

SIMPSON COUNTY WATER DISTRICT WATER SHORTAGE RESPONSE PLAN

JAN 13 2000

(Based on the Kentucky Water Shortage Response Plan - Revised 6/88) SECTION 9 (1)

BY Stephan D Bell
SECRETARY OF THE COMMISSION

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

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Evaluating Vulnerability to Water Shortages

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Three conditions exist which can create water shortage:

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BY: Stephan Bue

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 Water Shortage Supply Plan attached as Exhibit A.

2. Increasing demand exceeding treatment capacity

See Exhibit A.

3. Increase 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 problems of the water transmission system to deliver water to the distribution system.

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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: _____ mgd
(goal of 10% reduction)

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

Measure the ability to meet demand:

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

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EXAMPLES OF PRESS RELEASES

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Advisory Phase

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Simpson County, KY - Due to the recent abnormally dry weather conditions and little indication of significant rainfall in the foreseeable future, residents of Simpson County should begin conserving water. For the month(s) of _____, Simpson County received only _____ percent of normal rainfall for the comparable period. The 30-day outlook from the National Weather Service calls for more abnormally dry weather.

The State of Kentucky has declared a local water shortage ADVISORY. At this time, there is an immediate need to begin voluntary conservation measures.

According to officials at the Kentucky Division of Water, consumers can cut water use by as much as 15% with very little difficulty or discomfort by using voluntary water conservation practices.

All non-essential uses of water should be minimized, such as watering lawns, washing cars, and hosing off pavement.

If everyone cooperates, the water usage in Simpson County can be cut significantly. If you have questions or suggestions, please contact _____ at (270) 526-4656.

Alert Phase

Simpson County, KY - A water shortage ALERT has been declared for the Simpson County Water District service area.

(Describe the supply situation, given unrestricted water demand.)

Under the ALERT, and in order to ensure adequate supplies for necessary uses, citizens are urged to practice conservation in all use of water. Non-essential water use, is restricted according to the following schedule:

1. Outside use for addresses ending in an odd number shall be limited to Tuesdays, Thursdays and Saturdays.
2. Outside use for addresses ending in an even number shall be limited to Wednesdays, Fridays and Sundays.

Non-essential use includes ornamental watering, filling of swimming pools, washing of motor vehicles, driveway or pavement washing, refilling of air conditioning cooling towers, and the serving of water in restaurants except by request.

Conservation of all water uses, accompanied by these restrictions, can reduce water use by 15 - 30 percent. Simpson County Water District customers can extend limited water supplies, avoiding further restrictions, by observing these bans and conserving water at all times.

(Project results of compliance)

If everyone cooperates, the water usage in Simpson County can be cut significantly. If you have questions or suggestions, please contact _____ at (270) 526-4656.

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Definitions of Classes of Water Uses

Class 1 (Essential uses)

- Water necessary to sustain human life and pets, and to maintain minimum standards of hygiene and sanitation
- Patient care and rehabilitation
- Water hauling sales for domestic use where not reasonably available elsewhere
- Firefighting
- Health and public protection purposes as approved by health officials and municipal governing body

Class 2 (Socially or Economically Important uses of Water)

- Personal, in-house water use including kitchen, bathroom and laundry
- Water hauling sales for non-domestic use when other sources are not reasonably available elsewhere
- Commercial car and truck washes
- Laundromats
- Restaurants, clubs, and eating places
- Schools, churches, motels/hotels and similar establishments
- Minimal watering of vegetable gardens
- Minimal watering of trees where necessary for their survival
- Agricultural irrigation of the production of food and fiber or the maintenance of livestock
- Watering by public gardens of community significance where necessary to preserve specimens
- Watering by commercial nurseries where necessary to maintain stock
- Watering where necessary to establish or maintain revegetation or landscape plantings required pursuant to law or regulation
- Watering of woody plants where necessary to preserve them
- Minimal water of golf course greens
- Operation of municipal swimming pools and residential pools that serve more than 25 dwelling units
- Air conditioning refilling for startup at the beginning of the cooling season
- Makeup of water during the cooling season
- Refilling of AC's specifically approved by health officials and the municipal governing body, where the system has been drained for health protection or repair services.

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Class 3 (Non-essential Uses)

- Use of fire hydrants other than Class 1 & 2 uses, including use of sprinkler caps, testing fire apparatus, and fire department drills
- Flushing of sewers and hydrants except as needed to ensure public health and safety as approved by health officials and the municipal governing body
- Serving water in restaurants, clubs, or eating places except by customer request
- Failure to repair a controllable leak

- Increasing water levels in scenic and recreational ponds and lakes, except as necessary to support fish and wildlife
- Filling fountains, reflecting pools and artificial and artificial waterfalls
- Watering of annual or non-woody plants, lawns, parks, golf course fairways, playing fields and other recreational areas
- Washing down buildings or structures for purposes other than immediate fire protection
- Flushing gutters or permitting water to run or accumulate in any gutter or street
- Expanding nursery facilities, placing new irrigated agricultural land in production, or planting of landscaping except when required by a site design review process
- Use of water for dirt control or compaction
- Watering of lawns, parks, golf course fairways, playing fields and other recreational areas
- Washing sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surface areas
- Recreational uses other than those specified as Class 2
- Non-commercial washing of motor and other vehicles
- Refilling air conditioning cooling towers after draining

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