

## City of Lexington, NC Water Shortage Response Plan

The procedures herein are written to reduce potable water demand and supplement existing drinking water supplies whenever they are in danger of being inadequate to meet customer needs. This plan is adopted to give the City of Lexington guidelines to deal with water shortage issues related to drought. Elements of this plan may also be used to address reservoir contamination or equipment and facility failures.

Conditions justifying declaration of water shortage.

- (a) *Insufficient reserve supply.* A water shortage may be declared to exist when the reserve supply available from Lake Thom-A-Lex shall have reached the point where the reserve supply has been so reduced that the citizens cannot be supplied with water to protect their health and safety without curtailing substantially the water demand.
- (b) *Reservoir contamination.* A water shortage may be declared to exist when the reserve supply available at Lake Thom-A-Lex has been contaminated in such a manner as to permit contamination to pass through the water treatment plant, damage equipment or endanger employees, or cannot be treated to the standards established by the Safe Drinking Water Act or the standards established by the state, or endangers the health and safety of the citizens.
- (c) *Equipment or facility failure.* A water shortage may be declared in the event of failure of raw water transmission lines, chlorination systems, flocculation systems, settling systems, filtration systems, chemical feed systems, storage systems, including finished water reservoirs and elevated tanks, high-service pumps or elements of the distribution system. Equipment or facility failure shall include any occurrence, which reduces the ability to produce and distribute water at the designed capacity of the water plant or to the minimum level necessary to protect the health and safety of the citizens.

### I. Authorization

The City Manager is authorized to call for the Lexington City Council to enact water shortage response provisions whenever the trigger conditions outlined in Section IV of this plan are met. These provisions are set forth in Chapter 13, Article III, of the City's *Code of Ordinances*. Lexington's City Council may elect to authorize him to implement these restrictions before the triggers are reached after consulting with the water system directors of Thomasville and Davidson Water, Inc. In his or her absence, the Assistant City Manager will assume this role.

Alan Carson, City Manager  
336-248-3910

Terra Greene, Assistant City Manager  
336-248-3910

### II. Notification

The following notification methods will be used to inform water system employees and customers of a water shortage declaration: employee e-mail announcements, notices at municipal buildings, notices in water bills and on the City of Lexington's homepage, [www.LexingtonNC.gov](http://www.LexingtonNC.gov). Required water shortage response measures will be communicated through *The Lexington Dispatch*, PSA announcements on local radio and

cable stations. Declaration of emergency water restrictions or water rationing will be communicated to all customers by telephone through use of reverse 911. Utility bill inserts will be used where appropriate to inform the public of the water shortage and the restrictions necessary to address the problem.

### III. Levels of Response

Five levels of water shortage response are outlined in the table below. The five levels of water shortage response are: voluntary reductions, mandatory reductions I and II, emergency reductions and water rationing. A detailed description of each response level and corresponding water reduction measures follow below.

<b>Level</b>	<b>Response</b>	<b>Description</b>
1	Voluntary Reductions	Water users are encouraged to reduce their water use and improve water use efficiency; however, no penalties apply for noncompliance. Water supply conditions indicate a potential for shortage.
2	Mandatory Reductions I	Water users must abide required water use reduction and efficiency measures; penalties apply for noncompliance. Water supply conditions are significantly lower than the seasonal norm and water shortage conditions are expected to persist. Allows maintaining jobs and landscaping investments related to water use.
3	Mandatory Reductions II	Bans additional water usages not included in Level 2 Mandatory Restrictions
4	Emergency Reductions	Water supply conditions are substantially diminished and pose an imminent threat to human health or environmental integrity.
5	Water Rationing	Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity.

In Level 1, Voluntary Reductions, water users will be asked to reduce their normal water use by the following voluntary water conservation measures:

- a. An extensive publicity campaign will be initiated by using public media and specialized methods to inform the public of an impending water shortage.
- b. Residential conservation measures will be encouraged and recommended, including the following:
  1. Use showers for bathing rather than bathtubs and limit showers to no more than four (4) minutes.
  2. Limit toilet flushing by multiple usage.
  3. Do not leave faucets running while shaving, rinsing dishes or brushing teeth.
  4. Limit use of clothes washers and dishwashers. If these appliances must be operated, they should be fully loaded.
  5. Limit lawn watering to that which is necessary for plants to survive.
  6. Water shrubbery the minimum required.
  7. Mulch shrubs, trees, and flowers.

8. Limit car washing at home to the minimum, and use a commercial car wash when possible.
  9. Do not wash down outside areas such as sidewalks, patios and driveways.
  10. Install water flow restrictive devices in showerheads and sink faucets.
  11. Use disposable and biodegradable dishes.
  12. Install water saving devices such as bricks, plastic bottles or commercial units in toilet tanks.
  13. Limit hours of operation of water-cooled air conditioners.
- c. All residents, businesses and institutions are encouraged to delay new landscape work until the water shortage has ended; however, drip irrigation systems are encouraged in lieu of traditional systems. Local governing bodies will utilize untreated or reclaimed water for street washing, landscape irrigation and other appropriate purposes to the extent practical, and will implement in their facilities the water conservation measures required pertaining to Level 2 water shortage alert.

In Level 2, Mandatory Reductions Stage I, all customers are expected to continue Level 1, voluntary water conservation measures and the following restrictions apply.

It shall be unlawful to use water from the public water system for the following purposes:

- a. To water shrubbery, trees, flowers and gardens except as follows:  
Customers may water shrubbery, trees, and flowers having a minimum of two (2) inches of mulch and gardens from 8 p.m. on Monday to 8:00 a.m. on Tuesday; from 8:00 p.m. on Wednesday to 8:00 a.m. on Thursday; and from 8:00 p.m. on Friday to 8:00 a.m. on Saturday. Such watering shall be done by handheld hose with a spring-loaded nozzle; by container; by drip irrigation system; or by soaker hoses. Houseplants may be watered at any time.
- b. To fill newly constructed swimming or wading pools or refill swimming or wading pools that have been drained. A minimum amount of water may be added to maintain continued operation of pools in operation at the time the provisions of Level 2 water shortage warnings are placed into effect.
- c. To operate water-cooled air conditioners or other equipment that does not recycle cooling water, except [when] health and safety are adversely affected.
- d. To wash automobiles, trucks, trailers, boats, campers, or any other type of mobile equipment, excluding commercial car washing. In the case of commercial car operations, pressure washing may also be used.
- e. To wash down outside areas such as streets, driveways, patios, sidewalks, service station aprons, parking lots, office buildings, outside windows, or exteriors of existing or newly constructed residential, commercial, industrial or institutional buildings with a hose. This may be done with a pressure washer used by a private contractor or representatives of the business itself.
- f. To operate or introduce potable water into any ornamental fountain, pool or pond or other structure making similar use of potable water.
- g. To serve drinking water in restaurants, cafeterias or other food establishments, except upon request.
- h. To use water from a public or private fire hydrant or sprinkler system for any purpose other than fire suppression or other public emergency. Water use for normal maintenance of water and sewer lines is permitted.
- i. To use water for dust control or compaction.

- j. To use recreational water toys ("Slip and Slide", "Kiddie Sprinklers", etc.)
- k. To use potable water for dust control or compaction.
- l. To use water in fund raising or promotional events other than for direct consumption.
- m. To use water for any unnecessary purposes or to intentionally waste water.

Any person who obtains water from a well, creek, pond or other supply other than that of the city, shall post and maintain in a prominent place thereon a sign furnished by the city giving public notice of the use of the other source of supply. Notification signs will be issued by the city manager or person designated by the city manager. Requests for notification signs may be made by the owner of the property to the city manager or his designee in person, by mail, telephone, or electronic media.

Excess use rates: water and sewer rates for all residential connections using more than twenty (20) ccf will be doubled. Water rates for water consumed by sprinkler systems will be five (5) times the normal rate. Any monies collected through excess use rates shall be restricted to a reserve account dedicated to addressing water shortage problems and water conservation initiatives.

In Level 3, Mandatory Reductions II, customers must continue actions from all previous stages and further reduce water as listed below.

It shall be unlawful to use water from the public water system for the following purposes, in addition to restrictions in Levels 1 and 2:

- a. To water or sprinkle any lawn, garden, sod, shrubs or flowers except with non-potable water.
- b. To use water outside a structure for any use other than emergency use involving fire or accident.
- c. To introduce water into a swimming or wading pool.
- d. To use a pressure washer.
- e. All irrigation connections are to be valved off.
- f. Restaurants must serve food on disposable plates, saucers, cups, eating utensils, napkins and tablecloths.
- g. To make any nonessential use of water.

In Level 4, Emergency Reductions, customers must continue all actions from previous stages and further restrictions are implemented as follows:

Commercial and industrial water customers will be required to cut their water use by forty (40) percent over the average usage during the corresponding billing period for the most recent twelve-month period. Failure to do so will result in water and sewer rates being applied to accounts, which are two (2) times the adopted rates.

In Level 5, all customers are only permitted to use water at the minimum required for public health protection. In addition to the restrictions imposed for Level 1 through Level 4 responses, the City shall put in effect water-rationing measures.

In the event of water rationing, water will be supplied in the minimal quantities required for the health, welfare and safety of the citizens in accordance with the following guidelines. Failure to comply will result in disconnection of water service.

- a. There shall be no industrial use of water. Water may not be used to dye yarn, socks or other hosiery. Water may not be used in any electroplating operation. Water may not be used for any chemical, mirror or other manufacturing process requiring water. Water may not be used for drum cleaning. There shall be no commercial uses of water. This includes but is not limited to pet grooming, barbershops, beauty salons, spas, gymnasiums, etc.
- b. There shall be no institutional uses of water. Athletic events shall not increase bathing requirements. Physical education facilities shall not utilize bathing facilities.
- c. The City may discontinue water service to its customers for a maximum of 12 hours. This includes service areas outside the city limits. Fire protection will be maintained when possible. The City will restore water to a rationed zone in the event of an emergency. Whenever possible, tanker fire trucks shall use non-potable water.
- d. Water usage shall be limited to the minimum quantities necessary for sanitary purposes and fire protection and suppression and water shall be used for no other purpose.

The City Manager or his designee may authorize relief from specific provisions of these restrictions in order to maintain an economic or public investment or to continue employment by business or industrial customers.

#### IV. Triggers

Triggers for the City of Lexington are provided below. The City’s main source of water is the reservoir, Lake Thom-A-Lex. The following measurements of usable storage and intake levels trigger entry into corresponding water restriction stages.

Level	Usable Storage	Lake Level	Desired Reduction in Water Withdrawal
1	<75%	2’9” below full	5%
2	<65%	3’10 below full	10%
3	<60%	5’7” below full	15%
4	<50%	6’6 below full	20%
5	<40%	8’6” below full	25%

#### V. Enforcement

The provisions of the water shortage response plan will be enforced by City of Lexington. Violators may be reported to the Water Resources Department (336-248-3970), the City Manager’s office (336-248-3910), or the e-mail contact listed on the City’s website ([www.LexingtonNC.gov](http://www.LexingtonNC.gov)).

- a. *Generally.* Any violation of the provisions of this division shall constitute a misdemeanor, punishable upon conviction as provided in section 1-12 of the Code of Ordinances of the City of Lexington, and in addition thereto such violation may be enjoined and restrained as provided in G.S. 160A-175.

- b. *Injunctive remedies.* Pursuant to the provision of G.S. 160A-193, the injunctive remedies therein provided shall be applicable for the summary abatement or remedying of appropriate conditions dangerous or prejudicial to the public health and the expenses thereof assessed as therein provided.

#### VI. Public Comment

This plan is in compliance with provisions of Chapter 13, Article III, of the City of Lexington's Code of Ordinances. This plan has been presented to the City Of Lexington's Utilities Commission and the Lexington City Council and has been approved by both.

#### VII. Variance Protocols

Water use variance requests may be made to the office of Lexington's City Manager at 28 West Center Street (336)-248-3910. The City Manager or his designee may authorize relief from specific provisions of these restrictions in order to maintain an economic or public investment or to continue employment by business or industrial customers.

#### VIII. Effectiveness

The effectiveness of this water shortage response plan will be determined by comparing the stated water conservation goals with observed water use reduction data. Other factors to be considered include frequency of plan activation, any problem periods without activation, total number of violation citations, desired reductions attained and evaluation of demand reductions compared to the previous year's seasonal data.

#### IX. Revision

The water shortage response plan will be reviewed and revised as needed to adapt to new circumstances affecting water supply and demand, following implementation of emergency restrictions, and at a minimum of every five years, as required by the provisions of G.S. 143-355 (1). Further, a water shortage response planning work group will review procedures following each emergency or rationing stage to recommend any necessary improvements to the plan to the City Council. The Water Resources Superintendent is responsible for initiating all subsequent revisions.

Prepared by: Roger D. Jones, PE, Public Services Manager

Reviewed and Recommended by the Lexington Utilities Commission on May 3, 2010.

Approved by the Lexington City Council on May 24, 2010.