



## **Water Shortage Response Plan**

### **Village of Bald Head Island, North Carolina**

#### **PWSID # 04-10-130**

The procedures herein are written to reduce potable water demand when certain conditions exist which may adversely affect the continued availability of water for the protection of public health, welfare and safety of the Village of Bald Head Island.

### **I. Authorization**

Whenever a condition outlined in Section IV is met the Village Manager shall order the Village Clerk to notify the mayor and council members of a pending state of emergency. A special meeting shall be assembled within (48) hours of this notification to review all information and enact the water shortage response provisions as necessary. If a quorum cannot be assembled within the above mentioned timeframe the Mayor (or Mayor pro tempore, if Mayor is unavailable) shall implement the Water shortage response (phase I, II, III).

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### **II. Notification**

The following notification methods will be used to inform Village staff and customers of a water shortage declaration: E-mail announcement, notices posted at all municipal buildings, notices posted on water bills. Water shortage response measures will be communicated through, the village website (<http://www.villagebhi.org>) PSA announcements on BHI cable channel (3).

### **III. Levels of Response**

Three levels of water shortage response are outlined below. The three levels of water shortage response are: Voluntary Conservation, Mandatory Conservation and Emergency Conservation. A detailed description of each response level and corresponding water conservation measures follow.

<b>Phase</b>	<b>Response</b>	<b>Description</b>
I	Voluntary Conservation	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. <i><b>The following recommendations are encouraged</b></i>

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- Limit lawn watering to that which is necessary for the lawn to survive
- Water shrubbery the minimum amount required, reusing household water when possible
- Limit cart and boat washing to the minimum
- Refrain from washing down outside areas such as sidewalks, patios, and the like
- Use showers for bathing rather than baths, and limit showers to no more than four minutes
- Refrain from leaving faucets running while shaving or while rinsing dishes
- Limit use of clothes washers and dishwashers and when used, operate fully loaded
- Install water-flow restrictive devices in showerheads
- Use disposable and biodegradable dishes
- Install water-saving devices such as bricks or commercial units in toilet tanks to reduce volume. Insure toilet flapper valves are not leaking. *Note: This flapper can be checked by adding a food coloring to the toilet tank and visually checking to see if the color appears in the bowl. If it does show color the toilet is leaking.*

Phase	Response	Description
II	Mandatory Conservation	Water users must abide to water use reduction and efficiency measures; Water supply conditions are significantly lower than the seasonal norm and water shortage conditions are expected to persist. <b><i>The following measures shall be mandatory and enforced, penalties will apply for noncompliance</i></b>

- Minimize all non-essential use of water
- Watering of grass is prohibited
- Outdoor irrigation is prohibited, except for:
  - a) Maintaining newly installed landscapes not to exceed the minimum watering rate necessary on the day of installation and not to exceed 30 days. After 30 days the landscaping will be considered existing landscaping. No new planting allowed after Phase II conservation is issued
  - b) Watering golf course tees, fairways and greens by means of an automated irrigation system between the hours of 8:00 PM and 6:00 AM with less than one inch of water per week
  - c) Erosion control project (permit required)
- Maintaining personal food gardens not to exceed the minimum watering rate necessary
- Maintaining existing landscape plantings at the minimum watering rate necessary, between the hours of 8:00 PM and 6:00 AM, using a hand held container or hose with automatic shutoff or using drip irrigation
- Maintaining plant inventories, by means designed and operated to maximize water use efficiency, at retail garden centers
- The use of water for washing or cleaning of mobile equipment including carts, trucks, boats and fleet vehicles is prohibited unless water use is deemed essential to maintain the safe operational use or equipment integrity
- The use of water for power washing of buildings and other structures is prohibited, except for paint prep only (permit required)
- The use of water from fire hydrants and hose bibs is prohibited, except for:
  - a) Fighting fire and fire protection purposes;
  - b) Testing or training fire fighters if it is necessary to protect public safety.

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- c) Jetting piles to facilitate construction.
- d) Construction site hose bibs.
- The filling of family, public or private swimming pools, including hot tubs, spas and whirlpool tubs, is prohibited, except for the minimal amount of make-up water necessary to maintain a pool's structural integrity and filtration system

Phase	Response	Description
III	Emergency Conservation (Mandatory)	Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity. <b><i>The following measures shall be mandatory and enforced, penalties will apply for noncompliance</i></b>

- No use of public or private water for other than essential purposes
- No watering of lawns, grass, shrubbery, trees, flowers or vegetable gardens, except for watering golf course tees and greens by means of an automated irrigation system between the hours of 8:00 PM and 6:00 AM with less than one inch of water per week
- No using water outside of structures for any use other than emergencies involving fire
- No introducing water into swimming pools
- No use of fire hydrants except for fighting fire
- All other uses of water will be limited to uses necessary to meet the essential human health and safety needs of the people of Bald Head Island.

### IV. Triggers

The Village of Bald Head Island primary water source is groundwater from wells located throughout the Island. The Village also purchases water from Brunswick County Public Utilities as needed based on water demand or minimum purchase.

A state of emergency shall be deemed to exist whenever the availability to produce or supply water to Bald Head Island is critical. This critical state and level of conservation phase (I, II, III) could be based on but not limited to the following.

- Recommendations from the Governor of North Carolina and/or Drought Management Advisory Council of North Carolina
- The availability of water supply from Brunswick County *Note: When Brunswick County declares a water shortage the Village of Bald Head Island shall evaluate conditions both on and off Island to make a determination to declare a water shortage if necessary. During this time the Village Utilities Director will stay in close contact with Brunswick County Public Utilities and provide updates to the Village Manager as conditions change*
- Production wells must be pumped greater than (50) GPM to meet water demand
- Production wells are required to pump longer than (12) hour during a (24) hour prior to meet demand
- Production wells become influenced by salt water intrusion
- Mechanical malfunction of the distribution system
- Rapid drawdown of the Village well water supply (aquifer)
- Any cause to threaten the availability of water for human consumption, firefighting and protection of lives and property

Water shortage response phase (I, II, III) must be implemented whenever, measurements of the potable water storage tank triggers an entry into corresponding water conservation phases.

Phase	Triggers Based on Water Storage Level
I	Water sources or water production equipment unable to maintain potable water storage level above 60% capacity (approximately 15.0')
II	Water sources or water production equipment unable to maintain potable water storage level above 40% capacity (approximately 10.0')
III	Water sources or water production equipment unable to maintain potable water storage level above 25% capacity (approximately 6.0')

#### 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 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 Village of Bald Head Island Utilities Department and Public Safety Officers. Violators may be reported to Public Safety, Village Hall, Utilities or Public Works Departments.

#### Violations; penalties

- (a) Upon the violation of any provision of this chapter, the Village may enforce the chapter by criminal or civil proceedings, or by any other remedy provided for under G.S. 160A-175 and G.S. 14-4 or successor provisions or as otherwise specifically set forth in this chapter.
- (b) Written notice of a violation may be provided to the violator by personal service or first class mail. When first class mail is sent, receipt shall be deemed to occur on the third day after the date of the postmark.
- (c) Upon notification of a violation as provided for in subsection (b) of this section, each day's continuing violation shall be deemed a separate and distinct offense.
- (d) Upon the violation of any provision of this chapter, the violator shall be subject to a civil penalty in the sum of Five Hundred Dollars (\$500.00), to be recovered by the Village in a civil action in the nature of debt if the offender does not pay the penalty within five (5) business days after the violator has been cited for violation of this chapter.
- (e) In addition to the foregoing remedies, the provisions of this chapter may be enforced by the Village by injunctive relief or other appropriate equitable remedy issuing from a court of competent jurisdiction.

- (f) The provisions of this chapter may also be enforced by an order of abatement.
- (g) The criminal fine imposed for the violation of any provision of this chapter shall be Fifty Dollars (\$50.00) for the first violation and One Hundred Dollars (\$100.00) for each subsequent violation.

## **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 Village Hall for customers to view. All subsequent revisions to the draft plan will be published at least 30 days prior to an adoption vote by Village of Bald Head Island Mayor and Council.

## **VII. Variance Protocols**

Not applicable

## **VIII. Effectiveness**

The effectiveness of the Bald Head Island 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.