



## **WATER SHORTAGE MANAGEMENT IMPLEMENTATION PLAN**



**CHARLOTTE.**

Department of the City of Charlotte

Adopted: 06/01/03

Revised: 06/01/06, 05/30/09, 01/25/10, 08/21/15

## **EXECUTIVE SUMMARY**

Using the framework provided by the City of Charlotte Water Conservation Ordinance, this Water Shortage Management Implementation Plan flushes out the mechanics of putting the Ordinance to work during times of persistent rainfall deficiency. One of the many goals of the plan is to ensure that the enforcement of any mandatory restrictions is conducted fairly, consistently and effectively. Therefore, this plan describes the actions necessary to manage the conditions causing the shortage as well as protect the public water supply as prescribed by Ordinance.

This plan is the result of many years of research, interviews, and analysis of previous actions, available resources and lessons learned. With this plan, Charlotte Water is positioned to quickly and effectively respond to any water shortage crisis.

Charlotte Water is a partner in the Catawba-Wateree Drought Management Advisory Group (DMAG), a 40-plus member basin-wide drought management group that developed a regional drought plan in conjunction with Duke Energy's FERC license agreement. The regional plan, known as the Low Inflow Protocol (LIP), took 2 years to develop and underwent extensive public hearings involving more than 100 stakeholders.

Though this Implementation Plan predates the Low Inflow Protocol (LIP), this plan has been updated to align with the actions prescribed by the LIP for water suppliers in the basin. The actions called for in this plan are also in accordance with existing local ordinances and City code.

This plan should be reviewed annually to ensure the plan includes the use of updated information and tools and to evaluate the plan for alignment with the latest version of the regional LIP.

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## **PURPOSE**

A water shortage management plan is a useful tool in managing water supply problems and emergencies. This plan can be utilized in any number of situations, such as drought, water supply disruption, distribution or quality problems. It can also aid in response to man-made and natural disasters (acts of terrorism, contamination, flood, hurricanes, etc.).

## **WATER SHORTAGE CONDITIONS**

A water shortage may be declared by the City Manager upon recommendation of the Charlotte Water Director, based on some or all of the following factors:

- Pressure at monitoring locations of the water system
- Ability to re-fill water storage tanks of the water system
- Ability to maintain an amount of water in the ground level storage tanks at Charlotte Water's water treatment plants that is adequate for fire protection.
- Ability to maintain adequate water pressure in every portion of the Charlotte Water drinking water distribution system;
- Adequacy of the water supply in terms of quantity and/or quality for the foreseeable future to satisfy the anticipated demand for water;
- Conditions downstream of the Charlotte Water supply water intakes;
- Regulatory requirements affecting operation, repair or maintenance of any portion of the water system;
- Such factors as may affect our ability to supply, treat and/or distribute water through its water system;
- Such factors as identified by Duke Energy, in accordance with the drought stage triggers incorporated in to the Low Inflow Protocol;
- Drought declarations by the State of North Carolina.

## **PRIORITY USES**

Water use prioritization is the key to the success of a water management plan. By grouping water uses by category, Charlotte Water can maintain service consistent with community values and priorities. All users and customer groups will be affected by the implementation of a water shortage management plan, but in a logical and progressive manner. This strategy allows for decisions to be made when conditions change.

## **ESSENTIAL WATER USE**

Essential use means water necessary to maintain public health and safety. All entities charged with ensuring those services are deemed essential functions. In emergencies, water delivery may be limited to specific locations.

Sample uses:

- Sustaining human health and safety
- Fighting fires
- Testing for public safety standards
- Continued operation of water system
- Operation of medical care facilities

### **COMMUNITY & BUSINESS WATER USE**

Community & Business use defines any use of water that is critical to the function of a business or institution or has significant value to the community.

Sample uses:

- Watering plant stock at nurseries, tree farms
- Commercial car washing
- Maintaining community pools
- Agricultural applications
- Drip irrigation/hand applied water to trees, plant beds
- Water used in production of a product
- Turf and landscape irrigation to maintain facilities intended for community sports and recreation uses

### **DISCRETIONARY WATER USE**

Discretionary water includes water for activities that are deemed elective or non-essential. These activities are the first to be regulated when restrictive measures are enacted.

Sample uses:

- Turf irrigation of personal property lacking plant, zone and rain sensors
- Ornamental water use – fountains, decorative use
- Water to fill or re-fill pools
- Noncommercial car/vehicle washing

- Irrigation during a rain event
- Water applied to impervious surfaces – driveways, streets, sidewalks, parking lots unless required for health and safety.

## STAGES OF DROUGHT RESPONSE

Trigger points that demonstrate worsening hydrologic conditions will define various stages of drought response. A summary of trigger points for various stages as defined in the LIP is provided in the table below. Declarations of drought response stages are made by the DMAG. For the purposes of this Implementation Plan, Charlotte Water uses the same Drought Response Stages as described in the LIP and typically moves through Drought Response Stage actions in accordance with DMAG Drought Stage declarations.

### Summary of Trigger Points

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

## STAGE 0

This is the preliminary stage of the water shortage plan. The DMAG will initiate semi-monthly meetings to focus on:

- Reporting information
- Reviewing history and forecast
- Reviewing plans for responding to conditions.

**Goal**      Review and update if needed implementation and communication plans;  
Identify available resources and partners for Implementation Plan activities;  
Escalate conservation efforts

**Actions**

- Notify customers of current conditions through public outreach and communications
- Activate communications plan to raise awareness of conditions with employees, customers and visitors
- Request customers to employ voluntary water use measures which may

include:

- Reduction in lawn and landscape irrigation to two days a week
- Curtailing landscape watering to no more than one inch of water per week
- Reducing residential vehicle washing
- Reducing or eliminating discretionary water use
- Avoiding outdoor watering during daytime hours (sunrise to sunset)
- Provide a status update to the DMAG on actual water withdrawal trends.
- Assemble Charlotte Water task force and support team

## STAGE 1

At this level of alert, citizens are reminded of conservation techniques and encouraged to adopt some water saving measures intended to reduce overall water use. This level of action is encouraged year round for efficient water use.

Goal            Reduce consumption by 3-5%

- Actions
- Notify customers of current conditions through public outreach and communications
  - Activate communications plan to raise awareness of conditions with employees, customers and visitors
  - Request customers to employ voluntary water use measures which may include:
    - Reduction in lawn and landscape irrigation to two days a week
    - Curtailing landscape watering to no more than one inch of water per week
    - Reducing residential vehicle washing
    - Reducing or eliminating discretionary water use
    - Avoiding outdoor watering during daytime hours (sunrise to sunset)
  - Provide a status update to the DMAG on actual water withdrawal trends.

## STAGE 2

This stage reflects a move in intensity from voluntary actions to ***mandatory restrictions***. Restrictions at this time are designed to capture a significant savings with a minimum of regulation. Although this phase does require enforcement, it does not signal emergency or crisis. A move to mandatory restriction is necessary when voluntary measures are not effective in reducing the demand significantly when the supply continues to be threatened by long-range projections or localized interruptions. The following levels may be

implemented sequentially or in any order that meets the immediate need to ensure adequate water for necessary uses. This Drought Response Plan stage corresponds with City Code Article VII, Chapter 23 definition of Phase 1.

Goal	Reduce consumption by 5-10%
Actions	<ul style="list-style-type: none"><li>• Communicate current conditions and required actions to employees, customers and community users</li><li>• Water restrictions may include:<ul style="list-style-type: none"><li>◦ Limiting lawn and landscape water use</li><li>◦ Limit days to water</li><li>◦ Limit hours to water</li><li>◦ Reduce or eliminate residential vehicle washing</li></ul></li><li>• Report consumption to DMAG and to State agencies</li><li>• Provide a status update to the DMAG on actual water withdrawal trends.</li></ul>
Exceptions	<ul style="list-style-type: none"><li>• Bubble, drip or hand irrigation applied to trees, gardens, containers and plant beds is not restricted in Stage 2.</li><li>• Athletic fields and golf course fairways may submit an alternative watering plan to achieve conservation goals.</li></ul>

Enforcement activities will be determined by the Charlotte Water Director, to include assessing penalties and issuing citations.

### **STAGE 3**

Mandatory requirements become more restrictive in an effort to lessen the impacts of worsening conditions. This Drought Response Plan stage corresponds with City Code Article VII, Chapter 23 definition of Phase 2.

Goal	Reduce Consumption by 10-20%
Actions	<ul style="list-style-type: none"><li>• Communicate current conditions and required actions to employees, customers and community users.</li><li>• Water restrictions may include:<ul style="list-style-type: none"><li>◦ Limiting lawn and landscape watering to one day a week (these restrictions apply to turf irrigation, athletic fields and golf course fairway irrigation)</li><li>◦ Restrict or prohibit residential vehicle washing</li></ul></li></ul>



- Restrict or prohibit private pool filling
- Eliminate variances
- Request industrial customers activate their water conservation plans and reduce consumption to meet plan goals
- Report consumption to DMAG and to State agencies
- Provide a status update to the DMAG on actual water withdrawal trends

Exceptions      • Bubble, drip or hand irrigation applied to trees, gardens, containers and plant beds is not restricted in Stage 3.

#### STAGE 4

This is a severe measure and is reserved for situations where the public water supply is threatened and the Director must act to ensure an adequate supply for essential public needs. The restrictions remain in place until conditions improve to Stage 3 level or better. This Drought Response Plan stage corresponds with City Code Article VII, Chapter 23 definition of Phase 3.

Goal              Improve to lower stage of drought response as soon as possible, while maintaining human health and safety

- Actions
- Notify customers of the movement to emergency water use restrictions
  - Water use restrictions may include:
    - All outdoor water use with water provided by Charlotte Water is prohibited
    - Residential customers may be asked to reduce their consumption by 30%
    - Community/Business water users may be asked to reduce their consumption by 25%
    - Irrigation of athletic fields and fairways with water provided by Charlotte Water is prohibited
  - Essential water use customers (hospitals, nursing homes, emergency care providers, etc.) are asked to monitor their use for opportunities to conserve
  - All employers are asked to educate their employees about water conservation
  - Make water available from fire hydrants equipped to dispense water
  - Make water available for fire protection where possible, through whatever means

- Place medical facilities at the highest priority standing for available water
- Close valves or remove meters throughout the system to direct water to meet essential priority needs
- Limit total customer water consumption
- Issue a boil water advisory notice

## **ENFORCEMENT**

Any customer or user who violates mandatory restrictions, willfully or accidentally is subject to penalties, to include surcharges and possible loss of service. Knowledge of the prevailing restrictions and proper functioning of automatic sprinkler systems are the responsibility of the property owner and resident. This provision also applies to a customer who violates a variance or a hydrant permit. Customers who violate conditions of a variance, hydrant permit or alternate watering plan are subject to the enforcement penalties as well as additional surcharges.

### **ENFORCEMENT PLAN FOR STAGE 2**

#### **WATER USES PROHIBITED DURING STAGE 2**

- Lawn/Turf watering that takes place during days or times when lawn and landscape watering is prohibited (hand watering and drip irrigation is allowed any time of day)
- Operating an ornamental water feature that does not support aquatic animal life
- Filling swimming pools
- Topping off swimming pools during days or times when prohibited
- Wasting water

#### **Stage 2 Violation Fines**

<b>Violation</b>	<b>1 ½' meter</b>	<b>2" + meter</b>
<b>1st</b>	\$100	\$200
<b>2nd</b>	\$200	\$400
<b>3rd</b>	\$300	\$600

Any customer who violates the Stage 2 restrictions more than 5 times is subject to loss of irrigation water service.

### **ENFORCEMENT PLAN FOR STAGE 3**

Stage 3 is designed to manage a worsening situation. Limited discretionary outdoor water use is permitted one day a week and business use must be reduced as well.

#### **WATER USES PROHIBITED DURING STAGE 3**

- Lawn or turf watering at any time
- Watering fields or fairways (watering tees and greens is allowed)
- Residential/non-commercial car washing
- Filling or topping off swimming pools
- Hydrant use except for emergency uses, approved commercial uses and fire protection

#### **Stage 3 Violation Fines**

<b>Violation</b>	<b>1 ½' meter</b>	<b>2" + meter</b>
<b>1st</b>	\$200	\$400
<b>2nd</b>	\$400	\$800
<b>3rd</b>	\$600	\$1200

Any customer who violates the Stage 3 restrictions more than 2 times is subject to loss of irrigation water service.

#### **ENFORCEMENT PLAN FOR STAGE 4**

If the Water Shortage situation progresses to Stage 4, the situation will be managed by the Charlotte Water Emergency Response Team, in coordination with Charlotte-Mecklenburg Emergency Management, FEMA and other agencies.

- Water rationing would be utilized to ensure public health and safety
- Limited hydrant use
- Valves and meters will be adjusted to direct water to meet essential needs
- A Boil Water Advisory may be issued
- All customers will be limited in their total consumption capability.
- Business hours may be curtailed
- Patrols will be dispatched according to need and to protect and regulate hydrant use

#### **WATER USES PROHIBITED DURING STAGE 4**

No outdoor water use except for emergency purposes, such as fire protection, water main repair, etc.

#### **Stage 4 Violation Fines**

<b>Violation</b>	<b>1 ½' meter</b>	<b>2" + meter</b>
<b>1<sup>st</sup></b>	\$200	\$400
<b>2<sup>nd</sup></b>	\$400	\$800
<b>3<sup>rd</sup></b>	\$600	\$1200

#### **APPEALS**

##### **CHARLOTTE WATER USE VIOLATIONS POLICY**

All citations for unauthorized water use during any phase of water restrictions will not be changed unless shown to be in error. Knowledge of the prevailing restrictions 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 restrictions take effect are still responsible for the operation of any irrigation system on their property using water provided by Charlotte Water. These conditions will not be considered a basis for an appeal of a citation. All water that passes through the customer's meter is the responsibility of the customer and is subject to the restrictions in effect.

##### **APPEAL CONDITIONS**

If a customer feels the citation was issued in error, he may submit additional information disputing the violation to Charlotte Water via the established Appeal Process.

Customers whose service is terminated or who receive notice of termination shall have 5 calendar days after termination of service or notice of termination to appeal the action in writing to the Director of Charlotte Water, or his designee. A hearing will be held within 3 business days of receipt of appeal. Termination orders will be suspended until an appeal decision is made. Appeal procedures will be available on the Charlotte Water website.

##### **VARIANCES**

A variance from the prevailing mandatory water restrictions may be granted to a customer satisfying the requirements to use water for a purpose that would be otherwise prohibited. Variances may be granted, as example, for new landscape installations to reduce erosion risk.

In order to qualify for a variance, a customer/user must apply in writing, using a prescribed form, supplying all necessary information. Once the variance is approved for a specific time period, the variance is sent back to the customer to be displayed on site. All variances are

recorded and maintained in a database for use by enforcement officials. All variances expire on the noted expiration date or at the onset of Stage 3 mandatory emergency restrictions

Customers should use the variance application forms provided on the Charlotte Water website. Property owners or residents at the location where the water will be used and where water bill is sent qualify to apply for a variance at that location. Applicants are usually notified of Variance status within 24 hours; however notification may take up to 3 – 5 days depending on available resources. The property owner or resident must display a copy of the variance on site whenever watering and must comply with all provisions of the variance.

#### **NEW LANDSCAPE INSTALLATION VARIANCE**

**During Stage 2** May be granted for a duration of 30 calendar days, watering allowed according to the following schedule:

First 30 days	as needed
Weeks 5 and 6	up to three days a week as indicated on form
Weeks 7 and 8	up to two days a week as indicated on form

**During Stage 3** May be granted for landscapes installed during the previous 30 calendar days for a duration of 30 calendar days, watering allowed as needed but no more than up to three days a week

\* No new landscape installations will be granted a variance

**During Stage 4** No variances allowed. All previous variances will be voided immediately

Variances are not needed for water use not restricted by this ordinance, such as garden centers, well users, etc.

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

#### **EVALUATION OF EFFECTIVENESS**

The effectiveness of the measures employed during implementation of any mandatory stages of the water shortage plan will be evaluated. Tracking the reductions in use by the affected sectors of the customer base as contained in the annual consumption report for the utility will be considered.

All mandatory drought response activities undertaken by the participating members of the Catawba Wateree Drought Management Advisory Group, as directed by the Low Inflow Protocol, will also serve as an expansive and detailed examination of the effectiveness of measures enacted.

The NC Drought reporting website also has tracked the reductions in demand, therefore serving as additional corroborating source of data.

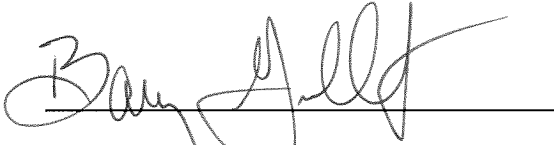
### **RETURN TO NORMAL CONDITIONS**

When water shortage conditions warrant according to Drought Stage triggers, the Charlotte Water Director shall recommend to the City Manager that a public notice declaring the water shortage event resolved and terminate water restrictions.

This action means the emergency has eased but that conservation and wise water use should continue. Such actions will help to ensure the continuing availability of a safe and reliable water supply for our community and region.

The Water Shortage Management Implementation Plan is effective upon adoption by the Director of Charlotte Water.

Approved as to form:

A handwritten signature in dark ink, appearing to read "Barry Gullet", is written over a horizontal line.

Barry Gullet, Director  
Charlotte Water

8.21.2015

Date

## APPENDIX A - PLAN AT A GLANCE

Stage	Reduction Goal (Gallons for typical customer)	Charlotte Water Activities	Voluntary Actions	Mandatory Action
0 Watch		-Communications -DMAG coordination -Internal conservation		
1 Voluntary	3% - 5% (157 - 262)	-Communications -DMAG coordination -Internal conservation -City-wide conservation	Reductions: -Discretionary water uses	None
2 Mandatory	5% - 10% (262 - 524)	-Communications -DMAG coordination -Internal conservation -City-wide conservation -Ordinance enforcement	Reductions: -Community & Business uses	Restrictions: -Discretionary water uses
3 Extreme	10% - 20% (524 - 1047)	-Communications -DMAG coordination -Internal conservation -City-wide conservation -Ordinance enforcement	-Industries asked to implement conservation plans if not already doing so	Restrictions: -Discretionary water uses -Community & Business uses
4 Emergency	Maintain essential water uses & achieve lower drought response stage	-Communications -DMAG coordination -Internal conservation -City-wide conservation -Ordinance enforcement -Assist Emergency Management		Restrictions: -Discretionary water uses -Community & Business uses Water use limited to essential uses only



## **APPENDIX B – CITY OF CHARLOTTE WATER CONSERVATION ORDINANCE**

### **ARTICLE VII - WATER CONSERVATION**

#### **Sec. 23-251. - Purpose and intent.**

It is the purpose and intent of this article to maintain and protect the water resources available to the city for essential and community and business water uses during a water shortage declaration. This article seeks to achieve that purpose by providing for the issuance of an official water shortage declaration and the implementation of mandatory water conservation controls during the time when such declaration is in effect. This article shall be liberally construed to effectuate such purpose and intent.

(Ord. No. 2274, § 4(23-130), 3-24-2003)

#### **Sec. 23-252. - Definitions.**

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

City manager means the city manager, the deputy city manager, any assistant city manager or any acting or interim city manager.

CMU water system means CMU potable water supply, storage, treatment and distribution system, or any portion thereof.

Customer means any person or entity in whose name the city maintains an account for water use. The term "customer" also means and includes any person or entity who receives or is capable of receiving water from CMU water system through the customer's private water system or by any other means, without regard to whether CMU is aware of the existence of such customer.

Community and business water use means any use of water from CMU water system that meets either of the following criteria with special emphasis on those uses which substantially minimize water use through recycling or other means: critical to an institution's or business's function and such use or function has a significant impact upon the economy of the county or any municipality located therein; or critical to recreational or other facilities operated or maintained for community use. Examples of community and business water uses may be set forth in the water shortage management plan and include but are not limited to:

- (1) Watering stock or inventory at plant nurseries, garden centers or tree farms;
- (2) Watering fairways, tees and greens on golf courses;
- (3) Washing vehicles at commercial car washes;
- (4) Commercial pressure washing;
- (5) Commercial, agricultural applications;
- (6) Commercial manufacturing;
- (7) Fire hydrant and water line flushing;
- (8) Complying with applicable law for earth-disturbing activity using no more water than is reasonably necessary; and
- (9) Other similar uses as determined by CMU.

Discretionary water use means any use of water from CMU water system that is elective and is not a community and business or essential water use. Examples of discretionary water uses may be set forth in the water shortage management plan and include but are not limited to lawn/turf irrigation, residential car washing, noncommercial pressure washing, ornamental pools or fountains and other similar uses as determined by CMU.

Emergency conditions means any condition posing a substantial and immediate threat to the ability of CMU to meet actual or anticipated demand for community and business and/or essential water uses and requiring the immediate implementation of mandatory water conservation measures in order to protect the public health and safety, including, without limitation, a major disruption or failure in any portion of the system or contamination of the water in any portion of the system or of the raw water supply.

Essential water use means any use of water from CMU water system that is necessary to maintain public health and safety. Examples of essential water uses may be set forth in the water shortage management plan and include but are not limited to: sustaining human life, fighting fires, testing for public safety standards, patient care and rehabilitation, maintaining pressure in CMU water system, maintaining operation of CMU water system and other similar uses as determined by CMU.

Irrigation service connection means a service connection by which a customer receives water from CMU water system for the sole purpose of watering vegetation and is not

connected directly or indirectly to any plumbing system that discharges into the publicly operated treatment works.

Service connection means the terminal end of a complete service connection or, in the absence of a complete service connection, the point at which water leaves CMU water system and enters a customer's water system.

(Ord. No. 2274, § 4(23-131), 3-24-2003)

**Cross reference—** Definitions generally, § 1-2.

Sec. 23-253. - Imposition of mandatory controls.

(a) The city manager is authorized to impose mandatory water conservation controls as authorized by this article on the usage of water obtained directly or indirectly from CMU water system by declaring a water shortage. After receiving written recommendations from CMU, the city manager may impose such controls, upon consideration of the following factors:

- (1) Pressure at monitoring locations of CMU water system;
- (2) Ability to refill water storage tanks of CMU water system;
- (3) Ability to maintain an amount of water in the ground level storage tanks at CMU's water treatment plants which is adequate for fire protection purposes;
- (4) Ability to maintain adequate water pressure in every portion of CMU water system;
- (5) Adequacy of CMU water supply in terms of quantity and/or quality for the foreseeable future to satisfy the anticipated demand for water;
- (6) Conditions downstream of CMU water intakes;
- (7) Regulatory requirements affecting the operation, repair or maintenance of any portion of CMU water system;
- (8) Such factors as are identified in a water shortage management plan adopted by CMU pursuant to this article; and
- (9) Such other factors as may affect CMU's ability to supply, treat and/or distribute water through its water system.

(b) CMU's recommendation to the city manager on the issuance, amendment or termination of a water shortage declaration shall set forth the basis for such recommendation, including the factors leading to such recommendation.

(c) CMU is authorized to adopt a water shortage management plan, which shall be consistent with and guide CMU in the implementation and enforcement of the provisions of this article.

(Ord. No. 2274, § 4(23-132), 3-24-2003)

Sec. 23-254. - Water shortage declaration.

(a) The city manager may issue a water shortage declaration by signing a notice of water shortage declaration. A water shortage declaration will take effect on the effective date and time specified in the notice. A water shortage declaration, including any amendment thereto, may be issued for the entire CMU water distribution system or for any designated portions thereof. Upon issuance, a water shortage declaration shall remain in effect until amended or terminated in accordance with this article.

(b) A water shortage declaration may be amended or terminated by the issuance of a notice of such action signed by the city manager and posted in accordance with this section. Water conservation controls imposed pursuant to this article and/or the portion of CMU water distribution system subject to an existing water shortage declaration may be revised by amending such a declaration. The termination of any water shortage declaration will automatically terminate all mandatory water conservation controls imposed pursuant to this article.

(c) A notice required by this article must specify the effective date and time of the notice and be publicly posted in the Charlotte-Mecklenburg Government Center, 600 East Fourth Street, Charlotte, North Carolina, or any other place designated by law or the city council for the posting of public notices for at least 12 hours before taking effect; provided that the city manager may determine that the following notices need not be posted for any minimum period of time:

(1) A notice of termination of a water shortage declaration;

(2) A notice of amendment of a water shortage declaration that reduces the portion of CMU water distribution system subject to the declaration and/or the mandatory water conservation controls in effect; and

(3) A notice of a water shortage declaration or amendment thereto under emergency conditions as set forth therein.

All notices posted pursuant to this article shall state the date and time of posting.

(Ord. No. 2274, § 4(23-133), 3-24-2003)

Sec. 23-255. - Phases of water conservation.

(a) Any one of the following phases of water conservation may be implemented by the issuance of a water shortage declaration or amendment of a previously issued declaration:

(1) Phase I, restricted;

(2) Phase II, banned; and

(3) Phase III, emergency.

(b) A water shortage declaration, including without limitation an amendment thereto, imposing phase I, II or III water conservation controls shall specify the controls imposed by such declaration. Customers and users shall comply with such mandatory controls as are specified in a water shortage declaration, including any amendment thereto, issued pursuant to this article. Violation of any mandatory control specified in a declaration issued pursuant to this article shall be subject to such enforcement action as is set forth in this article.

(c) No mandatory control imposed by a water shortage declaration shall apply to any public or volunteer fire department while fighting a fire.

(d) The water shortage management plan adopted pursuant to this article may include classifications of the uses made of water from CMU water system as discretionary, community and business and essential and take such classifications into account in determining the water conservation controls that may be imposed pursuant to this article.

(Ord. No. 2274, § 4(23-134), 3-24-2003)

Sec. 23-256. - Phase I, restricted.

(a) A water shortage declaration, including an amendment thereto, may impose phase I water conservation controls at any time that, based upon a recommendation from CMU, the city manager determines that CMU may not be able to meet all demand for discretionary, community and business and essential water uses based on any one or more of the factors set forth in section 23-253(a).

(b) A water shortage declaration imposing phase I water conservation controls may include:

(1) Restrictions on the manner, day of the week, and/or time of day of one or more discretionary water uses; and/or

(2) Complete prohibitions on one or more of such uses.

(c) Community athletic associations, golf courses and similar customers whose use of water to irrigate large areas is a community and business water use may submit a plan for approval by CMU allowing alternatives to the water conservation controls imposed by a water shortage declaration. Approval of alternatives shall be limited to a customer's community and business water use and shall require such customers to comply with substantially equivalent controls on water usage. Violation of any portion of a customer's approved plan shall be considered as a violation of a water conservation control and subject to the provisions of section 23-262 in the same manner as any other violation of a water conservation control imposed pursuant to this article.

(Ord. No. 2274, § 4(23-135), 3-24-2003)

Sec. 23-257. - Phase II, banned.

(a) A water shortage declaration, including an amendment thereto, may impose phase II water conservation controls at any time that, based upon a recommendation from CMU, the city manager determines that CMU may not be able to meet all demand for community and business and essential water uses based on any one or more of the factors set forth in section 23-253(a).

(b) A water shortage declaration imposing phase II water conservation controls may include:

(1) Restrictions on the manner, day of the week, and/or time of day of one or more discretionary or community and business water uses; and/or

(2) Complete prohibitions on one or more of such uses.

(Ord. No. 2274, § 4(23-136), 3-24-2003)

Sec. 23-258. - Phase III, emergency.

(a) A water shortage declaration, including an amendment thereto, may impose phase III water conservation controls at any time that, based upon a recommendation from CMU

and the city manager, the city council determines that CMU may not be able to meet all demand for essential water uses based on any one or more of the factors set forth in section 23-253(a); provided that the city manager may impose phase III water conservation controls without the approval of the city council at any time that, based upon a recommendation from CMU, the city manager determines that CMU may not be able to meet all demand for essential water uses based on any one or more of the factors set forth in section 23-253(a) and also finds that emergency conditions exist. If the city manager imposes phase III water conservation controls pursuant to this section, such controls shall be subject to amendment or termination by the city council.

(b) A water shortage declaration imposing phase III water conservation controls may include:

(1) Restrictions on the manner, day of the week, and/or time of day of one or more discretionary, community and business or essential water uses; and/or

(2) Complete prohibitions on one or more of such uses.

(c) The city manager, based upon a recommendation from CMU, shall determine the specific water conservation controls included in a water shortage declaration imposed pursuant to this section. The provisions of subsection (a) of this section shall not be construed under any circumstances to limit the authority of the city manager under this article to issue, amend or terminate a water shortage declaration or to require approval of the city council in order for the city manager to amend or terminate any water shortage declaration imposing phase III water conservation controls, including, without limitation, amending a water shortage declaration to revise phase III water conservation controls or to impose phase I or II water conservation controls.

(d) In addition to the controls authorized by subsection (b) of this section, the city manager shall also be authorized, based upon a recommendation from CMU, to take such actions as may be reasonably necessary or convenient to ration water among CMU customers, including, without limitation, suspending water service to customers pursuant to a plan approved by the city council.

(Ord. No. 2274, § 4(23-137), 3-24-2003)

Sec. 23-259. - Termination for leak in customer's plumbing.

It shall be unlawful for any customer or owner of a plumbing system receiving water from CMU water system to fail to repair a leak in such plumbing system within a reasonable time while a water shortage declaration is in effect. Any customer or owner who fails to repair a

leak in such plumbing system within five calendar days after notice to do so from CMU shall be subject to a civil penalty of \$100.00 termination of service, or both.

(Ord. No. 2274, § 4(23-138), 3-24-2003)

Sec. 23-260. - Permits for hydrant usage.

(a) CMU may issue permits to any customer with a qualifying need during a water shortage declaration authorizing water to be used from fire hydrants that are a part of CMU water system, so long as such water is used in accordance with all water conservation controls imposed by such declaration. Any permit to use water from such a fire hydrant issued prior to a water shortage declaration shall be subject to such declaration and the water conservation controls imposed by such declaration.

(b) In any permit issued pursuant to this section, CMU may impose such conditions and restrictions as are appropriate to require that water used from CMU water system be minimized to the extent practical.

(c) Unless otherwise expressly provided in a permit, any permit subject to this section shall automatically terminate upon the effective date and time of the imposition of phase III water conservation controls.

(d) Any person or entity receiving a permit subject to this section who violates the terms thereof shall be subject to a civil penalty pursuant to section 23-262(e) and to the revocation of the permit. Any person who has violated the term of any permit subject to this section, any variance issued pursuant to this article or any mandatory water conservation control imposed pursuant to this article may be denied a permit, notwithstanding any provision of this section to the contrary.

(Ord. No. 2274, § 4(23-139), 3-24-2003)

Sec. 23-261. - Variances.

(a) CMU is authorized to issue a variance in accordance with this article permitting any customer satisfying the requirements of this article to use water for a purpose that would otherwise be prohibited by water conservation controls then in effect.

(b) During any time that phase I water conservation controls have been imposed pursuant to this article and except as otherwise provided in this article, CMU shall issue variances under the following circumstances: A customer with a new lawn and/or landscape installed within 30 days of the application for a variance (but not during any time



when phase II or phase III water conservation controls were in effect) may be permitted to water such newly installed landscaping on the date of installation and for up to 30 days after the date of installation and, during such time period, shall not be subject to restrictions on the days of the week, but shall be subject to any restrictions on the times of the day, when outdoor vegetation may be watered in accordance with the water conservation controls otherwise in effect. A variance issued pursuant to this subsection may be extended by CMU under such terms and conditions as are set forth in the water shortage management plan.

(c) During any time that phase II water conservation controls have been imposed pursuant to this article and except as otherwise provided in this article, CMU shall issue variances for the following uses: A customer with a new lawn and/or landscape installed within 30 days prior to the implementation of phase II water conservation controls (but not during any time when phase II or phase III water conservation controls were in effect) may be permitted to water such newly installed landscaping on the date of installation and for up to 30 days after the date of installation and during such days of the week and times of the day as designated in the variance.

(d) During any time that phase I or phase II water conservation controls have been imposed pursuant to this article, CMU shall issue variances for the following uses:

(1) A public or volunteer fire department during any training exercise using water from CMU water system under circumstances when such training is reasonably necessary to maintain effective firefighting capabilities;

(2) Any customer or user undertaking any activity required by applicable law; and

(3) Any person or entity proposing to eliminate or reduce unsanitary conditions that pose a substantial risk of injury or disease.

(e) During any time that phase III water conservation controls have been imposed pursuant to this article, CMU may, but shall be under no obligation to, issue variances for the uses listed in subsection (d) of this section.

(f) In any variance issued pursuant to this section, CMU may impose such conditions and restrictions as are appropriate to require that water used from CMU water system be minimized to the extent practical.

(g) Unless otherwise expressly provided in a variance, any variance issued pursuant to this section shall automatically terminate upon the effective date and time of the imposition of phase III water conservation controls.

(h) Any person or entity receiving a variance pursuant to this section who violates the terms thereof shall be subject to a civil penalty pursuant to section 23-262(e) and to the revocation of the variance. Any person who has violated the term of any permit subject to this article, any variance issued pursuant to this section or any mandatory water conservation control imposed pursuant to this article may be denied a variance, notwithstanding any provision of this section to the contrary.

(Ord. No. 2274, § 4(23-140), 3-24-2003)

Sec. 23-262. - Enforcement.

(a) The use of water from CMU water system in violation of any mandatory water conservation control imposed pursuant to this article, the term of any permit subject to section 23-260 or the term of any variance issued pursuant to section 23-261 is unlawful. Further, the refusal or failure of a customer or other person acting on the customer's behalf to cease immediately a violation of a water conservation control, after being directed to do so by a person authorized to enforce the provisions of this article, is unlawful. Each customer is responsible for any use of water that passes through the service connection associated with the customer's account or otherwise passes through the customer's private water system.

(b) Any customer who violates or permits the violation of any mandatory water conservation control imposed pursuant to section 23-256 shall be subject to a civil penalty according to the following schedule of penalties:

	1½-inch service connection or smaller	2-inch service connection or larger
First offense	\$100.00	\$200.00
Second offense	200.00	400.00
Third and subsequent offenses	300.00	600.00

(c) Any customer who violates or permits the violation of any mandatory water conservation control imposed pursuant to sections 23-257 or 23-258 shall be subject to a civil penalty according to the following schedule of penalties:

	1½-inch service connection or smaller	2-inch service connection or larger
First offense	\$200.00	\$ 400.00
Second offense	\$400.00	\$800.00
Third and subsequent offenses	\$600.00	\$1,200.00

(d) Any customer who violates or permits the violation of any term of a permit subject to section 23-260 or a variance issued pursuant to section 23-261 shall be subject to a civil penalty of \$500.00.

(e) Any customer or other person acting on behalf of the customer who refuses or otherwise fails to cease immediately a violation of a water conservation control after being directed to do so by a person authorized to enforce the provisions of this article shall be subject to a civil penalty equal to twice the amount of the civil penalty applicable to the violation which such customer or person was directed to cease.

(f) In addition to the payment of any civil penalty assessed pursuant to this section, a customer shall be subject to termination of water service through any irrigation service connection used to violate any water conservation controls imposed pursuant to this article during any period of time during which a water shortage declaration is continuously in effect under the following circumstances:

(1) Five or more violations of any water conservation control, including, without limitation, the terms of any variance or permit issued pursuant to this article; or

(2) Two or more violations of any phase II or phase III water conservation control, including, without limitation, the terms of any variance or permit issued pursuant to this article.

In the discretion of CMU, termination of such service may include one or more of the following actions: turnoff, meter removal, yoke removal and turnoff at main. Water service will not be restored at such service connection until the customer agrees to such terms as CMU determines are reasonably necessary or advisable to ensure the customer's compliance with such water conservation controls as are then in effect or may be imposed

pursuant to this article and the payment of all the customer's obligations, including, without limitation, all outstanding charges for water service, civil penalties and all other fees, amounts and penalties charged in accordance with the provisions of this chapter. If a customer violates such a term or condition, the customer shall be subject to a civil penalty of up to \$1,000.00 in addition to any other remedy that may be authorized by law or agreement and termination of water service through such service connection for up to a minimum period of 15 days. Service may be restored thereafter in accordance with the provisions of this section.

(g) A customer whose water service is terminated pursuant to subsection (f) of this section shall not be entitled to notice and an opportunity for a hearing in advance of such termination. Notice of such termination shall be given as soon as reasonably possible after a decision is made by CMU to terminate such service, but service of such notice and an opportunity for a hearing shall not be conditions precedent to such termination. A customer whose service is terminated pursuant to this section or who receives notice of such a termination shall have five calendar days after termination of service or receipt of notice of termination, whichever is later, to appeal such termination to the director of CMU, or his/her designee, by delivering a written notice of appeal. A hearing shall be held on such appeal within three business days of receipt of the notice of appeal, or by such other date as approved by the director of CMU, or his/her designee, and the customer.

(h) The violation of any water conservation control or provision of this article may be enforced by all remedies authorized by law for noncompliance with municipal ordinances, including the assessment of a civil penalty and action for injunction, order of abatement or other equitable relief; provided that, except as provided in subsection (i) of this section, no violation of any water conservation control or provision of this article shall be a basis for imposing any criminal remedy.

(i) The violation of sections 23-137 and 23-140 during any time while a water shortage declaration is in effect shall be punishable in accordance with applicable law for a criminal misdemeanor, including without limitation a fine of \$500.00.

(j) Each civil penalty assessed against a customer pursuant to this article shall be added to the customer's water bill and shall be paid in the same manner as set forth in this chapter for the payment of water bills. Failure to pay all or any portion of a water bill, including any civil penalty assessed pursuant to this article, in a timely manner may result in the termination of water service from CMU.

(k) Except as provided in this subsection, each day that a violation of a mandatory water conservation control occurs shall be considered to be a separate violation.

(1) If a customer or other person acting on behalf of the customer refuses or otherwise fails to cease immediately a violation of a water conservation control after being directed to do so by a person authorized to enforce the provisions of this article, such failure shall constitute a separate violation; and

(2) After receiving a notice of violating a water conservation control and ceasing such violation, a customer who resumes the violation of the water conservation control on the same day shall be guilty of a separate violation.

(l) CMU and any other city employees or persons designated by the city manager shall be authorized to enforce the provisions of this article.

(Ord. No. 2274, § 4(23-141), 3-24-2003)

## APPENDIX C – 2015 UPDATES TO WATER USE GUIDANCE BY STAGE

	2015 - Residential Customers	2015- Commercial Customers
Stage 1 – Voluntary Restrictions	<ul style="list-style-type: none"> <li>• Irrigate two days a week on Tuesdays and Saturdays, if they must irrigate at all.</li> <li>• Turf watering of no more than one inch of water per week (including rain).</li> <li>• No washing vehicles at home, consider commercial car wash locations that recycle water instead</li> <li>• Conserve all water use indoors and outdoors.</li> <li>• Refrain from outdoor water use during the day (6am to 6pm).</li> <li>• Refrain from filling pools.</li> <li>• Only top off residential swimming pools on Thursdays and Sundays before 6am and after 6pm.</li> <li>• Discontinue operation of fountains and other ornamental water features the do not sustain aquatic animal life.</li> <li>• Refrain from residential power washing</li> </ul>	<ul style="list-style-type: none"> <li>• Ask customers to only irrigate two days a week on Tuesdays and Saturdays, if they must irrigate at all.</li> <li>• Recommend landscape watering of no more than one inch of water per week (including rain).</li> <li>• Ask customers to conserve all water use indoors and outdoors.</li> <li>• Ask customers to refrain from outdoor water use during the day (6am to 6pm).</li> <li>• Ask customers to refrain from filling pools.</li> <li>• Ask customers to only top off swimming pools on Thursdays and Sundays before 6am and after 6pm.</li> <li>• Ask customers to discontinue operation of fountains and other ornamental water features the do not sustain aquatic animal life.</li> <li>• Ask businesses to educate employees and customers about water conservation practices</li> <li>• Ask charity groups to consider alternatives to car washes for fund raising activities</li> <li>• Ask property managers to repair known water leaks and increase plumbing inspection frequency</li> <li>• Ask fleet managers to reduce car washing frequency</li> </ul>

	<b>2015 - Residential Customers</b>	<b>2015- Commercial Customers</b>
<b>Stage 2 - Mandatory Restrictions</b>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors and outdoors.</li> <li>• Customers may only irrigate lawn and landscape on Tuesdays and Saturdays before 6am and after 6pm.</li> <li>• Customers may not wash vehicles at home.</li> <li>• Customers may not fill residential swimming pools.</li> <li>• Customers may only top off residential swimming pools on Thursdays and Sundays before 6am and after 6pm.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> </ul>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors and outdoors.</li> <li>• Customers may only irrigate lawn and landscape on Tuesdays and Saturdays before 6am and after 6pm.</li> <li>• Customers may not fill commercial/public swimming pools.</li> <li>• Customers may only top off commercial/public swimming pools on Thursdays and Sundays before 6am and after 6pm.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> <li>• Businesses should educate employees and customers about water conservation practices as appropriate</li> <li>• Customers may not have fund-raising car washes.</li> <li>• Commercial customers must repair a plumbing system leak within five calendar days after notice from Charlotte Water.</li> <li>• Fleet managers must reduce car washing frequency.</li> <li>• Commercial customers must refrain from discretionary power washing.</li> </ul>

	<b>2015 - Residential Customers</b>	<b>2015- Commercial Customers</b>
<b>Stage 3 – Severe Mandatory Restrictions</b>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors and outdoors.</li> <li>• Customers may only irrigate lawn and landscape on Tuesdays before 6am and after 6pm.</li> <li>• Customers may not wash vehicles at home.</li> <li>• Customers may not fill or top off residential swimming pools.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> <li>• Residential customers must repair a plumbing system leak within five calendar days after notice from Charlotte Water.</li> </ul>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors and outdoors.</li> <li>• Customers may only irrigate lawn and landscape on Tuesdays before 6am and after 6pm.</li> <li>• Customers may not fill or top off commercial/public swimming pools.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> <li>• Businesses should educate employees and customers about water conservation practices as appropriate</li> <li>• Customers may not have fund-raising car washes.</li> <li>• Commercial customers must repair a plumbing system leak within five calendar days after notice from Charlotte Water.</li> <li>• Fleet managers must further reduce car washing frequency.</li> <li>• Commercial customers must refrain from discretionary power washing.</li> </ul>



	<b>2015 - Residential Customers</b>	<b>2015- Commercial Customers</b>
<b>Stage 4 - Emergency</b>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors.</li> <li>• Customers may not use water outdoors.</li> <li>• Customers may not wash vehicles at home.</li> <li>• Customers may not fill or top off residential swimming pools.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> <li>• Residential customers must repair a plumbing system leak within five calendar days after notice from Charlotte Water.</li> </ul>	<ul style="list-style-type: none"> <li>• Customers should conserve all water use indoors.</li> <li>• Customers may not use water outdoors</li> <li>• Customers may not fill or top off commercial/public swimming pools.</li> <li>• Customers may not operate a water feature that does not support aquatic animal life.</li> <li>• Businesses should educate employees and customers about water conservation practices as appropriate</li> <li>• Customers may not have fund-raising car washes.</li> <li>• Commercial customers must repair a plumbing system leak within five calendar days after notice from Charlotte Water.</li> <li>• Fleet managers may not wash vehicles.</li> <li>• Commercial customers must discontinue all discretionary water uses.</li> <li>• All temporary hydrant connection permits expire.</li> </ul>