

**Water Shortage Response Plan
City of Gastonia, North Carolina
May 17, 2018**

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.

I. Authorization

The Gastonia City Manager shall enact the following water shortage response provisions in accordance with the standards set forth in the Gastonia Code of Ordinances – Chapter 14, Article VII., entitled Emergency Water Conservation. In his or her absence, the Director of Public Utilities will assume this role.

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II. Declaration

Whenever the regional water supply or the water supply of the City of Gastonia's water system is impacted due to conditions which may adversely affect the continued availability of water for human consumption, sanitation, health and fire protection, it may be necessary to declare a water shortage and implement conservation requirements under the standards set forth in the Gastonia Code of Ordinances -- Chapter 14, Article VII. – Emergency Water Conservation.

III. Notification

The following notification methods will be used to inform water system employees and customers of a water shortage declaration: employee e-mail announcements, notices at municipal buildings, notices in water bills and on the City of Gastonia website homepage. Required water shortage response measures will be communicated through, publication in a newspaper of general circulation or PSA announcements on local radio and cable stations, and on the City of Gastonia website. Declaration of emergency water restrictions will be communicated to all customers by the Blackboard Connect telephone system.

IV. Levels of Response

Four levels of water shortage response are outlined in the table below. The levels of response are based upon criteria set by the Catawba-Wateree Drought Management Advisory Group (C-W DMAG). The four levels of water shortage response are: voluntary reductions, mandatory reductions I and II, and emergency reductions. A detailed description of each response level and corresponding water reduction measures follow below.

Stage	Response	Description
1	Voluntary Reductions	Water users are encouraged to reduce their water use and improve water use efficiency; however, no penalties apply for noncompliance. Water supply conditions indicate a potential for shortage.
2	Mandatory Reductions I	Water users must abide 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 Reductions 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.

In Stage 1, Voluntary Reductions, all water users will be asked to reduce their normal water use by 3 to 5%. Customer education and outreach programs will encourage water conservation and efficiency measures including: irrigating landscapes at a maximum of two days per week between the hours of 7:00 p.m. to 5:00 a.m., preventing water waste, runoff and watering impervious surfaces; reduction of residential vehicle washing; washing only full loads in clothes and dishwashers; using spring-loaded nozzles on garden hoses; and identifying and repairing all water leaks.

In Stage 2, Mandatory Reductions I, all customers are expected to reduce their water use by 5 to 10% in comparison to their average usage. In addition to continuing to encourage all voluntary reduction actions, the following restrictions apply: irrigation is limited to two days per week between the hours of 7:00 p.m. and 5:00 a.m. as specified in Section 14-814 (2) of the Gastonia Code of Ordinances; outdoor use of drinking water for washing impervious surfaces is prohibited; eliminate residential vehicle washing; and all testing and training purposes requiring drinking water (e.g. fire protection) will be limited.

In Stage 3, Mandatory Reductions II, customers must continue actions from all previous stages and further reduce water use by 10 to 20% compared to their average water usage. Additional water restrictions as specified in Section 14-814 (3) of the Gastonia Code of Ordinances will apply.

In Stage 4, Emergency Reductions, customers must continue all actions from previous stages and further reduce their water use by 20 to 30% compared to their average usage. A ban on all use of drinking water except to protect public health and safety is implemented. The City Manager may limit or prohibit new service connections to the city's water system as specified in Section 14-812 (5) of the Gastonia Code of Ordinances.

V. Triggers

Gastonia is provided water from Mountain Island Lake on the Catawba River. Gastonia will abide by the triggers set forth in the Catawba-Wateree Drought Management Advisory Group Low Inflow Protocol (LIP) Agreement or as specified in Section 14-810 of the City of Gastonia Code of Ordinances.

Summary of Trigger Points

Stage	Storage Index		Drought Monitor (3 month Average)		USGS Streamflow Gages
0	90% < SI < TSI		0 = DM		AVG = 85%
1	75% < SI = 90% TSI	= And	1 = DM	Or	AVG. = 78%
2	57% < SI = 75% TSI	And	2 = DM	Or	AVG = 65%
3	42% , SI = 57% TSI	And	3 = DM	Or	AVG = 55%
4	SI = 42% TSI	And	4 = DM	Or	AVG = 40%

*Catawba-Wateree Relicensing Agreement, Low Inflow Protocol

SI – Storage Index

TSI – Total Storage Index

DM – Drought Monitor

VI. 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 will be in a better position to prevent shortages and respond to recurring water shortage conditions.

VII. Enforcement

The provisions of the Water Shortage Response Plan will be enforced by City of Gastonia Public Works and Utilities Department, Police and Fire Departments, and other such personnel as designated by the City Manager. Violators may be reported to the City's dedicated water conservation hotline or the e-mail contact listed on the town's website. Citations are assessed according to the following schedule depending on the number of prior violations and current level of water shortage.

Water Shortage Level	First Violation	Second Violation	Third Violation	Fourth and Successive Violation
Voluntary Reductions	N/A	N/A	N/A	N/A
Mandatory Reductions (Stages 2 and 3)	Warning	\$100	\$250	\$500
Emergency Reductions	\$250	\$500	\$1000	\$1000

The City of Gastonia shall have the authority to discontinue or restrict water use during a Stage 2 or higher water shortage declaration period in accordance with Section 14-822 of the Gastonia Code of Ordinances.

VIII. Public Comment

Customers will have multiple opportunities to comment on the provisions of the Water Shortage Response Plan. First, a draft plan will be available at the Municipal Operations Center and City Hall for customers to view. A notice will be included in customer water bill notifying them of such. Also a draft plan will be published on the City of Gastonia website. A public hearing will be scheduled with notice printed in newspaper of general circulation to collect comments on the draft. All subsequent revisions to the draft plan will be published at least 30 days prior to an adoption vote by Gastonia's City Council.

IX. Variance Protocols

A variance to the restrictions of the water use may be requested in accordance with Section 14-813 of the Gastonia Code of Ordinances. Applications for water use variance requests are available from the Office of the City Engineer or the Municipal Operations Center and the City of Gastonia website. All applications must be submitted to the City Hall for review by the City Manager or his or her designee. A decision to approve or deny individual variance requests 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 (i.e. necessary use of drinking water) and the prevention of structural damage.

X. Effectiveness

The effectiveness of the Gastonia 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 violation citations, desired reductions attained and evaluation of demand reductions compared to the previous year's seasonal data.

XI. 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 Gastonia's City Council. The Gastonia City Manager is responsible for initiating all subsequent revisions.