & Infrastructure Review
  2. Hydraulic Model Development, Calibration, and Evaluations
  3. Risk Prioritization and Asset Management Planning
  4. Capital Improvement Plan Development and Master Plan Documentation



# Sewer Collection System Master Plan Update

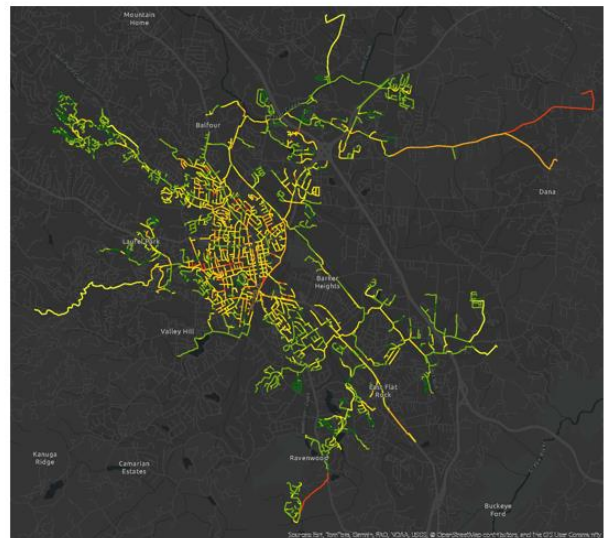
- Latest Progress
  - Data collection for gravity sewers and force mains complete
  - Data collection for pump stations in progress
  - 1:1 digital sewer model in development
  - Risk Prioritization framework has been established\*
  - Future anticipated 2045 Service Area in development\*

\*Additional info in upcoming slides



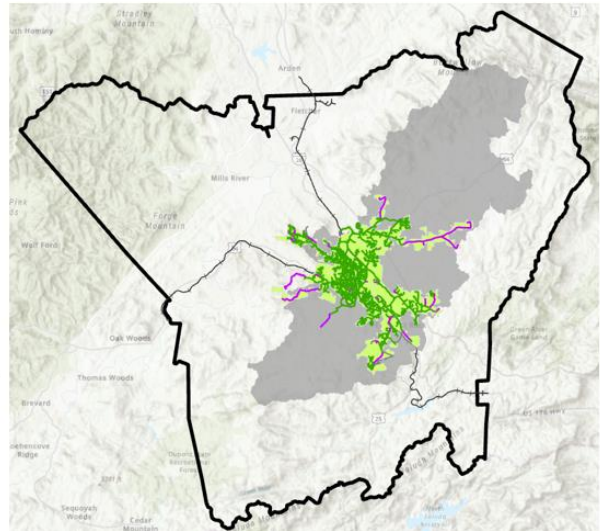
# Sewer Collection System Master Plan Update

- Risk Framework
  - Lines given a Risk score of **1** to **5**
  - $[Risk] = [Likelihood\ of\ Failure] * 65\% + [Consequence\ of\ Failure] * 35\%$
  - Likelihood of Failure established by known information about asset
  - Consequence of Failure established by anticipated impacts to customers, environment, etc.



# Sewer Collection System Master Plan Update

- Service Area
  - Sewer infrastructure costs too much to not plan for tomorrow's needs today.
  - Ultimate buildout of sewer system is dependent on watersheds upstream of Wastewater Treatment Facility.
  - Realistically, what areas will need public sewer in the next 20 years?



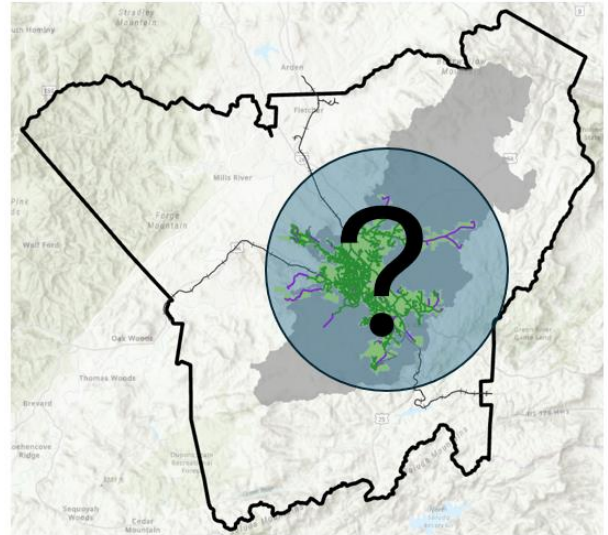
# Sewer Collection System Master Plan Update

- Next Steps
  - Establish a 2045 Anticipated Service Area Boundary.
  - Model future flow needs based upon latest Land Use Plan within anticipated future service area.
  - Develop Capital Improvements Plan to ensure infrastructure can support anticipated needs.
- Schedule
  - Project scheduled to be completed in late 2026.

|                                                                           | Number of Months | Month Year Start | Month Year End | 2025-10 | 2025-11 | 2025-12 | 2026-01 | 2026-02 | 2026-03 | 2026-04 | 2026-05 | 2026-06 | 2026-07 | 2026-08 | 2026-09 | 2026-10 | 2026-11 |
|---------------------------------------------------------------------------|------------------|------------------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Task 1 - Sewer Collection System Data &amp; Infrastructure Review</b>  |                  |                  |                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Project Kick-off                                                        | 1                | 2025-11          | 2025-11        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Data Request                                                            | 2                | 2025-10          | 2025-11        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Data Gap Assessment and Addressing Gaps                                 | 4                | 2025-11          | 2026-02        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Pump Station Assessment                                                 | 1                | 2026-01          | 2026-01        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| <b>Task 2 - Hydraulic Model Development, Calibration, and Evaluations</b> |                  |                  |                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Flow Monitoring                                                         | 2                | 2026-01          | 2026-02        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Hydraulic Model Development                                             | 4                | 2025-11          | 2026-02        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ Hydraulic Model Calibration and Validation                              | 2                | 2026-03          | 2026-04        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| ✓ System Performance Criteria Development                                 | 1                | 2026-01          | 2026-01        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Flow Projections                                                          | 2                | 2026-01          | 2026-02        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Existing and Future Conditions Analysis                                   | 3                | 2026-06          | 2026-07        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| <b>Task 3 - Risk Prioritization and Asset Management Planning</b>         |                  |                  |                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Risk Framework                                                            | 2                | 2026-01          | 2026-02        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| R&R Project Identification                                                | 3                | 2026-03          | 2026-05        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| <b>Task 4 - CIP Development and Master Plan Documentation</b>             |                  |                  |                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 20-Year Capital Improvement Plan and Cash Flow Analysis                   | 2                | 2026-07          | 2026-08        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Master Plan Document                                                      | 3                | 2026-09          | 2026-11        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |

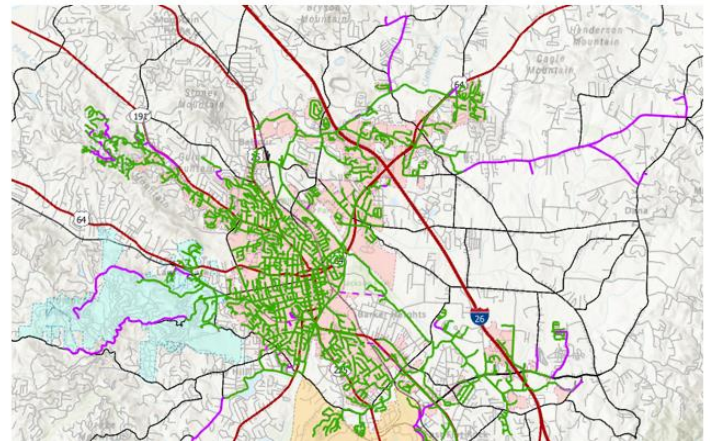
# Sewer Collection System Master Plan Update

- 2045 Service Area
  - Stakeholder feedback is key to understanding future needs, and to allow us to sustainably serve our community.
  - Project is seeking stakeholder engagement to establish a 2045 service area boundary.
    - **Initial feedback can be gathered today**
    - **Formal Collaborative Workshop also scheduled for Tuesday August 4<sup>th</sup> at 11:00 AM at City Hall**
      - All Advisory Board members are welcome to attend



## Sewer Collection System Master Plan Update

Questions and  
initial feedback?



# Sewer Collection System Master Plan Update

- Considerations for 2045 Service Area
  - Managing Existing Service Area
    - Existing Capacity Restrictions – Reduce SSOs / Accept Future Growth
    - Replace Aging Infrastructure / Pipes
    - Abandon Existing Pump Stations – Reduction in Operational Costs
  - Possible New Service Areas
    - New Industrial Development – Economic Development
    - New Residential Development – Where is growth going to happen? When?
    - Septic Tank Conversions – Public Health



## C. Water Shortage Response Plan Update - Adam Steuer, Utilities Director

Utilities Director Adam Steuer gave the following PowerPoint presentation.



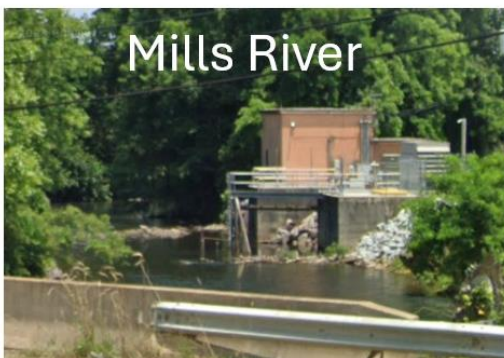
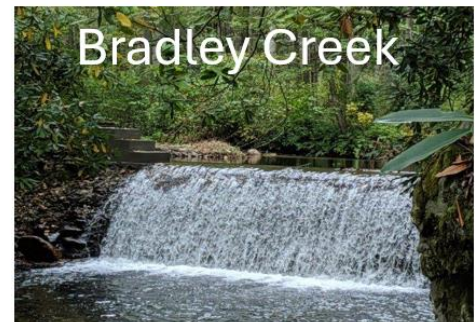
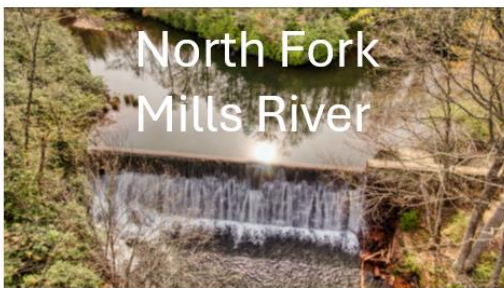
## Water Shortage Response Plan Update

City of Hendersonville, NC  
July 2026

# What is a Water Shortage Response Plan?

- Staged response for water supply shortages
  - Lack of source water (drought, contamination, etc)
  - Equipment failure
  - High system demands
  - Etc.
- Stages become more restrictive based on the shortage severity
  - Voluntary to Mandatory
  - Uses of water: non-essential, socially/economically essential, essential
  - Prohibit or reduce uses
- Legally mandated NCGS 143-355 (l)
- Hendersonville must update its WSRP for the new French Broad River Intake

## Overview – Hendersonville’s Water Supply



# Current Water Supply

| Source              | Normal Conditions | Drought Conditions* |
|---------------------|-------------------|---------------------|
| Mountain Reservoirs | 4.5 mgd           | ~ 0 mgd             |
| Mills River         | 12 mgd            | >2 mgd              |
| French Broad River  | 15 <u>mgd</u>     | 15 mgd              |
| TOTAL               | 31.5 mgd          | >17 mgd             |

- 2025 Average Day Demand: 7.7 mgd
- 2025 Max Day Demand: 9.9 mgd
- 2040 Average Day Demand: 11.4 mgd
- 2040 Max Day Demand: 17.0 mgd

\* Drought Conditions are defined in current WSRP as when the Mills River USGS gauge drops below 55 cfs

## What is a Stream Gauge?

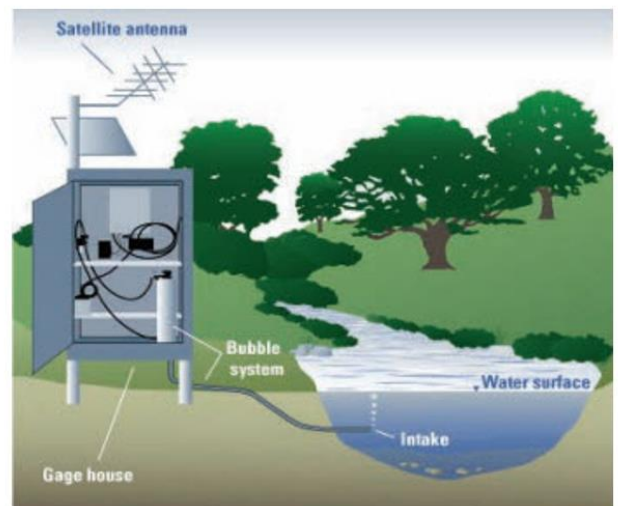
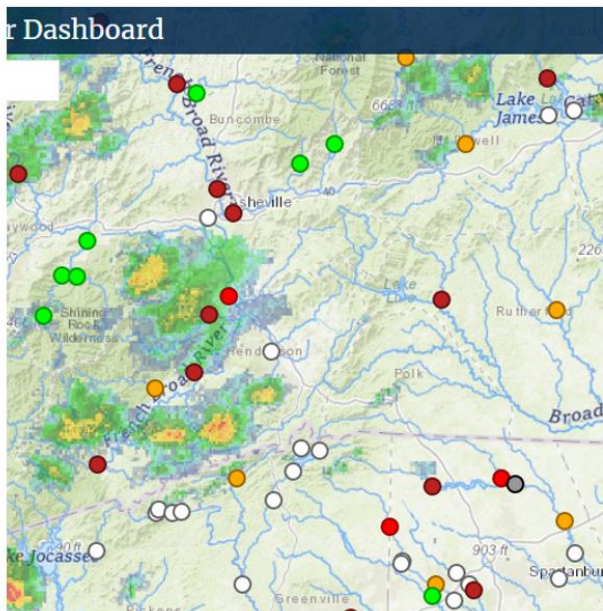


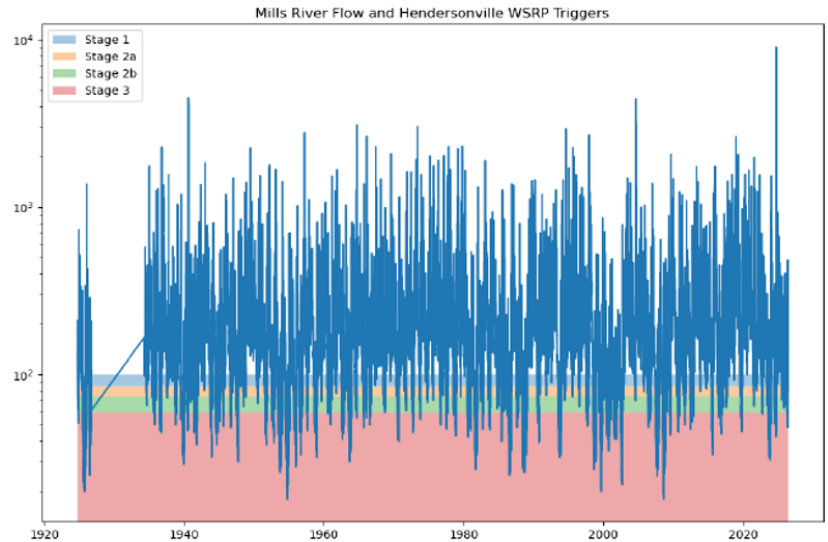
**Figure 2.** Diagram of a typical streamgage installation with equipment used to measure stream stage (by L.S. Coplin, U.S. Geological Survey).

## Current WSRP triggers frequency analysis

As written, current WSRP has some logical inconsistencies— assuming those were errors, this would be the current WSRP requirement

- Made some adjustments for consistency:
  - Stage 1: Flow between 32.5 to 25<sup>th</sup> percentile for seven consecutive days within a 30-day period
  - Stage 2A: Flow between 24.5 to 19<sup>th</sup> percentile for 3 consecutive days
  - Stage 2B: Flow between 19 to 11.5<sup>th</sup> percentile for 3 consecutive days
  - Stage 3: Flow less than 11<sup>th</sup> percentile for 3 consecutive days

| Stage | Occurrence Frequency (stage or greater) |
|-------|-----------------------------------------|
| 1     | 23.6%                                   |
| 2a    | 17.6%                                   |
| 2b    | 14.1%                                   |
| 3     | 9.1%                                    |



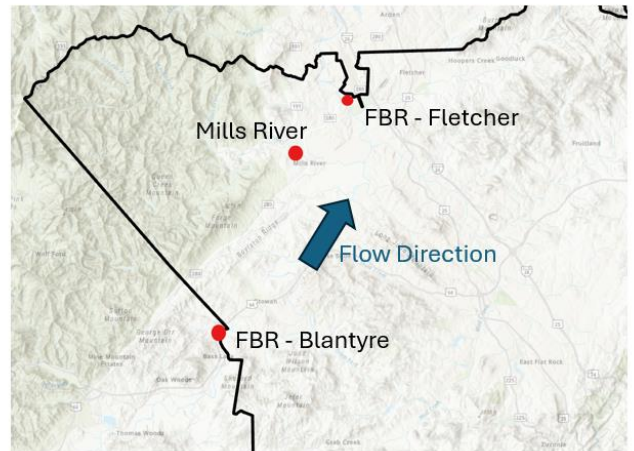
## Setting Stage Triggers

- A River's 7Q10 - hydrologic benchmark representing the lowest consecutive 7-day average streamflow that statistically occurs once every 10 years.
- Regulatory agencies generally allow withdraws of 20% of 7Q10 streamflow and broadly assume no environmental impacts.
- Hendersonville's triggers and response are a policy decision based on responsible stewardship of the resource.

| Stage         | Source Water Demand                                            | Withdraw within 20% 7Q10 | Response                                                                                       |
|---------------|----------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|
| 1 - Advisory  | Current Full Capacity – 15mgd                                  | Yes                      | <b>Voluntary.</b> Limit all non-essential uses                                                 |
| 2 - Alert     | Current Average Day Demand – 7.75mgd                           | Yes                      | <b>Mandatory.</b> Further limit or prohibit certain non-essential uses                         |
| 3 - Warning   | 20% of Reduction of Current Average Day Demand –               | Yes                      | <b>Mandatory.</b> Prohibit non-essential uses. Limit socially and economically essential uses. |
| 4 - Emergency | 30% Reduction of Current Average Day Demand – Severe Condition | No                       | <b>Mandatory.</b> Essential uses only. Water rationing.                                        |

# Proposed Triggers

- All three river gauges at or below flow trigger for a 7-day rolling average
- 14-day waiting period to move into next severe response level
- Exit a stage if above a flow trigger for a 7-day rolling average (no waiting period)



| Stage         | Mills River (USGS 03446000)<br>cfs | FBR Blantyre (USGS 03443000)<br>cfs | FBR Fletcher (USGS 03447687)<br>cfs |
|---------------|------------------------------------|-------------------------------------|-------------------------------------|
| 1 - Advisory  | 42                                 | 178                                 | 237                                 |
| 2 - Alert     | 42                                 | 165                                 | 214                                 |
| 3 - Warning   | 42                                 | 158                                 | 201                                 |
| 4 - Emergency | 42                                 | 145                                 | 178                                 |

## Water Use Classifications – (No Changes)

| Class                                  | Domestic                                                                                  | Commercial/Industrial                                                                                                                     | Public                                                                                                        |
|----------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Essential</b>                       | Sustain life, hygiene and basic sanitation                                                | none                                                                                                                                      | Public Safety, Firefighting, Hospital and Patient Care                                                        |
| <b>Socially/Economically Essential</b> | Kitchen, laundry, minimal watering of vegetables/trees to sustain life                    | Commercial vehicle washing, laundromats, irrigating golf course greens, minimal irrigation to sustain livestock/crops, cooling operations | Filling Swimming Pools indented for use by public serving multiple households, schools, government facilities |
| <b>Non-Essential</b>                   | Washing vehicles, lawn irrigation, washing impervious surfaces, ornamental fountains etc. | Irrigating lawns, parks, golf courses                                                                                                     | Irrigating public parks and recreational areas                                                                |

## Current Plan

| Stage Title        | Reduction Goal | Allowable Rate Surcharge | Effectiveness |
|--------------------|----------------|--------------------------|---------------|
| 1 – Advisory       | 10%            | 0%                       | Voluntary     |
| 2a – Alert Level 1 | 20%            | 110%                     | Mandatory     |
| 2b – Alert Level 2 | 30%            | 120%                     | Mandatory     |
| 3 - Emergency      | 40%            | 130%                     | Mandatory     |

## Proposed Plan

| Stage Title   | Reduction Goal | Allowable Rate Surcharge | Effectiveness |
|---------------|----------------|--------------------------|---------------|
| 1 - Advisory  | 5%             | 0%                       | Voluntary     |
| 2 - Alert     | 10%            | 110%                     | Mandatory     |
| 3 - Warning   | 20%            | 120%                     | Mandatory     |
| 4 - Emergency | 30%            | 130%                     | Mandatory     |

## Frequency Analysis: Proposed Triggers with Current Demands

- With current proposed triggers and associated WSRP assumptions, drought stages are almost never triggered with historical hydrology
- The proposed trigger levels for the French Broad flow, especially at Fletcher, are the most limiting to WSRP stage implementation– flows rarely drop below the proposed trigger levels

| WSRP Stage Frequency Analysis |                         |                    |                    |                    |
|-------------------------------|-------------------------|--------------------|--------------------|--------------------|
|                               | Stage 1 or greater      | Stage 2 or greater | Stage 3 or greater | Stage 4 or greater |
| Total days (in Pd. of record) | 80                      | 40                 | 0                  | 0                  |
| Total yrs                     | 3<br>(1954, 2002, 2008) | 1<br>(1954)        | 0                  | 0                  |

|                                   | Mills River 7-Day Avg Flow | FB @ Blantyre 7-Day Avg Flow | FB @ Fletcher 7-Day Avg Flow |
|-----------------------------------|----------------------------|------------------------------|------------------------------|
| Days where Stage 1 trigger is met | 3.80%                      | 0.30%                        | 0.12%                        |
| Days where Stage 2 trigger is met | 3.80%                      | 0.19%                        | 0.02%                        |
| Days where Stage 3 trigger is met | 3.80%                      | 0.14%                        | 0.00%                        |
| Days where Stage 4 trigger is met | 3.80%                      | 0.09%                        | 0.00%                        |

# Summary of Changes

- FBR Intake reduces the historic daily hydrologic data frequencies:

| Stage/Level   | Current WSRR Occurrence Frequency | Proposed WSRP Occurrence Frequency | Reduction % |
|---------------|-----------------------------------|------------------------------------|-------------|
| 1 – Advisory  | 23.6%                             | 0.12%                              | 99.5%       |
| 2 - Alert     | 17.6%                             | 0.02%                              | 99.9%       |
| 3 - Warning   | 14.1%                             | 0%                                 | ~100%       |
| 4 - Emergency | 9.1%                              | 0%                                 | ~100%       |

- Minor revisions to stage titles (match weather notifications and reduction goals)
- No major revisions to water use classifications, conservation measures, or procedures

## Next Steps

- Adoption by City Council at upcoming meeting.
- Revise Water Shortage Response Ordinance
- Recommendation from the Water and Sewer Advisory Council.

*After some discussion with the board, Travis Bonnema made a motion to move forward with the response plan as presented and bring it in front of City Council. A unanimous vote of the Committee Members present followed. Motion carried.*

## D. Utility Billing Policy & Procedures Revisions - Adam Steuer, Utilities Director

Utilities Director Adam Steuerer gave the following brief PowerPoint presentation.



### Billing Policy and Procedure Revisions

July 27, 2026

#### Summary from April 27, 2026 Meeting

- Meter Tampering
- Delinquent Processing – reduce time to disconnection
- Security Deposits
- Corrective Billing
- Adjustments (Leak & Swimming Pools)
- Credit Card Processing Fees

### Property Owner & Tenant Responsibility



#### Current Challenge

When a tenant or owner leaves or stops service without paying the remaining balance, collection opportunities are limited.



#### KEY RECOMMENDATION

#### Proposed Solution

- Update contract terms that hold the property owner or tenant liable for paying balance on account before they can start service on a new account
- Service automatically transfers to owner once tenant service ends and owner responsible for charges
- No owner deposit for non-owner-occupied property
- Formal process to dispute amounts owed
- Ordinance, Policy & Contract updated to best practices



#### Result

Improved collections

Reduced bad debt

Greater accountability

## Implementation Timeline



### WHAT TAKES EFFECT

- New customer contract terms
- Ordinance amendment
- Billing policy amendment
- Credit card fees absorbed by customer
- Disconnection 4 weeks earlier for unpaid account balances – will waive late fees for initial months
- Collection efforts kick off
- New leak adjustment policy
- Other minor policy changes

### IMPLEMENTATION STEPS

- ✓ Staff training
- ✓ Customer notification campaign (letters, social media, website, realtors, attorneys)
- ✓ New contracts process made easy — customers can complete electronically without visiting City Hall

6. **OTHER BUSINESS** – None

7. **ADJOURNMENT**

There being no further business, the meeting was adjourned at 5:05p.m.

\_\_\_\_\_  
Jennifer Hensley, Mayor Pro Tem & Chairwoman

ATTEST:

\_\_\_\_\_  
Jill Murray, City Clerk