Town of Nashville

**North Carolina**

WATER SHORTAGE RESPONSE PLAN

A plan authorizing the declaration of water shortage; establishing procedures and measures for the essential conservation of water resources; and prescribing certain penalties.

Be It Enacted by the Governing Body of the Town of Nashville, North Carolina

**Section 1. Purpose** The purpose of this plan is to provide for the declaration of official phases of water supply shortage situations and the implementation of voluntary and mandatory water conservation measures throughout the Municipality in the event a shortage is declared.

# Section 2. Definitions

1. "Allotment," as the term is used in this plan, shall mean the maximum quantity of water allowed for each customer over any applicable period as established in the water rationing provisions of this plan.
2. "Any Water," as the term is used in this plan, shall mean any type of water, including fresh water, brackish water, wastewater, or reclaimed water.
3. "Brackish Water," as the term is used in this plan, shall mean water containing more than 1000 parts per million of dissolved salts.
4. "Customer," as the term is used in this plan, shall mean any person using water for any purpose from the Municipality's water distribution system and for which either a regular charge is made or, in this case of bulk sales, a cash charge is made at the site of delivery.
5. "Emergency," as the term is used in this plan, shall mean that water supplies are below the level necessary, to meet normal needs and that serious shortages exist in the area.
6. "Excess Use," as the term is sued in this plan, shall mean the usage of water by a water customer in excess of the water allotment provided under the water rationing provisions of this plan for that customer, over any applicable period.
7. "Fresh Water," as the term is used in this plan, shall mean water withdrawn from surface or groundwater which has not been previously used, other than brackish water.
8. "Mandatory Conservation," as the term is used in this plan, shall mean that raw water supplies (i.e., streamflow, reservoir levels or groundwater levels) are consistently below seasonal averages, and if they continue to decline, may not be adequate to meet normal needs.
9. "Non-Residential Customer," as the term is used in this plan, shall mean commercial, industrial, institutional, public and all other such users, with the exception of hospitals and health care facilities.
10. "Rationing, as the term is used in this plan, shall mean procedures established to provide for the equitable distribution of critically-limited water supplies, in order to balance demand and limited available supplies, and to assure that sufficient water is available to preserve public health and safety.
11. "Reclaimed Water," as the term used in this plan, shall mean wastewater which has been treated to allow reuse.
12. "Residential Customer," as the term is used in this plan, shall mean any customers who receive water service for a single or multi-family dwelling unit. The term residential customer does not include educational or other institutions, hotels, motel, or similar commercial establishments.
13. "Service Interruption," as the term is used in this plan, shall mean the temporary suspension of water supply, or reduction of pressure below that required for adequate supply, to any customer, portion of a water supply, or entire system.
14. "Voluntary Conservation, " as the term is used in this plan, shall mean that conditions exist which indicate the potential for serious water supply shortages.
15. "Waste of Water," as the term is used in this plan, includes, but is not limited to (1) permitting water to escape down a gutter, ditch, or other surface drain, or (2) failure to repair a controllable leak of water due to defective plumbing.
16. "Wastewater," as the term is used in this plan, shall mean water which has been previously used for industrial, municipal, domestic, or other purpose, and has not been returned to the surface or groundwater source.
17. "Water," as the term is used in this plan, shall mean water available to the Municipality of treatment by virtue of its water rights or withdrawal permit or any treated water introduced by the Municipality into its water distribution system, including water offered for sale.
18. "Water Use Classes," as the term is used in this plan, shall be established as follows:

I. Authorization

The Nashville Town Manager shall enact the following water shortage response provisions whenever the trigger conditions outlined in Section IV are met. In his absence, the Public Works Director will assume this role.

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Triggers

The Town of Nashville’s water source is groundwater. The following measurements of well pumping times and well levels in relationship to pump intake levels trigger entry into corresponding water restriction stages.

|  |  |
| --- | --- |
| **Stage** | **Well Operating Conditions** |
| 1 | Pumping Time >10 hrs 20% reduction in seasonal normal distance from static water level and pump intake20% increase pumping time for same output |
| 2 | Pumping Time >12 hrs 40% reduction in distance from static water level and pump intake40% increase pumping time for same output |
| 3 | Pumping Time >14 hrs 60% reduction in distance from static water level and pump intake60% increase pumping time for same output |
| 4 | Pumping Time >20 hrs 80% reduction in distance from static water level and pump intake |
| 5 | Water level at pump intake elevation |

## Class 1: Essential Water Uses

**Domestic Use**:

Water necessary to sustain human life and the lives of domestic pets, and to maintain minimum standards of hygiene and sanitation.

**Health Care Facilities:**

* Patient care and rehabilitation, including swimming pools used for patient care and rehabilitation.

**Public Use:**

* Fire Hydrants

1. Firefighting

2. Certain testing and drills by the fire department if performed in the interest of public safety and if approved by the municipal governing body.

* Flushing of Sewers and Hydrants: As needed to ensure public health and safety and if approved by the municipal governing body.

**Class 2: Socially or Economically Important Uses of Water**

**All Domestic Uses Other Than Those Included in Classes 1 and 3**:

* Home water use including kitchen, bathroom and laundry use
* Minimal watering of vegetable gardens
* Watering of trees where necessary to preserve them

## Commercial, Agricultural, Industrial and Institutional Uses

* Outdoor commercial watering (public or private) using conservation measures and to the extent that sources of water other than fresh water are not available to use.
* Irrigation for commercial vegetable gardens and fruit orchards or the maintenance of livestock. .Watering by commercial nurseries at a minimum level necessary to maintain stock.
* Water use by arboretums and public gardens of national, State, or regional significance where necessary to preserve specimens.
* Use of fresh water at a minimum rate necessary to implement vegetation following earth-moving, where such vegetation is required by law or regulation.
* Watering of golf course greens.
* Filling and Operation of Swimming Pools:

-Residential pools which serve more than 25 dwelling units.

-Pools used by health care facilities for patient care and rehabilitation -Municipal pools

* Commercial car and truck washes .Commercial Laundromats
* Restaurants, clubs, and Eating Places
* Air Conditioning:

-Refilling for start-up at the beginning of the cooling season

-Make-up of water during the cooling season

-Refilling specifically approved by health officials and the municipal governing body, where the system has been drained for health protection or repair purposes.

* Schools, Churches, Motels/Hotels and Similar Commercial Establishments

**Class 3: Non-Essential Uses of Water**

* **Ornamental Purposes:**

-Fountains, reflecting pools, and artificial waterfalls

* **Outdoor Non-Commercial Watering (public or private):**

-Gardens, lawns, parks, golf courses (except greens), playing fields and other recreational areas.

-Filling and operation of recreational swimming pools which serve fewer than 25 dwellings -Non-commercial washing of motor vehicles

-Serving water in restaurants, clubs, or eating places except by specific request.

-Air Conditioning: refilling cooling towers after draining except as specified in Class 1

**Public Use:**

-Fire Hydrants: any purpose, including use of sprinkler caps and testing fire apparatus and for fire department drills, except as listed in Class 1

-Flushing of Sewers and Hydrants except as listed in Class 1

**Section 3. Declaration of Voluntary Conservation**: Whenever the governing body of the Municipality finds that a potential shortage of water supply is indicated, it shall be empowered to declare by adoption of a plan that Voluntary Conservation conditions exist, and that the water manager or superintendent shall, on a daily basis, monitor the supply and demand upon that supply. In addition the mayor (or his/her agent) is authorized to call upon all water customers to employ voluntary water conservation measures (see Addendum) to limit water use (especially Class 3 uses) and eliminate the waste of water. This resolution shall be published in a newspaper of general circulation in the area which qualifies under GS 1-597, and may be publicized through the general news media or any other appropriate method for making such resolutions public.

**Section 4. Declaration of Mandatory Conservation**: Whenever the governing body of the Municipality finds raw water supplies (i.e. streamflow, reservoir levels or groundwater levels) to be consistently below seasonal averages, and if they continue to decline and may not be adequate to meet normal needs, it

shall be empowered to declare by adoption of an plan that Mandatory Conservation conditions exist. The Municipality shall continue to encourage voluntary water conservation measures defined under the Voluntary Conservation declaration, and further shall impose a ban on all Class 3 water uses for the duration of the shortage until it is declared ended by plan of the governing board. Publication of these plans shall follow the provisions declaration in Section 3 of this plan.

**Section 5. Declaration of a Water Shortage Emergency**: Whenever the governing body of the Municipality finds that raw water supplies are below the level necessary to meet normal needs and that serious shortages exist, it shall be empowered to declare by adoption of an plan that a water shortage Emergency exists. Class 1, Essential Uses shall be identified, in specific, as targets for voluntary conservation initiatives. Also, all Class 2, Socially or Economically Important uses shall be banned in addition to the Class 3, Non-Essential Uses. These restrictions shall continue until the emergency is declared ended by plan of the governing body. Publication of these plans shall follow the provisions in Section 3 of this plan.

**Section 6. Declaration of Rationing**: Whenever the governing body of the Municipality has declared a Water Shortage Emergency and finds a need to provide for the equitable distribution of critically-limited water supplies, in order to balance demand an limited available supplies, and to assure that sufficient water is available to preserve public health and safety, it shall be empowered to provide for mandatory rationing by adoption of an plan.

Section 6a. Objectives of Rationing: An plan that provides for mandatory rationing shall state findings that:

(a) It is imperative that water customers achieve an immediate further reduction in water use in order to extend existing water supplies and at the same time, assure that sufficient water is available to preserve the public health and sanitation and to provide fire protection service.

(b) The immediate further reduction in water usage is another step along a continuum of responses to the present water supply shortage. Should shortage continue, further reductions in usage may be required. It must be emphasized that the additional usage reduction in the rationed area is a valid and attainable goal reflective of the conditions which currently exist.

(c) The plan provides for equitable reductions in water usage and for equal sacrifice on the part of each water customer. The success of this plan depends on the cooperation of all water customers in the emergency area.

**Section 6b. Water Use Rationing for Residential Users1**

1May be difficult to administer

(a) Metered Residential Water Customers and Allotments:

1. The number of permanent residents in each dwelling unit (household) will determine the amount of water that each household will be allowed.
2. Each dwelling unit (household) shall be allotted 40 gallons per day for each resident of the household. Households with only one permanent resident will have a daily allotment of 55 gallons.
3. Residential water customers are required to provide municipality and utility personnel with reasonable access to read meters as necessary to this rationing declaration. Where access is not readily available, all reasonable efforts to contact customers in order to arrange for access to read meters shall be made. In the event a water customer does not allow entry to read the meter after reasonable efforts to arrange for such access, the dwelling unit (household) allotment will be reduced to 55 gallons per day.
4. (i) If it is found that the residential water allotment provided under this section would create an extraordinary hardship for individual customers, as in the case of special health- related requirements, a revised allotment for the particular customer may be established.

(ii) any person aggrieved by a decision relating to such an exemption or variance may file a complaint with the city manager (or clerk) in accordance with the Municipality's normal administrative procedures.

(b) Non-Metered Residential Water Customers and Allotments:

1. In order to effectively implement and monitor the residential water conservation effort, a water allotment shall be established for the entire water system based on 40 gallons per day per capita served or \_\_\_\_ percent (50 percent is suggested) of the water use by the entire system during \_\_\_\_ (specify typical month and year), as notified individually by the municipality.
2. The municipality and the utility will establish a communication system with the customers through public media to inform them of the requirements of the water rationing provisions of this plan, possible conservation measures that customers may employ, the system allotment, and a regularly scheduled report of whether the usage was within the allotment.

(c) Metered and Non-Metered Residential Customers of the Same Water Supply System. Where a water supply system serves both metered and non-metered residential customer, the allotments and procedures provided under both subsections (a) and (b) shall be applied, as appropriate.

(d) Suggested Conservation Measures. See Addendum.

## Section 6c. Water Use Rationing for Non-Residential Water Users

1. Non-residential customers include commercial, industrial, public and all other such users with the exception of hospitals and health care facilities.
2. Non-residential water customers shall further reduce their water usage to 40 gallons per person per day or to 50 percent of use levels during July 2003.
3. It is the primary responsibility of each non-residential water customer to meet the mandated water use reduction goal in whatever manner possible, including limitation of operating hours or days if necessary.
4. The Municipality will establish a water allotment for each non-residential water customers, based upon a required further reduction water usage from the rate of water used by the customer in effect on (date), or the last recorded use level if no meter readings record the rate of the customer's use on (date).
5. Each non-residential water user shall provide access to Municipal personnel for the purpose of meter reading and monitoring of compliance with this plan. All reasonable efforts will be made to contact customers to arrange for access.
6. 1. If the mandated further reduction in water usage cannot be obtained without imposing extraordinary hardship which threatens health and safety, the non-residential customer may apply to the municipality for a variance. For these purposes "extraordinary hardship" means a permanent damage to property or an economic loss which is substantially more severe than the sacrifices borne by other water users subject to this water rationing plan. If the further reduction would cause an extraordinary hardship or threaten health or safety, a variance may be granted by the city manager (or clerk) and a revised water use reduction requirement for the particular customer may be established.

2. Any person aggrieved by a decision relating to such a variance may file a complaint with the city manager (or clerk) in accordance with established procedures.

1. The Municipality will provide each non-residential customer with suggested means to reduce usage levels.

See Addendum.

## Section 6d. Water Use Rationing for Hospitals and Health Care Facilities

1. Hospitals and health care facilities shall comply with all restriction imposed on residential and non-residential water customers as may be applicable to each individual institution, to the extent compliance will not endanger the health of the patients or residents of the institution.
2. Each hospital or health care facility shall survey its water usage patterns and requirements and implement such additional conservation measures as may be possible without endangering the health of its patients or residents to achieve a further reduction in the institution's water usage.
3. The Municipality will provide each hospital and health care facility with suggested means to reduce usage levels.

See Addendum

**Section 6e. Enforcement of Water Rationing.**

1. The Municipality or its water utility will have primary responsibility for monitoring of compliance with the water rationing plan.
2. The following provisions shall govern the implementation of temporary service interruptions:
3. In order to effectuate compliance with this plan, the Municipality is hereby authorized and required to plan and implement temporary service interruption to all or part of its water supply system, as may be deemed appropriate, when any and/or all of the following conditions are:

determined to exist:

(i) The mandated reduction in system-wide usage has not been achieved, and/or

(ii) The mandated reduction in system-wide water usage has been achieved, but has failed to have a significant impact in extending limited water supplies, and/or

(iii) Temporary service interruptions are necessary in order to further extend limited and/or dwindling water supplies

1. In the event it is determined that temporary service interruptions are necessary, the Municipality shall notify its customers through the public media (newspapers, radio, and television), at least one day prior to the temporary service interruptions, that a planned, temporary service interruption is to be imposed.

Such notice shall:

(i)State the day or days when the planned, temporary service interruption will occur;

(ii) State the time(s) when such planned, temporary service interruptions will commence, and the time(s) such interruption will cease;

(iii) State whether the planned, temporary service interruptions are to be imposed on the entire system, or part thereof, and, if only part(s) of the system will experience planned, temporary service interruptions, identify geographic boundaries within which such interruptions will occur; and

(iv) Advise all Customers within the areas affected by planned, temporary service interruptions how to treat any water received from the system, for human consumption, during the period(s) of such interruptions and for such additional time as may be necessary until full pressure is restored to the system.

1. If a planned, temporary service interruption is imposed as authorized and required by this plan, the municipality must provide for the continued delivery of water to health care facilities within the area(s) affected by such interruptions, by means of any adequate, alternative delivery measures that may be necessary.
2. If a planned, temporary service interruption is implemented, the municipality must make provisions, by any means possible, for the continued delivery of such water as may be necessary for the proper operation of sewage collection, treatment, and disposal systems and facilities.
3. Any residential or non-residential water customer who exceeds the allotments established pursuant

to this water rationing will be subject to the following excess-use civil penalties.

1. "Excess-use civil penalties" will be collected based on the amount by which a customer's use exceeds the water allotments established pursuant to the local water rationing declaration, computed in accordance with the Nashville Code of Ordinances, Article IX, Section 39-505.
2. Any monies collected through excess-use civil penalties shall not be accounted for as income, but shall be placed in a reserve account that is dedicated to addressing water shortage problems and water conservation initiatives.
3. In addition to the excess-use civil penalty, non-compliance with the water rationing provisions of this plan will result in the following:
4. For the first excess use, a warning of possible discontinuation shall be issued to the customer.
5. For the second or subsequent excess use, service to the customer may be interrupted or shut off for a period not to exceed 48 hours, or, if the customer provides access, a flow restrictor may be installed in the customer's service line for the duration of the emergency. The cost incurred to interrupt or shut off and reinstate service, or to install and remove a flow restrictor, shall be assessed to the water customer. Before service to an individual may be terminated under this provision, actual notice of the intent to discontinue shall be given, which shall include notice that the customer may appear at designated time and place (within 24 hours) for an informal hearing to show why service should not be discontinued.
6. Meter reading schedules are authorized to be altered to assure adequate monitoring of compliance with this plan.
7. Any customer or other person aggrieved by a decision or action imposing an excess-use civil penalty or other remedy for non-compliance with the requirements of this plan may proceed in accordance with the following provisions:
8. The Municipality shall adopt procedures which provide an opportunity for the customer or aggrieved party to rebut the finding of a violation, or provide evidence of circumstances beyond the customer's control which resulted in the violation. a record of evidence regarding disputed violations shall be kept, and a written notice of the Municipality's final decision and action in such cases shall be provided to the customer or aggrieved party.

**Section 7.** **Shortage Water Rates** Upon the declaration of a water supply shortage as provided in Sections 3-6 the governing body of the Municipality shall have the power to adopt shortage water rates by plan designed to conserve water supplies. Such rates may provide for, but not be limited to: (a) higher charges per unit for increasing usage (increasing block rates); (b) uniform charges for water usage per unit of use (uniform unit rate); (c) extra charges for use in excess of a specified level (excess demand surcharge); or (d) discounts for conserving water beyond specific levels.

**Section 8.** **Regulations** Any person who violates the provisions of this plan, who fails to carry out the duties and responsibilities imposed by this plan, or who impedes or interferes with any action undertaken or ordered pursuant to this plan shall be subject to the following penalties:

1. If the mayor, manager, water superintendent, or other municipal official or officials charged with implementation and enforcement of this plan or a water supply shortage resolution learns of any violation of any water use restriction imposed pursuant to this plan, a written notice of the record shall be affixed to the property where the violation occurred and mailed to the customer and to any other person known to the Municipality who is responsible for the violation or its correction. Said notice shall describe the violation and order that is to be corrected, cured, or abated immediately or within such specified time as the Municipality determines is reasonable under the circumstances. If the order is not complied with, the Municipality may terminate water service to the customer subject the following procedures:
2. The Municipality shall give the customer notice by mail that, due to the violation, water services will be discontinued within a specified time and that the customer will have the opportunity to appeal the termination by requesting a hearing scheduled before the Municipality governing body or a Municipal official designated as a hearing officer by the governing body;
3. If such a hearing is requested by the customer charged with the violation, he or she shall be given a full opportunity to be heard before termination is ordered; and,
4. The governing body or hearing officer shall make findings of fact and order whether service should continue or be terminated.
5. A fee of $50 shall be paid for the reconnection of any water service terminated pursuant to sub- section (a). In the event of subsequent violation the reconnection fee shall be $200 for the second violation and $300 for each additional violations.
6. Any customers may also be charged with violation of this plan and prosecuted in District Court. Any person so charged and found guilty of violating the provisions of this plan shall be guilty of a misdemeanor. Each day's violation shall constitute a separate offense. The penalty for violation shall be a maximum fine of $50 or imprisonment for not more than 30 days.

**Section 9.1 Civil Penalties** In addition to or in lieu of criminal prosecution, violation of this plan may subject the offender to civil penalties in the amounts provided, or otherwise an amount of $25 per day, collectible in a civil action in the nature of debt.

**Section 10. Severability** If any provision of this plan is declared unconstitutional, or the application thereof to any person or circumstance is held invalid, the constitutionality of the remainder of the plan and its applicability to other person and circumstances shall not be affected thereby.

**Section 11. Effective Date** This plan shall take effect immediately.

**Section 12. Effective Period** This plan will remain in effect until terminated by action of the Municipality's governing body.

**Section 13. Administrative Matters** The components which comprise the Town of Nashville’s Water Shortage Response Plan will be administered as follows:

(a) Water Supply & Drought Advisory Board

1. The Town Manager shall maintain an advisory board comprised of the Public Works Director,

Planning Director, and Public Works Superintendent for the purpose of advising on water supply management and conservation strategies. Meetings will be scheduled by the Public Works Director no less than monthly during a water shortage event and as often as deemed necessary when the Town Manager has considered a water shortage condition to be imminent or existing. The Advisory Board will review available information from Town of Nashville, City of Rocky Mount, and State data.

(b) Public Comment

 1. The Town Council will schedule a public hearing for the purpose of soliciting public comment

 whenever the Town of Nashville Water Shortage Plan is proposed for amendment.

1. Variances

1. Requests for variances in water conservation measures will be directed to the Water Supply & Drought

 Advisory Board. Requests will be submitted in writing to the Board. The Board will consider the

 requests and respond within ten (10) business days of the receipt of a request.

1. Requests will be evaluated after taking into consideration:

-the amount of water consumption the requesting party has reduced prior to submitting the request.

-the amount of income the requesting party will lose as a result of the reduction in consumption.

-whether full or part-time jobs will be lost as a result of the reduction in consumption.

-the effect on public health and safety that may result from the reduction in consumption.

(e) Revision

 1. The Water Supply & Drought Advisory Board will review the Water Shortage Plan and other Water

 Conservation regulations every five (5) years beginning July 1, 2010 and after any period in which a

 mandatory water conservation order is imposed. The Board will review the plan and regulations

 whenever there is a significant change in circumstances on supply or consumption. The Board will

 recommend any amendments as deemed appropriate to the Nashville Town Council.

(f) Notification

 1. The Public Works Director will notify Town of Nashville’s water customers of the invocation of any

 water conservation measure identified herein by preparing and releasing to the media information

 regarding the current state of the Town’s water supply and the measures required to reduce

 consumption. The Public Works Director will also utilize other typical means of mass communication

 with the public customers.

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 monitoring and 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.

**WATER SHORTAGE**

**RESPONSE PLAN**

#### ADDENDUM

**CONSERVATION MEASURES**

Direct users to adopt the following conservation measures:

**INDOOR RESIDENTIAL USE:**

## Conservation for Voluntary and Mandatory Conservation Phases

* Use dishwashers only when they are full. Washing dishes by hand (don't let the tap run!) Saves about 25 gallons
* Adjust water level on clothes washing machines, if possible. Use full loads only, if not adjustable. .Turn off faucets while brushing teeth, etc. Saves about 5 gallons per day
* Reduce water used per flush by installing toilet tank displacement inserts. a plastic jug may often be used as an alternative. DO NOT USE BRICKS -they disintegrate when soaked and the resulting grit hinders closing of the flap valve.
* Do not use the toilet as a trash can.
* Use sink and tub stoppers to avoid wasting water.
* Keep a bottle of chilled water in the refrigerator for drinking.
* Find and fix leaks in faucets and water-using appliances. Faucets can usually be fixed cheaply and quickly by replacing washers.
* Adapt plumbing with flow-restricting or other water-saving devices. These are usually inexpensive and easy to install.
* Learn to read your water meter so you can judge how much water you use and what difference conservation makes.
* Take shorter showers and shallow baths. Saves about 25 gallons.
* Reduce the number of toilet flushes per day. Each flush uses about 5 gallons (2-3 if you have water saving toilets).
* Don't use a garbage disposal
* Use non-phosphate detergent and save laundry water for lawns and plants.

***Conservation for Emergency Conservation or Rationing Phase* (In addition to measures listed**

**above).**

* Turn off shower while soaping up.
* Use disposable eating utensils.

## OUTDOOR RESIDENTIAL USE

**Conservation for Normal Conditions and Voluntary Conservation Phase**

## Lawns

* Water before 10:00 a.m. to prevent evaporation which occurs during the hottest part of the day. Morning is better than evening, when the dampness encourages growth of fungus.
* Water only when lawn shows signs of wilt. Grass that springs back when stepped on does not need water.
* Water thoroughly, not frequently: long enough to soak roots. a light sprinkling evaporates quickly and encourages shallow root systems. Water slowly to avoid runoff.
* Don't let the sprinkler run any longer than necessary. In an hour, 600 gallons can be wasted.
* Allow maximum of one inch of water per week on your lawn. To measure, place cake tins outside to collect rain and water from sprinklers.
* Use pistol-grip nozzles on hoses to avoid waste when watering flowers and shrubs.
* Aerate lawns by punching holes 6 inches apart. This allows water to reach roots rather than run off surfaces-
* Position sprinklers to water the lawn, not the pavement.
* Avoid watering on windy days when the wind not only blows water off target, but also causes excess evaporation.
* Keep sprinkler heads clean to prevent uneven watering.
* Adjust hose to simulate a gentle rain. Sprinklers that produce a fine mist waste water through evaporation.
* Know how to turn off an automatic sprinkler system in case of rain.
* Use an alarm clock or stove timer to remind you to shut off sprinklers that don't have timers.

## Vegetables and Flower Gardens

* Water deeply, slowly and weekly. Most vegetables require moisture to a depth of 6 to 8 inches.
* Keep soil loose so water can penetrate easily.
* Keep weeds out to reduce competition for water.
* Put the water where you want it and avoid evaporation by using soil-soakers or slow-running
* hoses, not sprinklers.

## Trees and Shrubs

* Water deeply using a soil-soaker or drip-irrigation.
* Water only when needed. Check the depth of soil dryness by digging with a trowel.
* Mulch to reduce evaporation. a 2" to 3" layer of wood chips, pine needles, grass clippings, or straw keeps the soil cool in summer,
* Dig troughs around plants to catch and retain water.
* Water trees growing in full sun more often than those in shade. .Do not use sprinklers. Apply water directly at base.
* Do not fertilize during the summer. Fertilizing increases a plant's need for water. .Postpone planting until fall or spring when there is generally less need for water.
* Install trickle-drip irrigation systems close to the roots of your plants. By dripping water slowly, the system doesn't spray water in to the air. Use soil probes for large trees.
* Water when cloudy, at night, or even when a light rain is falling.

**OUTDOOR RESIDENTIAL USE**

**Conservation for Voluntary Conservation Phase (in addition to measures listed above).**

* Do not allow children to play with hose or sprinklers.
* Limit car washing.
* Be ready to catch rainfall that occurs. Place containers under drain sprouts. .Use leftover household water if available.
* Consider delaying the seeding or sodding of new lawns.
* Determine the amount of water being used outdoors by comparing water bills for summer and
* winter.

**Conservation for Mandatory Conservation Phase**

**(In addition to measures listed above).**

* Vegetable gardens and food trees should be given minimal amounts of water on an individual basis only.
* Do not water lawns and inedible plants.
* Do not use sprinklers.

*Most outdoor watering is prohibited under Emergency Conservation conditions.*

## HOSPITAL AND HEALTH CARE FACILITY USE

* Reduce laundry usage or services by changing be linens, etc. only when necessary to preserve the health of patients or residents.
* Use disposable food service items.
* Eliminate, postpone, or reduce, as they may be appropriate, elective surgical procedures during the period of emergency.

**INDUSTRIAL USE**

* Identify and repair all leaky fixtures and water-using equipment. Give special attention to equipment connected directly to water lines, such as processing machines, steam-using machines, washing machines, water-cooled air conditioners, and furnaces.
* Assure that valves and solenoids that control water flows are shut off completely when the water-using cycle is not engaged.
* Adjust water-using equipment to use the minimum amount of water required to achieve its stated purpose.
* Shorten rinse cycles for laundry machines as much as possible; implement lower water levels wherever possible.
* For processing, cooling, and other uses, either re-use water or use water from sources that would not adversely affect public water supplies.
* Advise employees, students, patients, customers, and other users not to flush toilets after every use. Install toilet tank displacement inserts; place flow restrictors in shower heads and faucets; close down automatic flushes overnight.
* Install automatic flushing valves to use as little water as possible or to cycle at longer intervals-
* Place water-saving posters and literature where employees, students, patients, customers', etc. will have access to them.
* Check meters on a frequent basis to determine consumptive patterns. .Review usage patterns to see where other savings can be made.