

Farmville Water Shortage Response Plan
Town of Farmville, North Carolina
August 20, 2018

The procedures herein are written to reduce potable water demand and supplement existing drinking water supplies whenever existing water supply sources are inadequate to meet current demands for potable water.

I. Authorization

The Farmville Town Manager shall enact the following water shortage response provisions whenever the trigger conditions outlined in Section IV are met. In their absence, the Water Supervisor will assume this role.

Mr. David Hodgkins
Farmville Town Manager
Phone: (252) 753-6700
E-mail: dhodgkins@farmvillenc.gov

Mr. Jeffrey Stancil
Town of Farmville Water Supervisor
Phone: (252) 341-8227
E-mail: jstancil@farmvillenc.gov

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 Town of Farmville website <http://www.farmvillenc.gov>. Required water shortage response measures will be communicated through PSA announcements on local radio and cable stations. Declaration of emergency water restrictions or water rationing will be communicated to all customers by PSA announcements on local radio, TV and cable stations. Additionally, an email will be sent to all water customers who have supplied the town with their email address.

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.

Stage	Response	Description
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.
3	Mandatory Reductions II	Same as in Stage 2
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 Stage 1, Voluntary Reductions, all water users will be asked to reduce their normal water use by 5%. Customer education and outreach programs will encourage water conservation and efficiency measures including: irrigating landscapes a maximum of one inch per week; preventing water waste, runoff and watering impervious surfaces; watering plants deeply to encourage root growth; washing only full loads in clothes and dishwashers; using spring-loaded nozzles on garden hoses; and identifying and repairing all water leaks.

In Stage 2, Mandatory Reductions I, all customers are expected to reduce their water use by 10% in comparison to their previous month's water bill. In addition to continuing to encourage all voluntary reduction actions, the following restrictions apply: irrigation is limited to a half inch per week between 8PM and 8AM; outdoor use of drinking water for washing impervious surfaces is prohibited; and all testing and training purposes requiring drinking water (e.g. fire protection) will be limited.

In Stage 3, Mandatory Reductions II, customers must continue actions from all previous stages and further reduce water use by 20% compared to their previous month's water bill. All non-essential uses of drinking water are banned and garden and landscape irrigation must be reduced to the minimum amount necessary for survival. Additionally, in Stage 3, a drought surcharge of 1.5 times the normal water rate applies.

In Stage 4, Emergency Reductions, customers must continue all actions from previous stages and further reduce their water use by 25% compared to their previous month's water bill. A ban on all use of drinking water except to protect public health and safety is implemented and drought surcharges increase to 2 times the normal water rate.

The goal of Stage 5, Water Rationing, is to provide drinking water to protect public health (e.g. residences, residential health care facilities and correctional facilities). In Stage 5, all customers are only permitted to use water at the minimum required for public health protection. Firefighting is the only allowable outdoor water use and pickup locations for distributing potable water will be announced according to Farmville's Emergency Response Plan. Drought surcharges increase to 5 times the normal water rate.

IV. Triggers

The Town of Farmville's water source is groundwater. The following measurements of well pumping times and well levels in relationship to pump intake levels trigger entry into corresponding water restriction stages.

Stage	Well Operating Conditions
1	Pumping Time >10 hrs 20% reduction in seasonal normal distance from static water level and pump intake 20% increase pumping time for same output
2	Pumping Time >12 hrs 40% reduction in distance from static water level and pump intake 40% increase pumping time for same output
3	Pumping Time >14 hrs 60% reduction in distance from static water level and pump intake 60% increase pumping time for same output
4	Pumping Time >20 hrs 80% reduction in distance from static water level and pump intake
5	Water level at pump intake elevation

Farmville is provided water also by purchase from the Greenville Utilities Commission (as of July 2010). When Greenville Utilities Commission declares a water shortage Farmville is required to do so as well. During this time, Farmville Water Supervisor will stay in close contact with Greenville Utilities Commission and follow their triggers.

Return to Normal

When water shortage conditions have abated and the situation is returning to normal, water conservation measures employed during each phase should be decreased in reverse order of implementation. Permanent measures directed toward long-term monitoring and conservation should be implemented or continued so that the community will be in a better position to prevent shortages and respond to recurring water shortage conditions.

V. Enforcement

The provisions of the water shortage response plan will be enforced by Town of Farmville Utilities Department and police personnel. Violators may be reported on the town's Phone line. Citations are assessed according to the following schedule depending on the number of prior violations and current level of water shortage.

Water Shortage Level	First Violation	Second Violation	Third Violation
Voluntary Reductions	N/A	N/A	N/A
Mandatory Reductions (Stages 2 and 3)	Warning	\$250	Discontinuation of Service
Emergency Reductions	\$250	Discontinuation of Service	Discontinuation of Service
Water Rationing	\$500	Discontinuation of Service	Discontinuation of Service

Drought surcharge rates are effective in Stages 3, 4 and 5.

VI. Public Comment

Customers will have multiple opportunities to comment on the provisions of the water shortage response plan. First, a draft plan will be available at Town Hall for customers to view. A notice will be included in customer water bills notifying them of such. Notice will be printed in all customer water bills to collect comments on the draft. All subsequent revisions to the draft plan will be published at least 30 days prior to an adoption vote by Farmville's Town Commissioners.

VII. Variance Protocols

Applications for water use variance requests are available from the Town of Farmville website and Town Manager's Office. All applications must be submitted to the Town Manager's Office for review by the Town Manager or his or her designee. A decision to approve or deny individual variance requests will be determined within two weeks of submittal after careful consideration of the following criteria: impact on water demand, expected duration, alternative source options, social and economic importance, purpose (i.e. necessary use of drinking water) and the prevention of structural damage.

VIII. Effectiveness

The effectiveness of the Farmville 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 in conjunction with the updating of our Local Water Supply Plan. 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 Farmville's Town Commissioners. The Town of Farmville Town Manager or his or her designee is responsible for initiating all subsequent revisions.

21.0 WATER EMERGENCY MANAGEMENT

21.1 Declaration of Water Emergency

The Board of Commissioners is authorized to declare that a water emergency exists. The General Manager or his authorized representative is authorized to declare that a water emergency exists without action by the Board of Commissioners in the event of an immediate water shortage. Depending on the severity of the emergency, voluntary (Stage 1) and mandatory (Stage 2 and Stage 3) staged water use restrictions as described in this article shall be imposed upon water customers. The following notification methods are available 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 GUC's website homepage. Required water shortage response measures can be communicated through local newspapers, PSA's on local radio and cable stations, and on GUC's website. Declaration of emergency water restrictions or water rationing can be communicated to all customers by telephone through use of reverse 911.

21.2 Staged Water Use Restrictions

21.2.1 Stage 1 - Water Conservation Alert

A Stage 1 water emergency will, as appropriate, be declared in the event of an immediate water shortage or when any of the following conditions exist:

- There are three consecutive days when water demand exceeds 80% of the water production capacity.
- The average of the daily Tar River level measurements taken at the Water Treatment Plant Raw Water Pump Station is -2.0 feet Mean Sea Level or less.
- The location of the salt water interface in the Tar River is determined to be 10 miles or less from the Water Treatment Plant Raw Water Pump Station.

Water production capacity shall be defined as the maximum volume of water that meets state and federal standards that the water treatment process can produce during a twenty-four hour period. Water production capacity can vary depending on system component reliability and raw water conditions. The salt water interface shall be defined as the point where chloride levels in the Tar River are measured at 250 milligrams per liter just below the

surface. During a declared Stage 1 water emergency the following voluntary water conservation practices shall be encouraged:

- (a) Inspect and repair all faulty and defective parts of faucets and toilets.
- (b) Use shower for bathing rather than bathtub and limit shower to no more than 5 minutes.
- (c) Do not leave faucets running while shaving, brushing teeth, rinsing or preparing food.
- (d) Limit the use of clothes washers and dishwashers and when used, operate fully loaded. Operate dishwashers between the hours of 8 PM and 8 AM.
- (e) Limit lawn watering to that necessary for plant survival. Water lawns between the hours of 8 PM and 8 AM.
- (f) Water shrubbery the minimum required. Water shrubbery between the hours of 8 PM and 8 AM.
- (g) Limit vehicle washing.
- (h) Do not wash down outside areas such as sidewalks, driveways, patios, etc.
- (i) Install water saving showerheads and other devices.
- (j) Use disposable and biodegradable dishes where possible.
- (k) Install water saving devices in toilets such as early closing flappers.
- (l) Limit hours of water-cooled air conditioners.
- (m) Do not fill swimming or wading pools.

21.2.2 Stage 2 - Water Shortage Warning

A Stage 2 water emergency will, as appropriate, be declared in the event of an immediate water shortage or when any of the following conditions exist:

- There are two consecutive days when water demand exceeds 90% of the water production capacity.
- The average of the daily Tar River level measurements taken at the Water Treatment Plant Raw Water Pump Station is -2.5 feet Mean Sea Level or less.
- The location of the salt water interface in the Tar River is determined to be 7 miles or less from the Water Treatment Plant Raw Water Pump Station.

Water production capacity shall be defined as the maximum volume of water that meets state and federal standards that the water treatment process can produce during a twenty-four hour period. Water production capacity can vary depending on system component reliability and raw water conditions. The salt water interface shall be defined as the point where chloride levels in the Tar River are measured at 250 milligrams per liter just below the surface. During a declared Stage 2 water emergency the following activities shall be prohibited:

- (a) Watering lawns, grass, shrubbery, trees, flower and vegetable gardens except by hand held hose, container, or drip irrigation system between 8 PM and 8 AM. In accordance with the following schedule:
 - Properties with ODD numbered addresses (ending in one, three, five, seven, or nine) may irrigate on TUESDAY, FRIDAY, and SUNDAY.
 - Properties with EVEN numbered addresses (ending in zero, two, four, six, or eight) may irrigate on MONDAY, THURSDAY, and SATURDAY.
 - NO irrigation is allowed on WEDNESDAY. (A person who regularly sells plants will be permitted to use water on their commercial stock. A golf course may water their greens. State, County and City licensed landscape contractors may water by hand held hose or drip irrigation any plants under a written warranty.)
- (b) Filling swimming or wading pools, either newly constructed or previously drained. Make up water for pools in operation will be allowed.
- (c) Using water-cooled air conditioners or other equipment, in which cooling water is not recycled, unless there are health or safety concerns.

- (d) Washing any type of mobile equipment including cars, trucks, trailers, boats, or airplanes. Any persons involved in a business of washing motor vehicles may continue to operate.
- (e) Washing outside surfaces such as streets, driveways, service station aprons, parking lots, or patios.
- (f) Washing the exterior of office buildings, homes, or apartments.
- (g) Using water for any ornamental fountain, pool, pond, etc.
- (h) Serving drinking water in food establishments such as restaurants or cafeterias, unless requested to do so by a customer.
- (i) Using water from a public or private fire hydrant for any reason other than to suppress a fire or other public emergency or as authorized by the General Manager or his authorized representative.
- (j) Using water to control or compact dust.
- (k) Intentionally wasting water.
- (l) Commercial and industrial water customers shall achieve mandatory reductions in water usage through whatever means are available. A minimum reduction of 20% shall be the target, however a greater target reduction percentage may be required depending on the severity of the water emergency. Compliance with the reduction target shall be determined by the General Manager or his authorized representative. Variances to the target reduction may be granted by the General Manager or his authorized representative to designated public health facilities.

21.2.3 Stage 3 – Water Shortage Danger

A Stage 3 water emergency will, as appropriate, be declared in the event of an immediate water shortage or when any of the following conditions exist:

- There is one day when water demand exceeds 100% of the water production capacity.

- The average of the daily Tar River level measurements taken at the Water Treatment Plant Raw Water Pump Station is -3.5 feet Mean Sea Level or less.
- The location of the salt water interface in the Tar River is determined to be 4 miles or less from the Water Treatment Plant Raw Water Pump Station.

Water production capacity shall be defined as the maximum volume of water that meets state and federal standards that the water treatment process can produce during a twenty-four hour period. Water production capacity can vary depending on system component reliability and raw water conditions. The salt water interface shall be defined as the point where chloride levels in the Tar River are measured at 250 milligrams per liter just below the surface. During a declared Stage 3 water emergency the following activities shall be prohibited, in addition to activities prohibited under Stage 2:

- (a) Watering lawns, grass, shrubbery, trees, and flowers.
- (b) Washing motor vehicles at commercial car wash establishments.
- (c) Watering any vegetable garden except by hand held hose, container, or drip irrigation.
- (d) Commercial and industrial water customers shall achieve mandatory reductions in water usage through whatever means are available. A minimum reduction of 50% shall be the target, however a greater target reduction percentage may be required depending on the severity of the water emergency. Compliance with the reduction target shall be determined by the General Manager or his authorized representative. Variances to the target reduction may be granted by the General Manager or his authorized representative to designated public health facilities.
- (e) In the event that the prohibition of the activities listed above is not sufficient to maintain an adequate supply of water for fire protection, all use of water for purposes other than maintenance of public health and safety shall be prohibited. Residential water use shall be limited to the amount necessary to sustain life through drinking, food preparation and personal hygiene.

21.3 Compliance Plan During Stage 2 and Stage 3 Emergencies

The General Manager or his authorized representative may require that commercial and industrial water customers prepare plans detailing measures to be taken by them to achieve mandatory reductions in daily water usage during Stage 2 and Stage 3 emergencies. Such plans shall be completed within sixty (60) calendar days after receipt of notice to prepare them.

21.4 Penalties for Violation of Mandatory Restrictions

Any User who is found to have failed to comply with any of the mandatory restrictions set forth in these Regulations may be fined up to five hundred dollars (\$500) per day per violation. Enforcement of the mandatory restrictions and imposition of fines will be implemented according to the following schedule except in cases of gross noncompliance:

- First Offense – Written Warning
- Second Offense – Fine up to two hundred dollars (\$200)
- Third Offense – Fine up to five hundred dollars (\$500)

GUC staff will enforce the provisions of mandatory restrictions.

21.5 Authority to Discontinue Service

Pursuant to the provisions of Part C, Section 14, Terms & Conditions Of Water And /Or Sewer Service, water service may be temporarily discontinued for failure to comply with the mandatory restrictions in these Regulations. All applicable penalty fees may be applied in the event of such service suspensions. In the event of continued noncompliance with this article, removal of meter and service will be deemed proper and service will be discontinued and tap fees and deposits will be forfeited.

21.6 Appeal by Customers of Penalties and Termination of Service

Any User who receives a penalty and/or has service terminated as a result of violations of the mandatory restrictions in these Regulations may appeal upon notification to the General Manager to an Executive Committee of the Board of Commissioners consisting of the Chair, Vice Chair and Secretary. The Executive Committee shall be the final decision maker for appeals and shall transmit a written copy of the final decision by registered or certified mail within three days after notification by the General Manager.

21.7 Enforcement of Mandatory Restrictions Under City Code of Ordinances

In the event that the General Manager or his authorized representative declares a Stage 3 water emergency and prohibits all use of water for purposes other than maintenance of public health and safety, pursuant to Section 21.2.3(e) of these Regulations, the Board of Commissioners may request that the Greenville City Council impose by ordinance the prohibitions and restrictions in Chapter 3, Article B (States of Emergency) Section 5-3-15 (Access to certain areas) (a) and (b) of the City Code of Ordinances in order to enforce the mandatory water restrictions.

21.8 Adoption and Enforcement of Article by Public or Private Water Systems

Public or private water systems purchasing water from the Commission shall adopt and enforce this entire article as a condition of water service. Upon declaration of a water emergency, the public or private water systems shall enforce the appropriate water use restrictions for the level of declared emergency.

21.9 Request for a Variance

A variance may be issued in instances where the mandated water restrictions cannot be met without threatening public health or safety. Variances can be applied for by completing a variance form available from the General Manager's office and on GUC's website. Completed applications are to be submitted to the General Manager's office. Variance requests may be granted considering the following factors, relieving such person from compliance with any of the requirements of these regulations in whole or part, if such person demonstrates:

- a) a threat to public health or safety would otherwise result;
- b) that there are no possible alternatives; that the applicant has taken and will take all reasonable measures to conserve water;
- c) that all other conservation measures required by these regulations will be implemented; and
- d) that such variance is not inconsistent with the purposes of these water shortage orders.

21.10 Plan Effectiveness

During a declared water emergency, GUC staff will monitor water treatment plant flows daily to determine the amount of water being treated and distributed throughout the system. The data will be compared with previous existing data to determine water use efficiency.

21.11 Revisions to Plan

Staff will review this plan and make necessary revisions at least every five years. Customers will be afforded opportunities through public notification methods set forth in Section 21.1 of these regulations to provide comments on any proposed revisions to the plan and prior to final plan adoption. Proposed changes will be made available for review and comment at least 30 days prior to consideration of adoption by the Board of Commissioners.

21.12 Termination of Restrictions

A water emergency declaration will expire when the Board of Commissioners determines that the condition which causes the emergency has abated. The expiration or cancellation of a water emergency declaration shall be promptly and extensively publicized. The following notification methods are available to inform water system employees and customers of a termination or reduction of restrictions: employee e-mail announcements, notices at municipal buildings, notices in water bills, and GUC's website homepage. Notice of termination or reduction of restrictions can also be communicated through local newspapers, PSA's on local radio and cable stations, and on GUC's website.