

## **CITY OF KING WATER SHORTAGE RESPONSE PLAN**

(WSRP)2018

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WATER SHORTAGE RESPONSE PLAN

# Purpose

A Water Shortage Response Plan (WSRP) 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, water distribution or quality problems. A WSRP can also be a useful tool for responding to man-made and natural disasters (acts of terrorism, contamination, flood, hurricanes, etc.).

# authority

Whenever the City of King experiences a potential water shortage, the City Council has authorized the Mayor, upon the advice and recommendation of the City Manager, to declare a Water Shortage Warning. Whenever the City of King experiences a shortage of treated water, or when the water supply is not adequate to meet normal needs, the City Council has authorized the Mayor, upon the advice and recommendation of the City Manager, to declare a Water Shortage Emergency. Whenever the City of King determines a need to provide for equitable distribution of critically limited treated water or water supplies to ensure that sufficient treated water is available to preserve public health and safety of the citizens, the City Council has authorized the Mayor, upon the advice and recommendation of the City Manager, to declare a Water Shortage Crisis. The creation and enforcement of a water rationing policy shall be developed at the time of declaration. Water shortage stages must be implemented once the specific triggers on Page 10 are met and these declarations shall exist for the duration of the shortage or until the triggers that constituted the specific stage are reversed.

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# notification

A publicity campaign will be initiated with conservation efforts publicized through the general news media or any other appropriate method for making such notification public. Other possible outreach options may include: the City of King website; posting on the Electronic Bulletin Board at the American Legion and Central Park; a note added to water bills; flyers and/or handouts; and/or an advertisement on local television or radio.

# WATER SHORTAGE WARNING

**Water Conservation Stage 1**

It shall be unlawful to use water from the public water system supplied by the City of King for the following purposes:

1. to water lawns, grass, shrubbery, trees, flower and vegetable gardens except between the hours of 7:00 pm and 7:00 am on that property’s garbage pickup day. Provided, however, that any person regularly engaged in the sale of plants shall be permitted to use water for such purposes, and shall not be restricted.
2. To wash automobiles, trucks, trailers, boats, airplanes, or any other type of mobile equipment except with a container not to exceed 3 gallons. Provided, however, that any person regularly engaged in the business of washing motor vehicles and any commercial car wash facility shall be permitted to use water for such purposes.
3. To wash down outside areas such asstreets, driveways, service station aprons, parking lots, office buildings, exteriors of existing or newly constructed homes or apartments, sidewalks, or patios, or to use water for other similar purposes. Provided, however, that any person regularlyengaged in the business of washing such areas shall be permitted to usewater for such purposes.
4. To use water from public or private fire hydrants for any purpose other than fire protection services, other public emergency or water department need.
5. To use water for dust control or compaction.
6. To intentionally waste treated water.

# WATER SHORTAGE EMERGENCY

**Water Conservation Stage 2**

In the event of a Water Shortage Emergency, in addition to the restrictions heretofore imposed, the following mandatory water conservation measures shall apply. It shall be unlawful to use water, at any time, from the public water system supplied by the City of King for the following purposes:

1. To water or sprinkle any grass, shrubbery, trees, flower and vegetable gardens with treated water.
2. To wash automobiles, trucks, trailers, boats, airplanes, or any other type of mobile equipment.
3. To wash down outside areas such as streets, driveways, service station aprons, parking lots, office buildings, exteriors of homes or apartments, sidewalks, patios, or other similar purposes.
4. To fill ponds, swimming pools, wading pools, hot tubs, spas, etc… or refill ponds, swimming pools, wading pools, hot tubs, spas, etc… that have been drained or partially drained.
5. To serve drinking water in restaurants, cafeterias, or other food establishments, except upon request.
6. To use treated water outside a structure for any use other than an emergency use involving fire protection services or as needed by the City of King to maintain the water system.
7. To introduce water into any ornamental fountain or similar structure.
8. To make any non-essential use of treated water for commercial or public use.

# WATER SHORTAGE CRISIS

**Water Conservation Stage 3**

In the event of a Water Shortage Crisis, in addition to the restrictions heretofore imposed, the rationing policy should be reflective of the following criteria:

1. Water customers must achieve an immediate further reduction in water use in order to extend existing water supplies and, at the same time, ensure that sufficient water is available to preserve the public health and sanitation and to provide fire protection service. This immediate further reduction in water usage is another step along a continuum of responses to any Water Shortage Crisis. Should the crisis continue, further reductions in water usage may berequired. It must be emphasized that additional usage reductions in the rationed area is a valid and attainable goal reflective of the conditions of the crisis.
2. Equitable reductions in water usage and an equal sacrifice on the part of each water customer should be the desired goal. The success of this policy depends upon the cooperation of all water customers in the emergency area.
3. Fire protection must be maintained where possible and tank trucks shall use non-potable water, if available.
4. Failure to act in accordance with the restrictions on treated water use or to attempt to evade or avoid such water rationing restrictions shall be unlawful.
5. Additional measures of mandatory conservation controls such as a percentage reduction in consumption, termination of service to specific areas in the water system on a rotating basis, prohibition of all industrial uses of potable water, etc., or whatever is necessary to protect the health and safety of the customers of the water system.

# WATER SHORTAGE CONDITIONS

A water shortage may be declared based on some or all of the following factors:

1. Stream flows and stream height levels at the raw water intakes in the Yadkin River;
2. Ability to re-fill water storage tanks in the water system;
3. Ability to maintain an amount of water in the ground level storage tanks at the Water Treatment Plant and/or in the water system that are adequate for fire protection;
4. Ability to maintain adequate water pressure in every portion of the water system;
5. Adequacy of the water supply in terms of quantity and/or quality for the foreseeable future to satisfy the anticipated demand for water;
6. Conditions upstream of the Water Treatment Plant raw water intakes;
7. Regulatory requirements affecting operation, repair or maintenance of any portion of the water system;
8. Such factors as may affect our ability to supply, treat and/or distribute water through the water system;
9. Drought declarations by the State of North Carolina.

# Priority Uses

Water use prioritization is the key to the success of a Water Shortage Response Plan. By grouping water uses by category, The City of King can maintain service consistent with community values and priorities. All users/customer groups will be affected by the implementation of a Water Shortage Response Plan, but in a logical and progressive manner. This strategy allows for decisions to be made when conditions change. Reference should be made to the “Water Shortage and Conservation Ordinance” found in Section 29 of the City of King Code of Ordinances.

1. Essential Water Use

Essential use shall mean (a) water necessary to maintain public health and safety and (b) water necessary to sustain normal life and the lives of domestic pets, and to maintain minimum standards of hygiene and sanitation. All entities charged with ensuring those services are deemed essential functions. In emergencies, water delivery may be limited to specific locations.

Example uses:

* Sustaining health and public protection purposes.
* Fighting fires.
* Testing for public safety standards.
* Continued operation of water system.
* Operation of medical care facilities.

1. 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.

Example uses:

* Water used in production of a product.
* Commercial car washing.
* Maintaining community pools.
* Agricultural applications.

1. 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.

Example uses:

* Turf irrigation.
* Ornamental water use–fountains, decorative use.
* Water to fill or re-fill pools.
* Non-commercial car/vehicle washing.
* Irrigation during a rain event.
* Water applied to impervious surfaces.

# TRIGGERS

Specific trigger points that demonstrate worsening hydrologic conditions will define the various conservation stages of the water shortage (and/or drought) response. A summary of the trigger points required to enter the various conservation stages is provided below.

|  |  |  |
| --- | --- | --- |
| System Element | Description | Conservation Stage |
| Stream flow  As shown on USGS website Station ENON | Less than 1000 cubic feet per second  Less than 600 cubic feet per second  Less than 350 cubic feet per second | 1  2  3 |
| Stream Height Level  Over low-level intake (visual insp.) | Less than 10 inches  Less than 6 inches  Less than 4 inches | 1  2  3 |
| Storage Levels  Tanks & Mains | Less than 50% full  Less than 30% full  Less than 15% full | 1  2  3 |
| Demand | Peak = 2.4 MGD for 2 consecutive days  Peak = 2.4 MGD for 5 consecutive days  Peak = 2.7 MGD for 2 consecutive days | 1  2  3 |
| Drought | Declared by State or local agency | 1 |
| Contamination / equipment failure / line breaks | Inability to pump or distribute for 18 hrs.  Inability to pump or distribute for 24 hrs.  Inability to pump or distribute for 30 hrs. | 1  2  3 |
| NO WATER  Worst Case Scenario | Streambed dry, tanks empty, and/or no interconnection with Forsyth County/City of Winston-Salem or Pilot Mountain | New phase as described later |

# WORST CASE SCENARIO (NO WATER)

The worst case scenario of a water shortage would be the situation where the City of King has no raw or potable water. Possible scenarios would be: If the stream bed is dry, storage tanks are empty, the Water Treatment Plant is inoperable, emergency connections are unavailable, whatever the cause, and the City Of King is unable to provide customers with any potable water. In this event, City staff would coordinate the trucking of potable water into the City to a pick up site, if available. City staff would also coordinate efforts with all available mutual aid participants. The Stokes County Disaster Relief and Assistance Plan coordinator would be contacted. A pick up site for customers for available water will be determined and appropriate notification of the location given to all customers. Pond, lake and other available water sources may be transported to City facilities and treated, if available.

# ENFORCEMENT

Any person who violates the provisions of this Water Shortage Response Plan, who fails to carry out the duties and responsibilities imposed by this Water Shortage Response Plan, or whoimpedes or interferes with any action undertaken or ordered pursuant to this Water Shortage Response Plan shall be subject to enforcement actions. Enforcement shall be the responsibility of the City Manager or his designee.

Enforcement actions may include, but are not limited to the following:

1. Notice of Violation (NOV) (first offense)

Whenever the City of King finds that any user has violated or isviolating this WSRP or any prohibition, limitation, or requirement contained therein, the City shall serve upon such a person a written notice stating the nature of the violation. The written notice of the violation shall be (1) mailed, certified with return receipt requested, to the customer of record and to any other person known to the City of King who is responsible for the violation or its correction, or (2) hand delivered to the customer of record or to the person in charge of the premise where the violation(s) occurred. The NOV shall inform the user of the violation and their responsibility to halt the activity within 24 hours.

2. Penalties (second offense)

In the event any treated water use restriction implemented by the City Council is violated, the City shall issue a penalty in the amount of $100.

1. Suspensions of Service

In the event any treated water use restriction implemented by the City Council is violated, the City shall terminate or restrict the service of the person(s) where such violation occurs and may in addition thereto or in the alternative take such other appropriate legal action as provided by law.

At such time as the City is satisfied that the person is no longer in violation of any treated water use restrictions, the City shall reinstate the person’s water service pursuant to the following:

1. After payment of a suspension/reconnection charge of $100.00 plus another $100.00 penalty for third time offenders;
2. After payment of a suspension/reconnection charge of $100.00 plus $250.00 penalty for fourth time offenders;
3. Civil Penalties

The City shall assess a civil penalty of up to $1000.00 per violation to any offender who shall continue any violation beyond the time limit provided for in the aforementioned Notice of Violation. Each day in which a violation of any provision of this WSRP shall occur or continue shall constitute a separate and distinct offense.

In determining the amount of a civil penalty relating to this WSRP, the City of King shall consider the following:

1. The degree and extent of the harm to the natural resources, public health, and/or public or private property resulting from the violation;
2. The duration and gravity of the violation;
3. Whether the violation was committed willfully;
4. The prior record of the violator in complying or failing to comply with the Water Shortage Response Plan;
5. The costs of enforcement to the City of King.

# PUBLIC COMMENT

Any person who wishes to review or express their concerns about this plan will be given the opportunity to do so at a Public Hearing prior to the final plan adoption and again prior to any plan revisions.

# APPEALS

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 using City of King water. 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 his designee.

Customers whose service is terminated or who receive notice of termination shall have five (5) calendar days after termination of service or notice of termination to appeal the action in writing to the City Manager, or his 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.

# variances

A variance from the prevailing water conservation measures may be granted to a customer satisfying the requirements to use water 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 by the City Planner in a spreadsheet for use by enforcement officials. All variances expire on the noted expiration date or at the onset of Stage 2 water shortage crisis conservation measures.

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

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

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.

# EVALUATION, REVIEW & REVISION

The effectiveness of the water shortage response plan protocols will be measured by the desired reductions in water supply demand. Other factors that will assist in determining the effectiveness could be the frequency of activation, historical use patterns and number of violation citations issued. The plan for the City of King is to have a working group review the effectiveness of the WSRP within 30 days following each activation. The working group will consist of four of the following: the Mayor, a member of the City Council, City Manager, City Engineer, Water Treatment Plant Superintendent or a member of the Utility Department. This working group will review and recommend needed revisions or improvements to the administrative staff responsible for the creation of the original Water Shortage Response Plan. This plan must also be revised immediately following any modification to the water system, after the implementation of any water shortage condition or at a minimum of every five years.

# CONCLUSION

When the factors measuring the water shortage conditions warrant, the City Manager shall recommend that the City Council 1) issue a public notice declaring the water shortage resolved and 2) terminate the water shortage conservation measures. This action means the water shortage warning, emergency and/or crisis 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.