

TOWN OF COLUMBIA, NC

Water Shortage Response Plan

PWSID # 04-89-010

INTRODUCTION

The Town of Columbia, population 867, sits on the eastern bank of the Scuppernong River, just south of the vast Albemarle Sound in northeastern North Carolina. The town is only about four feet above sea level and is surrounded by hardwood swamps where standing water is the norm. Even during periods of prolonged drought, area lands usually retain moisture and produce bountiful agricultural harvests. There is a public tendency to ignore drought alerts and conservation measures as unnecessary in an area with so much water, resulting in an unusual challenge for a small municipal water system.

AUTHORITY

The Columbia Town Manager is the primary authority responsible for implementing all water shortage response protocols. In his/her absence, the Columbia Water System Operator will assume this role.

In the event water demand on the Town of Columbia water system may exceed supply and transmission capabilities, the responsible authority may recommend that voluntary water conservation measures be implemented. In the event that voluntary conservation measures fail to relieve the demand on the water system, the town may implement mandatory or emergency water conservation measures,

All entities purchasing water from the Town of Columbia will adopt and enforce this Water Shortage Response Plan as a condition of water sales agreements. Upon declaration of water shortage, all entities associated with this system will enforce the appropriate water use restrictions and/or percent reduction goals for each level/phase of response to a water shortage.

PUBLIC NOTIFICATION/EDUCATION

A variety of education, outreach and public notification methods will be used to inform water system customers about water use policies and restrictions. These include direct site visits to major industrial, commercial and institutional users, distribution by hand delivery of flyers and notices to business and residential customers, newspaper releases to the Coastland Times (three times weekly) and Scuppernong Reminder (weekly), and radio public service announcements. During periods of drought, every effort will be made to keep the public informed about any increased water shortage severity.

WATER USE CLASSIFICATIONS

Class 1: Essential Water Uses

1. Domestic Use: Water necessary to sustain human life and the lives of domestic pets, and to maintain minimum standards of hygiene and sanitation.
2. Health Care: Patient care and rehabilitation, including the Columbia Medical Center and Tyrrell County Health Department.
3. Public Use: Firefighting including testing and drills by the Tyrrell Volunteer Fire Department if performed in the interest of public safety. Also, flushing of sewers and hydrants as needed to ensure public health and safety.

Class 2: Socially or Economically Important Water Uses

1. Domestic Use: All domestic uses other than those included in Classes 1 and 3. These include home use such as kitchen, bathroom and laundry, minimal watering of vegetable gardens and watering of trees where necessary to preserve them.
2. Commercial, Agricultural, Industrial and Institutional Use: This includes outdoor commercial watering (public or private) using best conservation measures, irrigation for commercial vegetable gardens and fruit orchards or the maintenance of livestock, watering by commercial nurseries at a minimum level to maintain plant stock, use of water at a minimum rate necessary to establish vegetation following earth-moving activity, where vegetation is required by law or regulations, and watering of public gardens of regional or local significance where necessary to preserve specimens. Also: car and truck washes, commercial laundromats, commercial laundries, restaurants, schools, day care centers, churches, motels and similar commercial establishments, seafood processing facilities and manufacturing/industrial processes where water is critical to operation.

Class 3: Non-Essential Water Uses

1. Ornamental Purposes: Fountains, pools, reflecting pools and artificial Waterfalls.
2. Outdoor Non-Commercial Watering (public or private): Gardens and lawns, filling and operation of recreational swimming pools, non-commercial washing of motor vehicles and serving water in restaurants, clubs or eating places except by specific request.

YEAR ROUND WATER USE POLICY

The Town of Columbia will promote a year-round water conservation strategy to manage its drinking water supply and demand. Wise use of water is expected of all customers and will be encouraged by the town.

Columbia will encourage year round efficient use of water by all customers. The town will carefully monitor demand and supply while maintaining awareness of regional conditions and water supplies by on-going review of the North Carolina Drought Monitor.

CONSERVATION MEASURES AND WATER USE RESTRICTIONS

The Town of Columbia Water system draws from two fresh water wells. The wells are programmed to cycle so that each well is providing about 50% of the water supply during any 24 hour period of time. Thus if the water plant is running 12 hours per day, each well is being drawn upon about six hours per day.

The town has one 200,000 gallon elevated water storage tank.

If either well is lost, conservation measures and water use restrictions will be implemented immediately. This will include direct notification to all industrial, commercial, institutional and carwash customers that they are to cease all except Class 1 (Essential Water Uses) water uses until further notice.

In drought conditions, phased conservation measures and water use restrictions will be used to reduce demand for drinking water. The severity of the drinking water shortage will be determined according to pump run times and the duration of time pumps exceed 11 hour per day. Evaluation of elevated storage tank levels and the time for the system to recover from demand events will also be considered. The drought condition status as determined by the North Carolina Drought Management Council will be used as a criteria.

1. *Voluntary Conservation Measures* – The primary trigger for implementing voluntary conservation measures will occur when both pump run times exceed 11 hours/day for a period of three days, when elevated storage tank capacity is less than 75% and when moderate drought conditions for the Columbia/Tyrrell County area are posted by the State. A water shortage advisory will be issued, conservation goals will be set, preparation for decreasing supply will begin and voluntary conservation by all users will be requested.
2. *Mandatory Restriction Measures* – The trigger for implementing mandatory restrictions will occur when both pump run times exceed 11 hours/day for a period of one week, when elevated storage tank capacity is less than 60% and when severe or extreme drought conditions for the Columbia/Tyrrell County area are posted by the State. All Class 3 (Non-Essential) uses will be banned

or restricted. Voluntary conservation measures will be requested for all other water uses. Compliance will be monitored and enforced when necessary and water use restrictions will be increased as necessary.

3. *Emergency Response Measures* – The trigger for implementing emergency response measures will occur when both pump run times exceed 11 hours/day for a period of two weeks or more, when elevated storage tank capacity is less than 50% and when exceptional drought conditions for the Columbia/Tyrrell County area are posted by the State. Selected Class 2 (Socially or Economically Important) and all Class 3 (Non-Essential) uses will be banned. Compliance will be rigorously monitored and enforced. Restrictions will increase as necessary.

LEVELS OF RESPONSE REQUIRED/ENFORCEMENT

Mandatory and emergency water conservation restrictions require full compliance by water users. Violators will be warned verbally and in writing. If customers continue to violate water conservation restrictions, their water service will be discontinued.

PUBLIC COMMENT/EXCEPTIONS

There will be no opportunity for users to review the water shortage response protocols before they are implemented, however a copy of this plan will be maintained at the Town of Columbia Municipal Building for public review during regular weekday business hours.

Customers seeking a variance or exception from conservation requirements in the Water Shortage Response Plan should submit a request in writing to the Town of Columbia Board of Aldermen, with the following information:

Name
Address
Date of Request
Hardship created by water use restrictions
Proposed duration for requested variance or exception
Detailed explanation for requested variance or exception
Justification for approval of the requested variance or exception

The Town of Columbia Board of Aldermen will evaluate the variance or exception request and render a decision at the next scheduled meeting of the Board.

EFFECTIVENESS OF PROTOCOLS

The effectiveness of the water shortage response protocols will be evaluated through continued close observation of the water system (well production, pump run times, elevated storage tanks, State Drought Monitor, etc.) Adjustments to conservation measures will be made as demanded by conditions.

PROTOCOL REVISIONS

The Water Shortage Response Plan will be reviewed annually for changes that may be needed, based upon past observations and data, or upon changing conditions. The Board of Aldermen will determine if water rates need to be increased or the rate structure should be altered to defer lost revenue or to serve as another enforcement tool to reach desired conservation goals.

The Town of Columbia Water System is not dependent on water storage impoundments or upon purchase of water from another system. The town does have a connection point and mutual agreement that allows Columbia and Tyrrell County to share water in emergency situations. There will be close coordination with the Tyrrell County Water System during drought or water shortage conditions.