

City of Salisbury

WATER SHORTAGE RESPONSE PLAN (WSRP)

Introduction

This Water Shortage Response Plan (WSRP) is implemented to meet the requirements of General Statute 143-355.2 and 15A NCAC 02E. 0607. The plan can be utilized to meet water needs during a drought, water supply disruption, water distribution problems, or water quality problems. It can also serve as a useful tool for responding to man-made or natural disasters. This plan applies to all users connected directly or indirectly to the public treated water supply.

A. Objectives

1. To establish clear criteria for evaluating water shortage levels.
2. To authorize the selected authority to implement defined voluntary, mandatory, and emergency water conservation measures.
3. To determine enforcement protocols and variance approval procedure and criteria.
4. To evaluate the effectiveness of this plan and revise the plan if needed.

B. Authority for WSRP Implementation

Whenever a potential water shortage is encountered, the City Council has authorized the City Manager to declare a water shortage and implement the necessary water conservation measures. A water shortage could be due to a shortage of treated water, the water supply not being adequate to meet normal needs, or system conditions such as equipment or facility failure. In the absence of the Manager, the Utilities Director or other designee shall be authorized to make this declaration.

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The City Manager or designee shall have authority to implement, maintain, modify, and rescind any one or more of the conservation measures and to make them applicable during various times of the month, week, or day as is appropriate to protect the public health, safety, and welfare or until the conditions requiring their imposition no longer exist.

Upon declaration of water supply shortage, all municipalities purchasing water from the City shall enforce the appropriate conservation measures for the declared level of water supply shortage.

C. Notification of WSRP Activation and Conservation Measures

All water users and system employees will be notified when the WSRP has been implemented via any or all of the following strategies as appropriate for the shortage situation. Any change in the water shortage situation will be announced through the same strategies used initially.

- Local daily newspaper for 2 consecutive issues or weekly as long as condition persists
- Public service announcement via local radio and government access television channel
- Reverse 911 notice to all customers
- Signs posted in City Hall, City Office Building and Utility Department Offices
- Website
- Water Bills

D. Levels of Severity

Levels of water shortage severity have been determined along with specific measurement criteria of available supply, demand, system conditions, or water quality indicators.

Water Shortage Levels:

- **Alert**
Conditions indicate potential for water supply shortages.
- **Level I Voluntary**
Conditions indicate potential for water supply shortages; voluntary conservation is encouraged.
- **Level I Mandatory**
Conditions indicate potential for water supply shortages; Mandatory restriction measures are imposed for irrigation uses, voluntary conservation is encouraged.
- **Level II Mandatory**
Water supplies are measurably lower than the seasonal norm and are diminishing. Mandatory restriction measures are imposed.
- **Level III Mandatory**
Water supplies are measurably lower than the seasonal norm and are diminishing. Mandatory restriction measures are imposed.
- **Level IV Emergency**
The system is experiencing a severe water shortage; drinking water supply is clearly inadequate and more stringent restriction measures must be imposed.

E. Water Use Priorities

Water use prioritization is a key element to the success of this plan. By grouping water users by category, service can be maintained consistent with community needs, values, and priorities. All water users are affected with implementation of this plan, but in a logical and progressive manner.

Class 1 -Essential Drinking Water Uses

In the event of a water shortage, the following drinking water uses have been determined to be essential uses of potable water:

- Domestic
- Patient Care / Rehabilitative Services
- Public Use (e.g. Fire fighting, health and safety purposes; water needed to sustain human and animal life; and water necessary to satisfy federal, state and local public health, safety or environmental protection requirements)

Class 2 -Socially/Economically Important Drinking Water Uses

In the event of a water shortage, the following drinking water uses have been determined to be socially or economically important uses of potable water:

- Industrial, Commercial, Institutional
- Outdoor (minimal levels for plant and animal survival)
- Agricultural
- Maintaining community pools
- Commercial car washing

Class 3 -Non-Essential Drinking Water Uses

In the event of a water shortage, the following drinking water uses have been determined to be non-essential uses of potable water:

- Turf irrigation
- Ornamental (without aquatic habitats)
- Outdoor Watering and Impervious Surface Washing (public/private)
- Water to fill or refill pools or hot tubs
- Non-commercial vehicle washing

F. Triggers

1. Drought

Specific triggers for moving to more and less restrictive water use conservation measures at each level have been developed and are described in the attachment Water Shortage Measurement Criteria. Criteria will be evaluated each Thursday to determine the appropriate level of response for the following week (Monday through Sunday).

Conservation measures will move to more restrictive as indicated by the triggers, but generally not more than two (2) levels per week.

Conservation measures will move to less restrictive as indicated by the triggers, but generally not until after the triggers indicate less restrictive conservation measures for at least two (2) weeks and not more than one (1) level per week.

2. Water Treatment, Storage, or Distribution Capacity Shortage

In addition to conditions caused by drought, the City may declare a water supply shortage whenever customer demand – as averaged over three (3) consecutive days – exceeds 85 percent of the City's capability of treating and delivering water. The stage and duration of such a water supply shortage shall be guided by the degree to which customer demand approach or exceed capacity to meet those demands, and by the degree to which conservation efforts successfully reduce short-term demands.

3. Natural and Man-Made Disasters and Catastrophic Equipment and Plant Failure Shortage

Any other circumstances, including service losses caused by equipment or facility failure, human error, deliberate act, weather, or other natural disaster, which constrain the City's water supply, treatment, or distribution capacity to less than reasonably needed by its customers, shall constitute a water supply shortage requiring immediate action by the City.

G. Levels of Response

Listed below are the measures to be taken at each level in response to a water shortage to reduce demand, extend the life of supplies in the event of a water shortage, and to avoid the need for more extreme measures if conditions worsen.

Alert: Water Use Awareness

- Issue a water shortage advisory.
- Increase conservation educational campaign.

Level I Voluntary: Water Use Awareness

- Issue a water shortage advisory.
- Increase conservation educational campaign.
- 5% potable water use reduction goal (system-wide as well as individual users).
- Request voluntary conservation from all water users.
- The following voluntary water conservation practices shall be encouraged:
 - Watering of lawns and ornamental plants should be limited to that necessary for plant survival only. Irrigation uses should be limited to between the hours of 9:00 p.m. and 4:00 a.m.
 - Planting of new ornamental trees or plants or seeding of lawns should be deferred until the water emergency situation no longer exists.
 - Household water should be reutilized to the greatest extent possible for watering.
 - Use of water for washdown of outside areas such as driveways or parking lots should be curtailed.
 - Faucets should not be left running while shaving, brushing teeth or washing dishes.
 - The use of washing machines and dishwashers should be limited, if possible, and these units should be operated with full loads when used.
 - Noncommercial washing of cars and other vehicles should be curtailed or limited to Saturdays and Sundays. Hoses should not be left running while washing vehicles.
 - The use of flow restrictors and other water saving devices is encouraged.
 - Showers used for bathing should be limited to four (4) minutes or less.
 - Filling of pools should be deferred or limited to the hours between 9:00 p.m. and 4:00 a.m.
 - Commercial and industrial operations shall eliminate all possible wastage of water.

Level I Mandatory: Water Use Awareness

- Issue a water shortage notice.
- 5% potable water use reduction goal (system-wide as well as individual users).
- Monitor compliance with water use bans and enforce when necessary
- Irrigation of lawns and ornamental trees or plants shall not be done except during the hours between 9:00 p.m. and 4:00 a.m. Variances for commercial irrigation may be issued and revoked by the utilities management, depending on the severity of the situation.
- The following voluntary water conservation practices shall be encouraged:
 - Planting of new ornamental trees or plants or seeding of lawns should be deferred until the water emergency situation no longer exists.
 - Household water should be reutilized to the greatest extent possible for watering.
 - Use of water for washdown of outside areas such as driveways or parking lots should be curtailed.
 - Faucets should not be left running while shaving, brushing teeth or washing dishes.
 - The use of washing machines and dishwashers should be limited, if possible, and these units should be operated with full loads when used.
 - Noncommercial washing of cars and other vehicles should be curtailed or limited to Saturdays and Sundays. Hoses should not be left running while washing vehicles.
 - The use of flow restrictors and other water saving devices is encouraged.
 - Showers used for bathing should be limited to four (4) minutes or less.
 - Filling of pools should be deferred or limited to the hours between 9:00 p.m. and 4:00 a.m.
 - Commercial and industrial operations shall eliminate all possible wastage of water.

Level II Mandatory: Water Use Restrictions

- Issue a water shortage notice.
- 7% potable water use reduction goal (system-wide as well as individual users).
- Monitor compliance with water use bans and enforce when necessary
- The following mandatory water restrictions shall be in effect
 - Household water shall be reutilized to the greatest extent possible for watering.
 - Faucets shall not be left running while shaving, brushing teeth or washing dishes.
 - The use of washing machines and dishwashers shall be limited. These units should be operated with full loads when used.
 - Irrigation of lawns and ornamental trees or plants shall not be done except during the hours between 9:00 p.m. and 4:00 a.m. Variances for commercial irrigation may be issued and revoked by the utilities management depending on the severity of the situation.
 - Planting of new ornamental plants or trees or seeding of lawns shall be deferred until after the water emergency no longer exists.
 - Use of water for washdown of outside areas is prohibited.
 - Noncommercial washing of cars and other vehicles shall be prohibited except on Saturdays and Sundays. Commercial washing facilities, including those providing handheld washing nozzles, may continue normal operation. However, commercial operations shall ensure that water is not wasted.
 - Commercial and industrial operations shall eliminate all possible wasting of water.
 - Newly constructed or drained pools shall be filled by permit only. Fill permits shall be issued by the utility business office and issuance of permits may be curtailed depending on the severity of the situation.

Level III Mandatory: Water Use Restrictions

- Issue a water shortage notice.
- 12% potable water use reduction goal (system-wide as well as individual users).
- Monitor compliance with water use bans and enforce when necessary
- The following mandatory water restrictions shall be in effect
 - Irrigation of lawns and other plants is prohibited.
 - Washing of cars, vehicles and equipment is prohibited.
 - Restaurants and food serving establishments shall utilize disposable service utensils and plates in all cases.
 - Recreational use of potable water, including filling of pools, is prohibited.
 - Large-scale commercial and industrial water customers utilizing five thousand (5,000) or more gallons of water per day shall achieve mandatory reductions in daily water usage through whatever means are available. Variances to this restriction may be granted by the director or his designee to designated public health facilities.

Level IV Emergency: Water Use Restrictions/Bans (and/or Rationing)

- Issue a water shortage emergency.
- 15% potable water use reduction goal (system-wide as well as individual users).
- Monitor compliance with water use bans and enforce when necessary
- The following mandatory water restrictions shall be in effect
 - All use of water for purposes other than maintenance of public health and safety are prohibited.
 - Where the city system is still functional, daily residential water use shall be limited to the amount necessary to sustain life through drinking, food preparation and personal hygiene.
 - Where the city system is not functional, National Guard and emergency service vehicles shall be utilized to distribute water for household use at prearranged locations within the affected area. Usage by individuals shall be limited to those amounts necessary to sustain life through drinking, food preparation and personal hygiene.

H. Enforcement

It shall be unlawful for any person to use or to permit the use of city water in violation of any mandatory restriction set forth in this article. Any violation of the mandatory provisions of this article shall be considered a general misdemeanor punishable by a fine of up to five hundred dollars (\$500.00) or imprisonment up to two (2) years or both in the discretion of the court. Each day in which a violation occurs shall be considered to be a separate violation.

In addition, water service may be temporarily discontinued for willful disregard of this article. All applicable penalty fees may be applied in the event of such service suspensions. In the event of continued gross noncompliance with this article, removal of meter and service will be deemed proper and service will be discontinued and tap fees and deposits will be forfeited.

Appeals Process

All citations for unauthorized water use during any phase of water conservation will not be changed unless shown to be in error. Knowledge of the prevailing conservation stages and proper functioning of automatic sprinkler systems are the responsibility of the property owner and resident. Customers who are not in residence at the time conservation measures take effect are still responsible for the operation of any irrigation system on their property. These conditions will not be considered a basis for an appeal of a citation. All water that passes through the user's meter is the responsibility of the customer and is subject to the conservation stages in effect.

Appeals are limited to loss of service actions. Customers do not have a right to appeal a citation or a surcharge. They may, however, ask for information regarding their violation. If a customer feels the citation was issued in error, they may submit additional information disputing the violation. That information should be directed to the City Manager or designee.

Customers whose service is terminated or who receive notice of termination shall have five (5) business days after termination of service or notice of termination to appeal the action in writing to the City Manager or designee. A hearing will be held within five (5) business days of receipt of appeal.

Termination orders will be suspended until an appeal decision is made.

I. Variances and Variance Criteria

A variance from the prevailing water conservation measures may be granted to a customer satisfying the requirements to water use for a purpose that would otherwise be prohibited. For example, a variance may be granted for new landscape installations to help new planting become established. In order to qualify for a variance, a customer/user must apply, in writing, to the City Manager, supplying all necessary information as described below. If and when the variance is approved for a specific time period, the variance notification will be sent to the customer who must prominently display it onsite. All variances will be recorded and maintained in a spreadsheet for use by enforcement officials. All variances expire on the noted expiration date or at the onset of a higher level of water shortage conservation measures.

How to apply: Reason for and duration of variance must be submitted in writing to the City Manager or designee.

Who may apply: Property owner(s) or resident(s) at the location where the water will be used and/or where the water bill is mailed.

Notification: Applicant will be notified of the status of the request within 5 business days of its receipt by the City Manager or designee.

Obligation: Property owner must prominently display a copy of the variance on site when watering and must comply with all provisions of the variance.

Criteria used by the City to determine if a variance will be granted:

- Impact on water supply demand
- Existence of an alternative source
- Social or economic importance
- Prevention of structural damage
- Other Reason(s)

Violation of the terms of the variance will be treated as a violation of WSRP and all prescribed charges will apply. In addition, the variance will be voided at the time of the violation.

J. Public Review

Public comments related to the WSRP can be received via letters addressed to the City Manager, during public comment section of City Council meetings or during public hearings when this plan is updated.

K. Evaluation

The effectiveness of the water shortage response plan will be measured by the desired reductions in water supply demand during times of water conservation. Other factors that will assist in determining the effectiveness could be the frequency of activation, historical use patterns, and number of violation citations issued. A working group will review the effectiveness of the WSRP following each activation. The working group could consist of the City Manager, the Utilities Director and others designated by the City Manager. This working group will review and make needed revisions or improvements to the Water Shortage Response Plan.

L. Revision

The Water Shortage Response Plan will be updated as needed in response to changing conditions, new development or changes in number or types of available water supplies, and revised regulations. All plans must be submitted to the Division of Water Resources for review.

M. Submission and Approval

The WSRP will be submitted every 5 (five) years with the Local Water Supply Plan. Any revisions to the WSRP will be submitted for review by the Division of Water Resources.

Attachments:

1- Water Shortage Measurement Criteria

Water Shortage Measurement Criteria

	D0 Abnormally Dry	D1 Moderate Drought	D2 Severe Drought	D3 Extreme Drought	D4 Exceptional Drought
Yadkin College 7 day daily average < 1,000 CFS (646 MGD)		Alert	Alert	Alert <i>(at any flow w/ D3 Category)</i>	Alert <i>(at any flow w/ D4 Category)</i>
Yadkin College 7 day daily average <750 CFS (485 MGD)	Alert	Alert	Alert	Level I Voluntary	Level I Voluntary
Yadkin College 7 day daily average <500 CFS (323 MGD)	Level I Voluntary	Level I Voluntary	Level I Voluntary	Level I Mandatory	Level I Mandatory
Yadkin College 7 day daily average <350 CFS (226 MGD)	Level I Mandatory	Level I Mandatory	Level I Mandatory	Level II	Level II
Yadkin College 7 day daily minimum <250 CFS (162 MGD)	Level II	Level II	Level II	Level II	Level II
Yadkin College 7 day daily minimum <200 CFS (129 MGD)	Level III	Level III	Level III	Level III	Level III
Yadkin College 7 day daily minimum <150 CFS (97 MGD)	Level IV	Level IV	Level IV	Level IV	Level IV

Note: Drought Category is based on 8 digit HUC weighted average for Upper Yadkin River (03040101)