Water Shortage Response Plan

**Water Shortage Response Plan**

**Town of Jefferson, North Carolina**

**May, 2023**

The procedures herein are written to reduce potable water demand and supplement existing drinking water supplies whenever existing water supply sources are inadequate to meet current demands for potable water.

|  |
| --- |
| 1. Authorization |

The Jefferson Town Manager shall enact the following water shortage response provisions whenever the trigger conditions outlined in Section IV are met. In his/her absence, the Jefferson Water Resources Director will assume this role.

Charity Shatley, Jefferson Town Manager

Phone: 336 846-9368

Email: [manager@townofjefferson.org](mailto:manager@townofjefferson.org)

Tim Church, Water Resources Director

Phone: 336 246-2165

Email: [jeffwns@centurylink.net](mailto:jeffwns@centurylink.net)

|  |
| --- |
| 1. Notification |

The following notification methods may be used to inform water system employees and customers of a water shortage declaration.

* Employee email announcements
* Notices at municipal buildings
* Notices in water bills
* Public announcement by County Emergency Management Coordinator
* Door to door notification by Town of Jefferson police department
* Door to door notification by Town of Jefferson maintenance personnel
* Town of Jefferson website

1

Required water shortage response measures will be communicated through the following:

* Announcements on WKSK radio, WBTV Charlotte, WCYB, Bristol
* Printed in *Ashe Post & Times,* West Jefferson

|  |
| --- |
| 1. Levels of Response |

Five levels of water shortage response are outlined in the table below.

The five levels are: Voluntary reductions, Mandatory reductions I and II,

Emergency reductions, and Water rationing. A detailed description of each response and level and corresponding water reduction measures are below.

|  |  |  |
| --- | --- | --- |
| **Stage** | **Response** | **Descriptions** |
| 1 | Voluntary  Reductions | Users are asked to reduce water use and improve water use efficiency; however no penalties apply for noncompliance. Water supply conditions indicate a potential for shortage. |
| 2 | Mandatory Restrictions I | Users must obey required water use reduction and efficiency measures; penalties apply for noncompliance.  Water supply conditions are significantly lower than the seasonal norm and water shortage conditions are expected to persist. |
| 3 | Mandatory Restrictions II | Same as in Stage 2 |
| 4 | Emergency Reductions | Water supply conditions are substantially diminished and pose an imminent threat to human health or environmental integrity. |
| 5 | Water Rationing | Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity. |

2

In Stage 1, Voluntary Reductions, all water users will be asked to reduce their normal water use by 5%. Customer education and outreach programs will encourage water conservation and efficiency measures, including; irrigating landscapes a maximum of one inch per week, runoff and watering impervious surfaces; watering plants deeply to encourage root growth; washing only full loads of clothes and dishes; using spring-loaded nozzles on garden hoses, identifying and repairing all water leaks.

In Stage 2, Mandatory Restrictions I, all customers are expected to reduce their water use by 10% in comparison to their previous month’s bill. In addition to continuing to encourage all voluntary reduction actions, the following restrictions also apply:

* Irrigation is limited to one-half inch per week between 8PM and 8AM.
* Outdoor use of drinking water for washing impervious surfaces prohibited
* Testing/Training requiring drinking water will be limited. (Fire dept.)

In Stage 3, Mandatory Reductions II, customers must continue actions from all previous stages and further reduce water use by 20% compared to their previous month’s water bill. All non-essential uses of potable water are banned and garden/landscape irrigation must be reduced to the minimum amount necessary for survival. Additionally in Stage 3, a drought surcharge of 1.5 times the normal water rate applies.

In Stage 4, Emergency Reductions, customers must continue all actions from previous stages and further reduce their water use by 25%. A ban on all use of potable water except to protect public health and safety is implemented and drought surcharges increase to 2 times the normal water rate.

The goal of Stage 5, Water Rationing, is to provide drinking water to protect the public health, (residences, residential health care facilities, and correctional facilities). In Stage 5 all customers are permitted to use water only at the minimum required for public health protection. Firefighting is the only allowable outdoor use and pickup locations for distributing potable water will be announced according to the ***Town of Jefferson Source Water Resiliency and Response Plan.*** Drought surcharges increase to 5 times the normal water rate.

3

|  |
| --- |
| 1. Triggers for Run-of-River |

The South Fork of the New River is a major source of water for the Town of Jefferson. The following streamflow measurements, intake levels, or production capacities trigger entry into corresponding water restriction stages.

|  |  |
| --- | --- |
| **Stage** | **River Operating Conditions USGS Gauge 0316100 (Sheets Bridge)** |
| 1 | Percentile class 20 - 24 |
| 2 | Percentile class 15 - 19 |
| 3 | Percentile class 10 - 14 |
| 4 | Percentile class < 10 |
| 5 | Percentile class < 10 |

**Note that in addition to “Run-of-River” conditions, the staged responses may also be triggered based upon;**

* Source water contamination
* Changes in raw water quality (algal blooms, sedimentation, etc.)
* Equipment and/or facility failures
* Major water main breaks

|  |
| --- |
| 1. Triggers for Groundwater Wells |

Groundwater wells typically supply 50% or more of the Town of Jefferson’s drinking water. The following situations in any of the wells may trigger an elevation in the staged responses, based on severity of the conditions.

* Power failure from BREMCO
* Failure of pump/motor equipment
* Reductions in well yields
* Major main breaks

4

|  |
| --- |
| 1. Return to Normal |

When water shortage conditions have abated and the situation is returning to normal, water conservation measures employed during each phase should be decreased in reverse order of implementation. Permanent measures directed toward long-term monitoring and conservation should be implemented or continued so that the community well be in a better position to prevent shortages.

|  |
| --- |
| 1. Enforcement |

The provisions of the water shortage response plan will be enforced by the Jefferson Town Manager, Jefferson Water Resources Director, Jefferson Public Works Superintendent, local law enforcement personnel. Violators may be reported to Town Hall. Citations are assessed according to the following schedule based on the number of prior violations and current level of water shortage.

|  |  |  |  |
| --- | --- | --- | --- |
| **Water Shortage Level** | **First Violation** | **Second Violation** | **Third Violation** |
| Voluntary Reductions | N/A | N/A | N/A |
| Mandatory Reductions  (Stage 2 and 3) | Warning | $250 | Service  Discontinued |
| Emergency Reductions | $250 | Service  Discontinued |  |
| Water Rationing | $500 | Service  Discontinued |  |
| **Drought surcharge rates are effective in Stages 3, 4, and 5.** | | | |

|  |
| --- |
| 1. Public Comment |

Customers will have multiple opportunities to comment on the provisions of the Water Shortage Response Plan.

* A draft plan will be available at Town Hall for customers to review.
* A notice will be included in customer water bills notifying them of such.
* A draft plan will be published at least 30 days prior to an adoption vote by the Jefferson Board of Aldermen.

5

|  |
| --- |
| 1. Variance Protocols |

Applications for water use variance requests are available from Town Hall. All applications must be submitted to the Town Clerk for review by the Town Manager or his/her designee. A decision to approve or deny the request will be determined within two weeks of submittal after careful consideration of the following criteria:

* Impact on water demand
* Expected duration
* Alternative source options
* Social and economic importance
* Purpose (necessary use of drinking water)
* Prevention of structural damage

|  |
| --- |
| 1. Effectiveness |

The effectiveness of the Jefferson Water Shortage Response Plan will be determined by comparing the stated water conservation goals with observed water use reduction data. Other factors to be considered include frequency of plan activation, any problem periods without activation, total number of violations compared to previous year’s seasonal data.

6

|  |
| --- |
| 1. Revision |

The water shortage response plan will be reviewed and revised as needed to adapt to new circumstances affecting water supply and demand, following implementation of emergency restrictions, and at a minimum of every five years in conjunction with the updating of our Local Water Supply Plan. Further, a water shortage response planning work group will review procedures following each emergency or rationing stage to recommend any necessary improvements to the plan to the Jefferson Board of Aldermen. The Town of Jefferson Water Resources Director is responsible for initiating all subsequent revisions.

|  |
| --- |
| **NOTE to personnel implementing the Water Shortage Response Plan:**  *It is important to use the “Source Water Resiliency and Response Plan” as a companion guidance document when conditions require the Water Shortage Response Plan to be activated. It contains contact information and response procedures that will be critical to successfully implementing the WSRP.*  ***A hard copy of the “Source Water Resiliency and Response Plan / Emergency Response Plan is on file in the office of the Water Treatment Plant.*** |

7

|  |
| --- |
| Town of Jefferson Water Resources  **WATER SHORTAGE RESPONSE PLAN**  Revised May,2023 |

TABLE OF CONTENTS

Page

1. Authorization 1
2. Notification 1
3. Levels of Response 2
4. Triggers for Run-of-River 4
5. Triggers for Groundwater Wells 4
6. Return to Normal 5
7. Enforcement 5
8. Public Comment 5
9. Variance Protocols 6
10. Effectiveness 6
11. Revision 7