

Water System: City of Winston-Salem
 PWSID #: NC02-34-010
 Water Source: Yadkin River

Reviewer: Bill Brewer
 Date: April 15, 2018

Water Shortage Response Plan Review Criteria Checklist

Minimum Criteria	Yes	No	Reviewer Comments
1. Authority			
Clearly states enacting authority by staff position or organizational unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state authority responsible for enacting Plan provisions.
Identifies alternate authority*	<input type="checkbox"/>	<input type="checkbox"/>	
Authority must enact plan directly whenever trigger conditions are met	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must contain clear language as to when water restrictions must be implemented Plan must state that actions "will" or "shall" be taken when specific triggers are met in place of the word "may".
2. Notification			
States method(s) by which water users and system employees must be notified whenever plan is enacted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state how water users and system employees will be notified whenever the Plan is enacted.
States method(s) by which water users must be notified of required response measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state how water users and system employees will be notified of required response measures.
Notification is appropriate for shortage situation*	<input type="checkbox"/>	<input type="checkbox"/>	
3. Levels of Response			
Levels of severity determined by specific measurements of available water supply, water demand or local conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must identify multiple levels of severity determined by specific measurements of available water supply, water demand or local conditions.
Identifies increasingly stringent levels of water shortage severity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must identify increasingly stringent levels of water shortage severity.
States multiple levels of response	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state specific response actions required at each level.
4. Triggers			
States specific measurements or conditions used to trigger reduction measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must identify specific measures or conditions related to loss of water system function due to drought, mechanical problems, contamination or other factors that will be used to trigger reduction measures.
States specific triggers for movement from more and less restrictive levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state specific triggers for movement from more and less restrictive levels.

Water System: City of Winston-Salem
 PWSID #: NC02-34-010
 Water Source: Yadkin River

Reviewer: Bill Brewer
 Date: April 15, 2018

Minimum Criteria	Yes	No	Reviewer Comments
5. Enforcement			
States methods for enforcing plan provisions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must state how plan provisions will be enforced.
Identifies authority responsible for enforcement*	<input type="checkbox"/>	<input type="checkbox"/>	
6. Public Comment			
States procedures for affected parties to review plan and provide comments prior to final plan adoption	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must describe the public review and comment process preceding plan adoption.
7. Variance Protocols			
States method for receiving water restriction variance requests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must describe a process for receiving variance requests from water restrictions.
States approval criteria for variance requests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must describe approval criteria for considering variance requests from water restrictions.
8. Effectiveness			
Plan states an evaluation method to demonstrate restrictions result in actual water savings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must contain an evaluation method to determine if water restrictions result in actual savings.
Plan effectiveness may be measured in 30 day period*	<input type="checkbox"/>	<input type="checkbox"/>	
9. Revision			
States when water shortage plan must be revised	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must establish when it must be reviewed and revised to adapt to new circumstances (e.g. new water sources, etc.), after implementation of any emergency restrictions and at least every five years.
States authority responsible for plan revision*	<input type="checkbox"/>	<input type="checkbox"/>	
10. Consistency with reservoir owner's plan			
System depends on a reservoir owned by another entity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Not Applicable
Plan is consistent with the plan adopted by the owner of the reservoir	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan must be consistent with the water shortage response plan adopted by the reservoir owner.
11. Regulation of Private Wells			
Does NOT contain provisions to meter or regulate private drinking water wells	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plan cannot be approved if it contains any provision "that meters or regulates private drinking water wells".

*Items in shaded rows are included for DWR use and ARE NOT required for Plan approval.

Based on the criteria listed above, this plan:

- Meets Minimum Criteria (Approved)
- Does Not Meet the Minimum Criteria (Disapproved)

City/County Utility Commission - Action Request Form

Date: May 14, 2018

To: Gregory M. Turner, Assistant City Manager

From: Courtney Driver, City/County Utilities Director

COMMISSION ACTION REQUESTED:

CONSIDERATION OF A RESOLUTION APPROVING REVISIONS TO ARTICLE VI. – WATER CONSERVATION OF THE WATER SYSTEM POLICY RESOLUTIONS TO MEET THE REQUIREMENTS OF NORTH CAROLINA ADMINISTRATIVE CODE.

SUMMARY OF INFORMATION:

All local governments and community water systems subject to G.S. 143-355(1) are required to update their Water Shortage Response Plans (WSRP) in order to improve plan effectiveness and adapt to new circumstances.

This legislation outlines specific criteria for systems' WSRP's as outlined in 15A North Carolina Administrative Code (NCAC) 02E 0.600. Section 15A NCAC 02E 0.607(b) requires systems to review their WSRP's, as per their plan's requirements and submit revisions to NC DEQ-DWR for review every five (5) years or as needed based on water shortage emergencies. All systems must submit Water Shortage Response Plans by June 1, 2018 to the NC DEQ-DWR for review. Utilities staff has reviewed Article VI. – Water Conservation of the Water System Policy Resolutions and has identified several minor revisions for review and approval by the Commission as outlined in Sec. 92 – Policy Revision and Public Review of our policies.

The following revisions are shown in Attachment A:

1. Addition of the pronoun “her” in reference to the titles of Utilities Director and Assistant City Manager
2. Replace “shortages” with the singular “shortage” in the phrase “...four (4) stages of shortage responses...”
3. Replace “W. Ken Scott Reservoir” with “W. Kerr Scott Reservoir”
4. Correct spelling errors and add miscellaneous wording (Any, The)

By approving this resolution, the Commission will be in compliance with the Water Shortage Response Plan criteria of 15A NCAC 02E 0.600.

Submitted By: Bill Brewer
Name

Utilities Superintendent
Department/Division

RESOLUTION AMENDING THE WATER SYSTEM POLICY RESOLUTIONS ARTICLE VI. – WATER CONSERVATION POLICY TO MEET THE REQUIREMENTS OF NORTH CAROLINA ADMINISTRATIVE CODE

WHEREAS, G.S. 143-355(1) requires all local governments and community water systems to update their Water Shortage Response Plans every five (5) years; and

WHEREAS, all water systems must submit Water Shortage Response Plans to the North Carolina Department of Environmental Quality Division of Water Resources by June 1, 2018 for review; and

WHEREAS, Sec. 92 – Policy Revision and Public Review of Article VI. – Water Conservation of the Water System Policy Resolutions requires review of our Water Shortage Response Plan at least every five (5) years; and

WHEREAS, Utilities Division staff has reviewed the Water System Policy Article VI. Water Conservation Policy for content to meet the requirements set forth in 15A NCAC 02E 0.600; and

WHEREAS, by approving this resolution the Commission will be in compliance with the Water Shortage Response Plan criteria of 15A North Carolina Administration Code 02E 0.600 and Article VI. – Water Conservation Sec. 92 – Policy and Public Review of our Water System Policy Resolutions.

NOW, THEREFORE, BE IT RESOLVED that the City/County Utility Commission an agency of the City of Winston-Salem, that the amendment to the Water System Policy Article VI. Water Conservation Policy as required by 15A NCAC 02E 0.600 and Article VI. – Water Conservation Sec. 92 – Policy and Public Review of our Water System Policy Resolutions is hereby approved.

ARTICLE VI. - WATER CONSERVATION^[2]

Footnotes:

--- (2) ---

Editor's note— A Resolution of June 8, 2009, amended Art. VI in its entirety to read as herein set out. Former Art. VI, §§ 82—89, pertained to similar subject matter and derived from a Resolution of June 12, 2000; and a Resolution of September 9, 2002.

Sec. 82. - Purpose.

The purpose of this article is to provide for the official declaration of water shortage stages and the implementation of water conservation measures throughout the commission's water service area in the event of such declaration.

(Res. of 6-8-09)

Sec. 83. - Definitions.

For the purpose of the interpretation and enforcement of this article, in addition to those definitions in Section 1 of this resolution, unless the context specifically indicates otherwise, the following terms, words and phrases shall have the meanings ascribed to them in this section:

Customer. Any person using water for any purpose, including commercial, manufacturing, institutional and residential uses, from the commission's water distribution system and for which a regular charge is made.

Emergency Conservation. Water supplies are below the level necessary to meet normal needs and that serious shortages exists such that the water supply may not be sufficient to preserve public health and safety thereby necessitating more restrictive mandatory conservation measures.

Essential Water Uses. Water uses necessary to sustain human life and the lives of domestic pets, to maintain minimum standards of hygiene and sanitation, to provide for fire protection, and to ensure public health and safety.

Mandatory Conservation. The consistent decline of the water supply poses a threat to the adequate provision of water to meet normal needs such that customers are required to take certain restrictive conservation measures to limit water use and prevent the waste of water.

Voluntary Conservation. Conditions exist which indicate the potential for a water shortage such that customers are encouraged to take certain conservation measures to limit water use and prevent the waste of water.

(Res. of 6-8-09)

Sec. 84. - Declaration and public notice.

- (a) In the event the water supply of the commission's water distribution system is low and/or declining due to conditions which may adversely affect the continued availability of water for human consumption, sanitation, health and fire protection, as determined by the utilities director (or in his/her absence the deputy director of utilities), the assistant city manager (or in his/her absence the utilities director) is authorized and empowered, upon written notification to the city manager and the commission, to declare a water shortage and implement conservation measures set forth herein, and

ADOPTED May 14, 2018 by the City/County Utility Commission

in Section 85, below. Such declaration may be issued for the entire water service area or for certain areas served by the water distribution system. Once a declaration of water conservation has been issued by the assistant city manager, internal employees shall be notified of the said declaration via e-mail and/or interdepartmental memo.

- (b) In determining that water conservation measures are necessary, the utilities director shall consider factors including, but not limited to, the following:
- (1) Water flow and levels in rivers and reservoirs;
 - (2) Water treatment plants and distribution system capabilities, including treated supply recovery time, available distribution storage, and excessive system demand;
 - (3) Draw-down rates;
 - (4) Weather forecasts and expected precipitation;
 - (5) Daily water use patterns;
 - (6) Seasonal and long-term weather patterns; and
 - (7) Availability of water from other sources.

The table below outlines the four (4) stages of water shortages responses, and the specific triggers that warrant transition from one stage to the next. The appropriate response to each stage is set out in Section 85. The assistant city manager shall implement a particular stage when any two (2) or more of the following triggers are present for that stage. Each conservation stage has an associated potable water reduction goal as indicated in the table. The potable water reduction goal shall be calculated on the basis of the weekly average of daily demand, Monday through Sunday of the previous week, as compared to prior, less restrictive conservation stages.

System Status	Voluntary Stage 1	Mandatory Stage 2a	Mandatory Stage 2b	Stage 3 Emergency
Potable Water Reduction Goal	10% reduction in system demand from pre-stage demand	20% reduction in system demand from pre-stage demand	25% reduction in system demand from pre-stage demand	35% reduction in system demand from pre-stage demand
System Demand	Exceeds 85% of available capacity for three consecutive days	Exceeds 90% of available capacity	Exceeds 90% of available capacity for three consecutive days	Exceeds 95% of available capacity
US Drought Monitor	Severe	Extreme	Extreme	Extreme
W. Ken Kerr Scott Reservoir Level	≤1027 feet asl	≤1023 feet asl	≤1019 feet asl	≤1015 feet asl
Yadkin River Flow (as measured at USGS)	≤554 cfs	≤200 cfs for more than 5 consecutive	≤175 cfs for more than 3 consecutive	≤125 cfs for more than 2 consecutive

02115360 Enon <u>GuageGauge</u>)		days	days	days
--------------------------------------	--	------	------	------

- (c) Notification of a water shortage declaration or changes to the current level of conservation shall be published in a newspaper of general circulation in the water service area in accordance with N.C.G.S. § 1-597, and shall be publicized via press release or other appropriate method for making such declarations public.
- (d) The potable water reduction goal for the utility commission's system shall be based on the reduction of system demand as indicated in the table above. Because the utility commission can only impact system demand by conservation declarations the percent reduction as indicated for each stage shall be used to determine the plans effectiveness. The potable water reduction goal shall be calculated on the basis of the weekly average of daily demand, Monday through Sunday of the previous week, as compared to prior less restrictive conservation stages.

(Res. of 6-8-09; Res. of 10-11-10)

Sec. 85. - Water shortage stages and conservation measures.

Once a water shortage stage has been declared, the utilities director shall begin to review the supply of water available on a daily basis, and report the status to the assistant city manager. A stage, once declared, shall remain in effect until two (2) or more of the triggers set out in Section 84(b) occur, requiring transition from one stage to the next, at which time an amended declaration shall be announced, or, until such time as the assistant city manager, upon the advice of the utilities director, shall deem that water conservation measures are no longer necessary. At the expiration of the declaration, the assistant city manager shall report to the city manager and the commission status of the existing water supply, and determine the appropriate stage, if any, to implement.

- (a) *Stage 1. Declaration of voluntary conservation.* In the event that a potential water shortage is identified by the utilities director, using the factors set out in Section 84(b) above, the assistant city manager shall declare a stage 1 water shortage. All customers, in order to limit water use and prevent the waste of water, will be strongly encouraged to employ voluntary water conservation measures including, but not limited to, the following:
 - (1) Limiting the watering of lawns, landscaping, and other vegetation to not more than one (1) hour per day and avoiding watering between 9:00 a.m. and 6:00 p.m.;
 - (2) Inspecting and repairing all leaks and faulty and defective parts of faucets and toilets;
 - (3) Installing water flow restrictive showerheads and water saving devices in toilets;
 - (4) Showering for not more than five (5) minutes, instead of bathing in a bathtub or taking long showers;
 - (5) Turning off faucets while shaving, brushing teeth or rinsing dishes;
 - (6) Limiting the use of washing machines and dishwashers, and only operating them when full;
 - (7) Limiting the washing of vehicles;
 - (8) Refraining from using water to wash down outside areas such as sidewalks, patios, and driveways; and
 - (9) Refraining from filling swimming or wading pools.

- (b) *Stage 2a. Declaration of Mandatory Conservation.* In the event that a consistent decline in the water supply poses a threat to the adequate provision of water to meet normal needs, as determined by the utilities director, using the factors set out in Section 84(b) herein above, the assistant city manager shall declare a stage 2a water shortage and mandate conservation measures including, but not limited to, the following:
- (1) The watering of lawns, landscaping, and other vegetation shall be limited to manual or automated sprinkling between the hours of 6:00 p.m. and 9:00 a.m. The dates upon which sprinkling will be permitted will be determined by street address numbers. Customers whose street address numbers are odd shall be allowed to do such sprinkling on odd numbered days of the month. Customers whose street address numbers are even shall be allowed to do such sprinkling on even numbered days of the month.
 - (2) The only other method by which it shall be permitted to water plants shall be the use of a watering can or other hand held container or device, not exceeding (3) gallons in size.
 - (3) Other restrictions contained in Section 85(a), above, shall remain voluntary, unless otherwise declared.
- (c) *Stage 2b. Declaration of Mandatory Conservation.* In the event that a consistent decline in the water supply poses a threat to the adequate provision of water to meet normal needs, as determined by the utilities director, using the factors set out in Section 84(b) above, the assistant city manager shall declare a stage 2b water shortage and mandate conservation measures including, but not limited to, the following:
- (1) The watering of lawns, landscaping, and other vegetation shall be limited to Saturdays and Sundays via manual or automated sprinkling between the hours of 6:00 p.m. and 9:00 a.m. The day upon which sprinkling will be permitted will be determined by street address numbers. Customers whose street address numbers are odd shall be allowed to use sprinklers on Saturdays, while customers whose street address numbers are even shall be allowed to use sprinklers on Sundays.
 - (2) The only other method by which it shall be permitted to water plants shall be the use of a watering can or other hand held container or device, not exceeding (3) gallons in size.
 - (3) Other restrictions contained in Section 85(a) shall remain voluntary, unless otherwise declared.
- (d) *Stage 3. Declaration of Emergency Conservation.* Whenever the water supply is below the level necessary to meet normal needs and a serious shortage exists, as determined by the utilities director using the factors set out in Section 84(b) hereinabove, the assistant city manager shall declare a stage 3 water shortage and mandate emergency conservation measures, including but not limited to the following:
- (1) The following shall not be permitted:
 - a. ~~Any~~ Any use of water outdoors for non-emergency related reasons. Exceptions shall include fire protection and prevention, and the needs of the city and the commission to maintain the water distribution system. Watering of lawns, and other landscaping, shall be permitted only with the use of a watering can or other hand held container or device, not exceeding three (3) gallons in size.
 - b. ~~The~~ The washing of vehicles and other mobile equipment, except that commercial- and business operated car washes shall be exempt from this prohibition, and provided that parts of vehicles may be washed where such washing is required by federal, state, or local laws for health reasons.
 - c. ~~The~~ The filling of swimming or wading pools.
 - (2) Customers shall be encouraged to reduce their consumption as much as possible, with a goal of reducing, by at least twenty-five (25) percent, the customer's average usage.

- (3) The assistant city manager shall temporarily impose restrictions on automated and manual irrigation systems. Such restrictions may include limitations on hours and days during which it is permissible use such systems or an absolute ban on the use of such systems.

(Res. of 6-8-09)

Sec. 86. - Compliance.

In the event that the assistant city manager declares a water shortage and imposes conservation measures, it shall be unlawful for any customer to use, or permit the use of water from the commission's water distribution system in a manner which fails to comply with such conservation measures and the provisions of this article. Failure to comply with any such conservation measures and the provisions of this article shall subject the offender to the enforcement provisions in Sections 86, 87, and 88. The city and the commission may exercise any and all remedies allowed by law, and in equity, including the imposition of a civil penalty, and the pursuit of injunctive relief.

(Res. of 6-8-09)

Sec. 87. - Civil penalties.

A civil penalty shall be assessed by the assistant city manager against any customer who fails to comply with any mandatory or emergency conservation measures set out in this article and as imposed in any water shortage declaration. Notification of a civil penalty so assessed shall be given within five (5) days after discovery of the violation. The amount of the civil penalty shall be as follows:

First Offense:	Warning
Second Offense:	\$100.00
Third Offense:	\$200.00
Each Successive Offense:	\$200.00

Violations of the provisions of this article and any declaration shall be cumulative, so long as the declaration is in effect, and for one (1) year thereafter. Any consequent penalties shall also be cumulative. If a customer moves, or terminates, and subsequently re-establishes, service during any period in which a declaration is in effect, the customer's violations shall continue to accrue, regardless of such move or termination.

(Res. of 6-8-09)

Sec. 88. - Criminal fines.

Upon a fourth violation of this article, a criminal warrant shall be issued for the arrest [of] the offending customer. Any violations of the provisions of this article shall constitute a class 3 misdemeanor, punishable, upon conviction, by a term of imprisonment of up to twenty (20) days, and by a fine of up to

five hundred dollars (\$500.00), as provided by N.C.G.S. § 14-4. In addition, violation of the article may be enjoined, as provided in N.C.G.S. § 160A-175. The issuance of a criminal warrant shall not prevent the imposition of further civil penalties.

(Res. of 6-8-09)

Sec. 89. - Variance requests.

Customers may request a variance from the restrictions listed herein above by completing a water conservation variance request form which can be obtained by contacting the city's department of utilities administration, at (336) 727-8000. Each request for variance will be reviewed on an individual basis, by the utilities director, taking into consideration the circumstances involved. The utilities director shall notify the customer, in writing, of the director's decision, within seventy-two (72) hours of receiving the request.

(Res. of 6-8-09)

Sec. 90. - Water service disconnection.

The utilities director shall have the authority to terminate or restrict water service to any customer who has violated the mandatory or emergency conservation provisions of this article or any water shortage declaration. Prior to such termination or restriction of water service, the utilities director shall give at least two (2) working days' written notice of intent to terminate water service or restrict water supply. Within said two (2) days, such customer, upon petition to the assistant city manager or his/her designee, may be heard as to why such termination or restriction should not be enforced. No notice shall be required to terminate water service which is provided solely for lawn and shrubbery sprinkler systems, swimming pools, or other uses which are non-essential. After water service has been terminated or restricted, it shall be unlawful to reactivate such service without permission of the utilities director.

(Res. of 6-8-09)

Sec. 91. - Enforcement.

Utilities division employees shall be empowered to enforce water restrictions as set forth in this article. Following declaration of any conservation declaration, the utilities director shall implement measures to document offenses and track repeat offenders, in order to aid enforcement of the civil penalties outlined in Section 87 herein above. Employees, designated by the utilities director, will be given citation booklets and will issue citations for violations of the policy, immediately, upon discovery.

(Res. of 6-8-09)

Sec. 92. - Policy revision and public review.

Article VI, Water Conservation, of the Water and Sewer System Policy Resolutions shall be reviewed, at a minimum, every five (5) years, or at the conclusion of an event requiring conservation measures to be enacted. This article shall be revised in collaboration with the relevant agencies, and shall be drafted by city staff. The revised article shall be submitted to the city/county utilities commission for adoption. The City of Winston-Salem/Forsyth County Utilities Commission holds public meetings during which the general public has the opportunity to comment on new and proposed changes to the Water and Sewer System Policy Resolutions. Upon adoption by the commission, the revised article shall be incorporated into the Water System Policy Resolutions and, by reference, into the City of Winston-Salem Administrative Code.

ADOPTED May 14, 2018 by the City/County Utility Commission

(Res. of 6-8-09)