

**SIMPSON COUNTY WATER DISTRICT**  
**WATER SHORTAGE RESPONSE PLAN**

(Based on Kentucky Water Shortage Response Plan – Revised 6/88)

The KY Natural Resources and Environmental Protection Cabinet has established a Drought Notification System based on weather monitoring data, water resource scientists and federal, state, and local agencies. Two levels of water shortage conditions have been identified.

1. **Water Shortage Watch**

The Cabinet will announce a Water Shortage Watch when water supply data indicate the potential for water shortages. Local governments and water utility managers are responsible for determining the need for local response and for making preparations for water shortages. The Cabinet must be kept informed of all shortages and actions taken in response to the shortage so the lifting of such measures can be accomplished.

Specific measures SCWD shall take when the Kentucky Division of Water issues a Water Shortage Watch are:

- a) Monitor water supplies daily. Refer to Section 2 “Evaluating Vulnerability to Water Shortages” to determine how much water the community has available and how much will be needed.
- b) Notify the Judge Executive if conditions indicate an inability of the treatment plant to supply the needs of the customers so the appropriate water shortage phase can be activated according to the severity of the conditions.
- c) Keep the Cabinet informed of all actions taken.

2. **Water Shortage Warning**

The Cabinet will announce a Water Shortage Warning when one or more water supply systems in an area have entered the emergency phase of a water shortage. Local governments and water utility managers should have already adopted water shortage response plans in their areas, and most systems should be in some phase of response to the shortage.

Specific measures SCWD shall take when the Kentucky Division of Water issues a Water Shortage Warning are:

- a) Continue to monitor raw water supplies and system demand daily
- b) Notify the Judge Executive if conditions indicate an inability of the treatment plant to supply the needs of the customers so an appropriate water shortage phase can be activated according to the severity of the conditions.
- c) Keep the Cabinet informed of all actions taken.

Should water supply data and/or system demand data indicate an inability to supply customers at current operational levels, SCWD shall notify the Judge Executive who shall issue a water shortage notification to the public based on the severity of the situation. Notifications in order of severity are:

1. Advisory Phase
  - Issue water shortage advisory
  - Set conservation goals and prepare for decreasing supply
  - Inform the public about the potential problem
  - Request voluntary conservation (Expect only 5-15% reduction in demand)
2. Alert Phase
  - Issue water shortage alert
  - Set more stringent conservation goals
  - Restrict Class 3, non-essential, water uses to odd/even schedule
  - Request voluntary conservation for all water use
  - Inform the public about the problem
  - Monitor compliance with the restrictions on Class 3 use and enforce when necessary
3. Emergency Phase
  - Issue water shortage emergency declaration
  - Set more stringent conservation goals
  - Ban all Class 3 and restrict all Class 2 water uses
  - Inform the public
  - Enact conservation pricing
  - Monitor all drought-related activities, especially compliance with the bans. Enforce as necessary
4. Rationing Phase
  - Begin mandatory allocations of water
  - Immediately reduce usage by 25 percent
  - Ban Class 3 uses, restrict Class 2 and Class 1 water uses
  - Inform the public
  - Enact conservation pricing
  - Set new conservation goals and monitor all shortage-related activities, especially compliance with the allocations. Enforce as necessary

### **Evaluating Vulnerability to Water Shortages**

Three conditions exist which can create water shortage:

1. **Inadequate raw water supply**
  - Old Hickory Lake is controlled by the flood control dam on Old Hickory Lake, Goodlettsville, Tennessee and operated by the Army Corp of Engineers.

- White House Utility District owns and operates the Water Treatment Plant which supplies water on a contract basis to Simpson County Water District.
- White House Utility District has a Drought Management Plan on file with the Simpson County Water District.

2. **Increasing demand exceeding treatment capacity**

- White House Utility District has a District Management Plan on file with the Simpson County Water District.

3. **Increased demand exceeding distribution system capacity from WHUD**

SCWD purchases its water supply from WHUD and may implement various phases of the Water Shortage Response Plan due to inability of the water transmission system to deliver water to the distribution system.

For Last Month:

Average use in \_\_\_\_\_ for past 5 years \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ 2 yrs ago \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ 1 yr ago \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ this year \_\_\_\_\_ mgd

For Current Month:

Average use in \_\_\_\_\_ for past 5 years \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ 2 yrs ago \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ 1 yr ago \_\_\_\_\_ mgd  
Average use in \_\_\_\_\_ this year \_\_\_\_\_ mgd

Usage Notes:

Weather Notes:

Therefore, average projected use for \_\_\_\_\_:

Without conservation measures: \_\_\_\_\_ mgd

With voluntary conservation measures:  
(goal of 10% reduction) \_\_\_\_\_ mgd

With more extensive conservation measures:  
(goal of 20% reduction) \_\_\_\_\_ mgd

Measure the ability to meet demand:

$$\frac{\text{Projected use (mgd)} \times 100}{\text{Stream Flow (mgd)}}$$