

## Water Shortage Response Plan Town of Beech Mountain, North Carolina

The table below outlines five levels of water shortage response: voluntary reductions, mandatory reductions I and II, emergency reductions, and water rationing.

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 by 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.
5	Water Rationing	Water supply conditions are substantially diminished, and remaining supplies must be allocated to preserve human health and environmental integrity.

**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; preventing water waste, runoff, and watering impervious surfaces; watering plants deeply to encourage root growth; washing only full loads in clothes and dishwashers; using spring-loaded nozzles on garden hoses; and identifying and repairing all water leaks.

**Stage 2, Mandatory Reductions I:** All customers are expected to reduce their water use by 10% compared to their previous month's water bill. In addition to continuing to encourage all voluntary reduction actions, the following restrictions apply; irrigation is limited to a half inch per week between 8PM and 8AM; outdoor use of drinking water for washing impervious surfaces is prohibited; and all testing and training purposes requiring drinking water (e.g., fire protection) will be limited.

**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 drinking water uses are banned, and garden and 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.

**Stage 4, Emergency Reductions:** Customers must continue all actions from previous stages and further reduce their water use by 25% compared to their previous month's water bill. A ban on all use of drinking water except to protect public health and safety is implemented, and drought surcharges increase to 2 times the normal water rate.

**Stage 5, Water Rationing:** All customers are only permitted to use water at the minimum required for public health protection. Firefighting is the only allowable outdoor water use. Pickup locations for distributing potable water will be announced according to Beech Mountain's Emergency Response Plan. Drought surcharges increase to 5 times the normal water rate.

**When Are Water Restrictions Enacted?**

The Town of Beech Mountain's water source is Buckeye Lake reservoir. The following measurements of intake levels trigger entry into corresponding water restriction stages.

1. The Buckeye Creek Reservoir shall continue to be operated as approved in Certification #1756 issued October 8, 1984 with the following modified minimum flow release schedule. [15A NCAC 02H .0506 (b)(2)]

**January 1 – April 15**

<b>Reservoir Water Surface Elevation</b>	<b>Action as required by Water Shortage Response Plan (WSRP)</b>	<b>Minimum Release MAF = 6.32 CFS</b>
Flowing over spillway	None	40% MAF = 2.53 CFS
Between top of spillway (but not flowing over) and 4 feet below spillway	Tier 1 Voluntary Restrictions	40% MAF = 2.53 CFS
Between 4 feet below spillway and 6.5 feet below spillway	Tier 2 Mandatory Restrictions 10% reductions	20 % MAF = 1.26 CFS
Between 6.5 feet below spillway and 13.5 feet below spillway	Tier 3 Mandatory Restrictions 20% reductions	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)
Between 13.5 feet below spillway and 23.5 feet below spillway	Tier 4 Emergency Restrictions 25% reductions	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)
23.5 feet below spillway	Tier 5 Water Rationing	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)

**April 16 – December 31**

<b>Reservoir Water Surface Elevation</b>	<b>Action as required by Water Shortage Response Plan (WSRP)</b>	<b>Minimum Release MAF = 6.32 CFS</b>
Flowing over spillway	None	20% MAF = 1.26 CFS
Between top of spillway (but not flowing over) and 4 feet below spillway	Tier 1 Voluntary Restrictions	20% MAF = 1.26 CFS
Between 4 feet below spillway and 6.5 feet below spillway	Tier 2 Mandatory Restrictions 10% reductions	15 % MAF = 0.95 CFS
Between 6.5 feet below spillway and 13.5 feet below spillway	Tier 3 Mandatory Restrictions 20% reductions	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)
Between 13.5 feet below spillway and 23.5 feet below spillway	Tier 4 Emergency Restrictions 25% reductions	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)
23.5 feet below spillway	Tier 5 Water Rationing	Outflow will equal Inflow determined using USGS Stream Gauges (upstream and downstream)

- Stage 1 – 0 feet (No longer flowing over spillway) elevation 3428’
- Stage 2 – 4 feet below spillway
- Stage 3 – 6.5 feet below Spillway (top intake)
- Stage 4 – 13.5 feet below Spillway (Middle intake)
- Stage 5 – 23.5 feet below Spillway (Bottom Intake)

**Enforcement**

The provisions of the water shortage response plan will be enforced by the Town of Beech Mountain utility department and police personnel. Violators may be reported to the Town’s dedicated water conservation hotline. Citations are assessed according to the following schedule depending on the number of prior violations and current level of water shortage.

<b>Water Shortage Level</b>	<b>First Violation</b>	<b>Second Violation</b>	<b>Third Violation</b>
Voluntary Reductions	N/A	N/A	N/A
Mandatory Reductions (Stages 2 and 3)	Warning	\$250	Discontinuation of Service
Emergency Reductions	\$250	Discontinuation of Service	Discontinuation of Service

Water Rationing	\$500	Discontinuation of Service	Discontinuation of Service
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Drought surcharge rates are effective in Stages 3, 4 and 5.