

ORDINANCE 2017-246

An Ordinance to Adopt a Drought Management Plan

WHEREAS, the City of Dyer is required by the Tennessee Division of Resources Rule 0400-45-01-.17 (7)(b) to adopt a Drought Management Plan by June 30, 2017, and

WHEREAS, the purpose of this plan is to reduce water demand in the event of a drought where existing water supplies are inadequate to meet current demand for potable water, NOW THEREFORE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DYER, TENNESSEE, THAT:

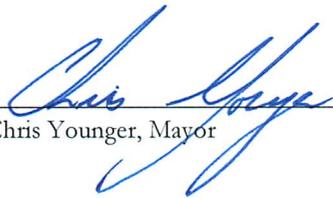
Section 1. The attached "Drought Management Plan for the City of Dyer" is adopted in its entirety.

Section 2. The City Recorder shall maintain a current copy of the plan as part of the City's official papers and records.

Section 3. This ordinance shall become effective on upon final passage, the public welfare requiring it.

Passed First Reading: June 12, 2017

Passed Second Reading: June 26, 2017



Chris Younger, Mayor



Nathan Reed, City Recorder

Drought Management Plan

For

CITY OF DYER

PWSID: 0000209

Date: Feb. 14 2017

Authority and Status to Plan.

DYER is a municipal corporation chartered and organized under the laws of the State of Tennessee. CITY OF DYER owns and operates a water treatment plant and distribution system serving the citizens of Dyer and the surrounding area. The Mayor of Dyer has the authority to implement a drought management plan the chief water treatment plant operator has been given the responsibility to complete the plan.

System Characteristics and Risks.

CITY OF DYER has approximately 1,064 water connections. Using the household factor of 2.34 persons per household for Gibson County this is equivalent to approximately 2,489 persons. The usage is categorized as follows:

Water Use Category	Use in Gallons (Avg)	Percent of Total Usage	Peak Water Use	Percent of Total Usage	Increase in Gallons	Percent Increase (peak over avg)
Residential	4,197,856	99	6,411,887	99	2,214,031	53
Commercial	30,110	1	58,030	1	27,920	93
Non Metered						
Total	4,227,966	100	6,469,917	100	2,241,951	53

The CITY OF DYER Water Treatment Plant is a conventional groundwater plant with a design capacity of approximately 0.56 million gallons per day. Average usage for the system is approximately 260,000 gallons per day. The maximum daily pumpage in recent years, which occurred in July, 2012, was 271,000 gallons. The treatment plant uses the three wells as its raw water source. The distribution system contains four water storage tanks with a combined capacity of 1,400,000 gallons.

Purpose of the Drought Management Plan.

Typically drought has not affected the water source in past years. The purpose of this plan is to reduce water demand in the event of a drought where existing water supplies are inadequate to meet current demand for potable water. The significance of taking into account water use on average and during peak water demand (though it may not reflect an extreme or exceptional drought) is that system officials can identify water uses that have the potential to be reduced more easily. The point here is to identify potential discretionary or non-essential water uses. It is evident from the data above that water use by residential users account for 99% of water produced. The one percent used in commercial use indicates that this area may not be easily reduced.

During the droughts of 2007 and 2008, the water treatment plant was able to meet customer demand with no restrictions implemented. Static water levels in our wells remained at normal levels. Presently there are connections with neighboring water systems. An emergency connection with Rutherford and Gibson County Utility is in place, however since their source is also groundwater, a drought that affects CITY OF DYER would likely affect them.

Drought Management Plan within the Context of an EOP.

Development of the city’s drought management plan and EOP were assigned to the chief water plant operator. He organized a team of individuals, including employees and local officials to help organize and frame the plan. City of Dyer’s EOP addresses line breaks, storms,

earthquakes, hazardous material spills and civil disturbances. The EOP is not available for public scrutiny. The drought management plan focuses attention on managing supplies and demand during a declared drought.

The Planning Committee

The CITY OF DYER drought management plan is a separate component of the Emergency Operation Plan (EOP). It was developed by Water Department staff of the town, but included a focus group in its development and review. Unlike the EOP to which the drought plan is an “annex,” the drought plan includes a standby rate structure, restricts some water uses and in some cases bans other water uses at times. The drought management plan was adopted by the mayor and city board members. The final adoption process was the normal process used by city council to adopt ordinances allowing for public comment. The drought committee met on May 22, 2017.

Goals – Objectives and Priorities.

The initial goal of the drought management plan was to provide water to all priority uses as established by the water system under worsening drought conditions (three levels). The water uses and levels of water availability take into account the maintenance of public health and safety, sustaining economic activity, preserving critical environmental resources and life activities.

General Water Uses in Order of Priority:

- Medical facilities
- Nursing homes and elderly care facilities
- Human Consumption (Drinking water, domestic cooking, bathing, toilet use)
- Fire protection (structural facilities, and hazardous situations)
- Environment (Erosion, Aquatic Habitat)
- Commercial Uses (Restaurant, Laundry, Office, Retail)
- Industry and Manufacturing (Sanitation, Process, Cooling)
- Recreation (Pools, Athletic Fields)
- Landscape (shrubbery) watering (Home and Commercial)
- Lawn watering, Vehicle Washing (Home and Commercial)

Ordinances, Policies and Legal Requirements.

The city’s drought management plan, rules, ordinances, and policies are available for review. Copies can be examined at the CITY OF DYER CITY HALL.

Well Static Water Levels

During periods of drought or impending drought, operators at the CITY OF DYER Water Treatment Plant will monitor the static water levels of system wells. US Drought Monitor (<https://www.drought.gov/gdm/current-conditions>) will be monitored to determine severity of drought. In the event that the static water levels begin to approach preset trigger points, the Tennessee Division of Water Resources will be contacted to discuss possible actions.

Phased Management.

The drought response plan is broken into four phases: Drought Alert, Voluntary Water Reductions, Mandatory Water Restrictions and Emergency Water Management. The drought management phases and sets of trigger points along with their associated goals are described below. Failure to achieve a management phases goal within a reasonable time shall call for the next phase to be implemented.

Drought Alert.

In the drought alert phase, no reduction in water use demand is planned. The CITY OF DYER will focus on monitoring conditions, prepare for the possible implementation of “Voluntary Reductions,” and call its drought task force group together to review the plan and next-step actions.

Voluntary Water Reductions.

Under “Voluntary Reductions” CITY OF DYER has established a water use reduction goal of 10 percent. This figure corresponds to approximately 27,000 gallons per day water use judging by peak usage. Among the trigger points for implementing this phase would be a drop in static water levels of 20% or an increase in the usage to 100,000 gpd for five consecutive days. The public appeal would consist of news releases to the media (weekly newspaper, local radio and regional television stations). Customers will be encouraged to use efficient water practices, e.g., watering lawns between sunset and sunrise, along with the more careful watering of shrubs and other landscape plantings.

Mandatory Water Restrictions.

The goal of activating a “Mandatory Water Restrictions” phase would be to reduce water demand by customers by 15 percent (from estimated peak demand). This would amount to a reduction of approximately 40,000 gpd. Vehicle washing will be restricted. Restrictions to car/vehicle washing will apply to commercial car washes that do not re-cycle water and to the domestic washing of cars, etc. Lawn and landscape watering will be restricted. To assist in reducing usage, the water system will reduce the amount of flushing where possible. Among the trigger points for implementing this phase would be a drop in static water levels of 40% or an increase in the usage to 150,000 gpd for five consecutive days. Restrictions will be provided to the public through the media and posted in public buildings such as libraries, city hall, court house, banks and grocery stores. A \$15.00 surcharge will be assessed to all customers using over 4000 gallons per month. System personnel will be utilized to monitor compliance with restrictions. Customers will also be requested to report violators of the restrictions.

The following will be used to enforce restrictions:

- First offense - A written warning will be issued
- Second Offense - A \$50.00 fine
- Third Offense - Customer's water service will be discontinued for a minimum of 5 days. A reconnection fee will be required to have service restored.

Emergency Water Management. The “Emergency Water Management” phase of the drought plan would be triggered by severe water pressure or other hydraulic issues, the static water level drops 50% or more or the daily usage increases 200,000 gpd for five consecutive days. The purpose of this phase would be to reduce water use to 25 percent of the peak demand. This would be a reduction of approximately 68,000 gpd. The media will be used to strongly encourage all customers to curtail any nonessential usage. A \$25.00 surcharge will be assessed to all customers using over 4000 gallons per month. System personnel will be utilized to monitor compliance with restrictions. Customers will also be requested to report violators of the restrictions.

The following will be used to enforce restrictions:

- First offense - A written warning will be issued

- Second Offense - A \$50.00 fine
- Third Offense - Customer's water service will be discontinued for a minimum of 15 days. A reconnection fee will be required to have service restored.

Monitor Supply and Demand.

CITY OF DYER established 3 drought management phases in addition to a "Drought Alert" Phase.

All four phases are described below. In addition, numerous trigger points were identified signaling the beginning of a phase.

Management Team.

The Mayor of CITY OF DYER designated the chief water treatment plant operator to be the drought plan implementation Manager. He is ultimately in charge of managing the water system. In addition, the mayor of the city, the chief of the fire department and the city recorder make up the drought management group responsible for overseeing the implementation of the plan. They advise and assist the chief operator in gathering information, assessing the situation and recommend/advise/approve the chief operator's actions. The task group is activated and will meet as necessary once a "Drought Alert" has been initiated. A "Drought Alert" corresponds to the US Drought Monitor's categorization of the water system's service area as being characterized as under "Severe" drought conditions. The task group monitors water system conditions, including water demand, water supply, forecasted conditions, hydraulic conditions, water quality issues, impacted communities, public notification, plan modifications, staffing, trigger points and other issues related to the implementation of the plan. The task group and chief operator must also maintain records of their actions, system conditions at the time of management actions taken, and their effects. Finally, the drought management group and plan implementation manager must also determine and announce the step-down and/or deactivation of the plan.

Review, Evaluation and Up-dating the Management Plan

The drought management plan was adopted on _____ by the city council. The drought manager will review the plan within 6 months after any phase of the plan has been implemented and/or every three years. Refinements to the drought management plan will be made as necessary. The drought manager is responsible for making the review and presenting that review before the council.