

**Water Shortage Response Plan
Town of Aberdeen, North Carolina
August 8, 2011**

The purpose of these procedures are 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 Aberdeen Town Manager shall, after communication to the Mayor and Town Board, enact the following water shortage response provisions whenever the trigger conditions outlined in Section IV are met. In his or her absence, the Public Works Director will assume this role.

Town Manager
Phone: (910) 944-1115

Public Works Director
(910) 944-7012

II. Notification

The Town will use the following notification methods to inform water system employees and customers of declarations and requirements:

A water shortage declaration

- Publication in a newspaper of general circulation,
- Through general news media,
- Other means deemed necessary for making such resolutions public
- Employee e-mail announcements,
- Staff meeting announcements,
- Notice at municipal buildings,
- Notices in water bills, and
- Notices on the Town of Aberdeen's website and TV station

Upon receiving such report, and upon determining that water conservation measures are necessary to adequately address the water shortage, the manager may declare any stage of water conservation described herein to be in force. Following such initial report to the governing board, the manager may impose such stages water conservation as may be deemed necessary to protect the Town's water supplies. The manager or the governing board may terminate any stage of water conservation upon determining that it is no longer necessary.

III. Levels of Response

The five levels of water shortage response, a general description of each response level, corresponding water reduction measures and goals, penalties, surcharges and water supply conditions are outlined in the table below. A list of specific responses follows the table.

Stage	Response	Description
1	Voluntary Reductions	Water users are encouraged to reduce all discretionary uses of water by the greatest extent possible and wasteful use of water is discouraged No penalties apply for noncompliance. Water supply conditions indicate a potential for shortage.
2	Mandatory Reductions I	Water users are required to comply with mandatory water use reduction and efficiency measures with a residential reduction goal of 10% of average usage. 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	Mandatory requirements become more restrictive to meet a reduction goal of 25%. Mandatory reduction of 50% imposed for golf courses and playing fields Penalties apply Water shortage conditions are worsening.
4	Emergency Reductions (Water Shortage Emergency)	Additional mandatory requirements are necessary to meet a water reduction goal of 25% of average usage for residential users and mandatory reductions of 35% for non-residential users. Penalties apply. Water supply conditions are substantially diminished and pose an imminent threat to human health or environmental integrity.
5	Water Rationing (Water Shortage Crisis)	Residential customers shall continue to reduce consumption to any degree feasible with a goal of a reduction of at least 40% of average usage. Non-residential users mandatory reduction increased to 50% Water Rationing is imposed to provide drinking water to protect public health (e.g. residences, residential health care facilities, and correctional facilities). Penalties apply. Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity.

Response Actions for Each Stage

Stage 1 - Voluntary Reductions

Emphasize water conservation and efficiency measures including

- encouraging reduction of all discretionary water uses to the greatest extent possible,
- discourage wasteful use of water,
- discourage use of water to wash impervious surfaces;
- encourage use of automatic shut-of nozzles on hand-held hoses;
- discourage frequent washing of vehicles and use of an automatic shutoff nozzle when washing cars is required,
- discourage fund raising car washes unless conducted at a commercial facility where water is recycled through the facilities operation,
- encourage limiting sprinkler irrigation operation to three days a week between the hours of 7pm to 5am and restrict watering to Monday, Wednesday, and Friday between the hours of 7pm and 5am,
- Restrict hand watering of trees, shrubs, flower, and vegetable gardens between 9am and 6pm
- Discourage planting of new shrubs, trees, and ornamentals
- Encourage restaurants to serve water only upon request
- Discourage use of water utilizing non re-circulating fountains
- Reduce water supply line pressure where feasible
- Encourage conservation in public buildings by reducing pressure at plumbing fixtures and installing restrictive devices
- Encourage water conservation in all phases of construction related activities and use of water from supplemental sources

Stage 2 - Mandatory Reductions I

Continue to encourage all voluntary reductions of Stage 1 and make the following activities unlawful:

- Use of water for any unnecessary purpose or to intentionally waste water;
- Watering lawns, grass, shrubbery, trees, flower, and vegetable gardens, except by hand held container or hose with an automatic shut off nozzle within the hours of 5pm and 9am
- Operate a sprinkler irrigation more than three days a week or outside of the hours of 7pm and 5am and restrict watering to Monday, Wednesday, and Friday for odd numbered addresses and Tuesday, Thursday, and Saturday for even numbered addresses between the hours of 7pm and 5am,
- Operate or introduce water into any non re-circulating ornamental fountain, pool or other similar structure,
- Serve drinking water in food service establishments except as requested,

- use of drinking water for washing exterior surfaces and impervious surfaces except as exempted,
- wash vehicles except with a hand held hose equipped with an automatic shut off nozzle or as permitted to use water for that purpose,
- Exceed water usage mandates.

Stage 3 - Mandatory Reductions II

Customers must continue actions from all previous stages and

- All non-essential uses of drinking water are banned, and
- garden and landscape irrigation must be reduced to the minimum amount necessary for survival.

Stage 4 - Emergency Reductions

Customers must continue all actions from previous stages and

- A ban on all use of drinking water except to protect public health and safety is implemented.

Stage 5 - Water Rationing

- 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 Aberdeen’s Emergency Response Plan.

IV. Triggers

The Town of Aberdeen’s water source is groundwater, the following measurements of well pumping times and well levels in relationship to pump intake levels trigger entry into corresponding water restrictions stages.

The Town Manager will enact the plan directly whenever a water shortage response takes place after communication to the Mayor and Town Board. The Town Manager will then give notice to the public through the media and such other means as are reasonably calculated to make the public aware of the condition. In the event the Town manager is not available the Public Works Director will give notice to the public as required.

Stage	Well Operating Conditions
1	Pumping Time >10 Hours 20% reduction in seasonal normal distance from static water level and pump intake 20% increase pumping time for same output
2	Pumping Time >12 Hours 40% reduction in distance from static water level and pump intake 40% increase pumping time for same output
3	Pumping Time >14 Hours 60% reduction in distance from static water level and pump intake 60% increase pumping time for same output
4	Pumping Time >20 Hours 80% reduction in distance from static water level and pump intake
5	Water level at pump intake elevation

V. Enforcement

The provisions of the water shortage response plan will be enforced by Town of Aberdeen Public Works Department, Police Department, and Fire Department and any other personnel designated by the Town Manager.

Citations are assessed according to the following schedule depending on the type of service, number of prior violations, and current level of water shortage.

Water Shortage Level	First Violation	Second Violation	Third Violation	Subsequent Violations
Voluntary Reductions (Stage 1)	N/A	N/A	N/A	N/A
Mandatory Reductions (Stages 2 and 3)	Warning (R) Warning (NR)	\$100 (R) \$100 (NR)	\$250(R) \$250 (NR)	\$500(R) \$2000 (NR)
Emergency Reductions (Stage 4)	\$100 (R) \$100 (NR)	\$250 (R) \$250 (NR)	\$1000 (R) \$2000 (NR)	\$1000 (R) \$2000 (NR)
Water Rationing (Stage 5)	\$250 (R) \$500 (NR)	\$500 (R) \$1000 (NR)	\$1000 (R) \$2000 (NR)	\$1000 (R) \$2000 (NR)

(R) = Residential Customer (NR) = Non-Residential Customer

In addition to the above civil fines, violators are, upon conviction, subject to Criminal fines not exceeding a maximum of \$500 a term of imprisonment up to 20 days.

Water service may be restricted or discontinued in the event of any violation of the provisions of the Water Shortage Emergency Ordinance during a Stage 2 or higher condition or for uncorrected water leakage.

VI. Variance Protocols

Applications for a Water Use Variance Request will be available from the Town of Aberdeen website (www.townofaberdeen.net) and at Town Hall. The Public Works Director or their designee will review all applications. 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.

VII. Effectiveness

The effectiveness of the Aberdeen 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.

VIII. Revision

The Water Shortage Response Plan will be reviewed and revised as needed to adapt to new circumstances affecting water supply and demand and at a minimum of every five years in conjunction with the updating of our Local Water Supply Plan. The plan may also be revised following implementation of emergency restrictions to make adjustments required to reduce potable water demand and supplement existing drinking water supplies.

Further, a water shortage response planning work group will be formed to review procedures following each emergency or rationing stage to recommend any necessary improvements to the plan to Aberdeen's Town Board of Commissioners. The Town of Aberdeen Public Works Director is responsible for initiating all subsequent revisions.