



# Water Conservation and Management Plan

## PART I

### Section 1.0

#### **I. Introduction**

This Water Conservation and Management Plan is developed for use by the Virginia Department of Corrections at its facilities as a guide for the proper conservation of water during normal use conditions, drought conditions and emergency situations.

Water Conservation should not be considered as a response to situations such as drought or emergency shortage. Protection of our natural resource should be routine and should not be misused through waste. Once wasted, water is very expensive to reclaim through mechanical means. Under drought conditions, water reclamation cannot be achieved through just one or two brief storms. It takes years of normal weather patterns to rebuild what drought and use have depleted.

This Water Conservation Management Plan sets in place guidelines for water conservation measures, offers recommendations on equipment to use that is proven to operate with less water requirements, suggests commonplace water conservation practices and furnishes the user with insight as to how to adjust to those conservation practices.

Although the Department of Corrections highly supports water conservation and realizes the importance of proper water use, the health, safety and security of its employees and offenders will not be compromised. Current required health, safety and security standards hold precedence over this Water Conservation and Management Plan where an act of water conservation will jeopardize those standards.

This Water Conservation Management Plan is written in three distinct parts. The first is the conservation of water during normal daily situations. This section covers those areas of water conservation that can be designed and constructed into water and plumbing systems, retrofitted to existing systems, and commonplace conservation practices. The second part will cover water conservation during prolonged drought conditions. Included in this section will be water conservation levels distinguished by color codes each of which having its own guidance on implementation. The last part will cover emergency situations where the emergency constitutes utilization of the highest level of water conservation. An emergency situation is declared when a complete water outage occurs through broken water mains, extreme drought conditions, or through water constituent irregularities.

The Management facet of this Water Conservation and Management Plan requires the appointment of a Water Conservation Manager at each facility. The Water Conservation Manager appointment should be from existing staff and given the responsibility and authority to implement and enforce this Plan. It is highly recommended that the individual appointed have prior knowledge of water conservation and be committed to its cause.

This Water Conservation and Management Plan is derived from the Department of Environmental Quality's Water Management Program, VR-680-13-07, Section 3.1.

#### **II. Water Waste Study Results**

The following are results of a study conducted by the EPA and adopted by the DEQ of how much water is used through the use of equipment and facilities. The study was conducted based on residential and regular household use (family of four). Facility water waste would be consistently higher.

- A. Toilets (self contained tank type) - 164 gpd or 4,920 gallons per month or 60,000 gallons per year.
- B. Faucets - 95.9 gpd or 2,877 gallons per month or 35,000 gallons per year.
- C. Showers - 101 gpd or 3,041 gallons per month or 37,000 gallons per year. Through studies it has been determined that a typical shower last 8 minutes and uses 17 gallons. This study was performed for a typical household. In the institutional setting, offenders are allowed at least 10 minutes. If you use the same above rule of thumb, then for each minute the shower is on there is 2.1 gallons of water used. Therefore, for each offender allowed to have 10 minute showers, there is 21 gallons of water used. Multiply this by the population at a major institution (assume a population of 1,200) and you find that it is



probable to use 25,200 gallons per shower. If the offenders are allowed to shower twice per day, then there is 50,400 gallons per day of use.

- D. Washing Machines - 153 gpd or 4,603 gallons per month or 56,000 gallons per year.
- E. Irrigation Systems - 274 gpd or 8,219 gallons per month or up to 100,000 gallons per year.
- F. General leaks - 14% of all water use is through leaks. For example a single faucet dripping can waste up to 5 gallons per day.

## Section 2.0

### Definitions and Abbreviations

**A&E Services - Architectural and Engineering Services** - This is a division of the Virginia Department of Corrections that oversees the capital improvement or modifications to buildings should a water conservation measure require the submittal of plans and specifications for issuance of a building permit. A&E Services has been given authority through BCOM to issue certain building permits. All improvements or modifications to existing or new buildings that are required as a result of the implementation of certain portions of the Water Conservation and Management Plan must be channeled to A&E Services. A&E Services will decide whether a building permit can be issued or whether a submittal needs to be made to BCOM for their approval.

**BCOM - Bureau of Capital Outlay Management** - The Bureau of Capital Outlay Management is the Building Inspector for all state agencies and is under the direction of the Department of General Services. Their office is located at 805 East Broad Street in the downtown area of Richmond. In all cases where capital improvement would require the implementation of a water conservation measure, BCOM would review and approve documents prior to construction, unless authority would be delegated to the Virginia Department of Corrections to review, approve and issue a building permit.

**DEQ - Department of Environmental Quality** - A state agency charged with monitoring drought conditions and presenting the Drought Status Report.

**Drought Monitor** - A scale created by the Drought Monitoring Task Force to categorize drought conditions. The drought monitor focuses on broad-scale conditions. The drought monitor is as follows:

- D0 - abnormally dry
- D1 - moderate drought conditions
- D2 - severe drought conditions
- D3 - extreme drought conditions
- D4 - exceptional drought conditions

**EPA - Environmental Protection Agency** - This is the Federal Agency that oversees all environmental concerns on a federal level. The EPA sets all guidelines that each state's environmental agencies follow.

**ESU - Environmental Services Unit** - This is a division of the Virginia Department of Corrections that oversees the production of water. ESU is also the author and creator of the Water Conservation and Management Plan and will assist and advise the Water Conservation Manager in the course of their duties of implementing the plan.

**Gpd - Gallons per Day per Person** - Measure of the use of water

**Gpf - Gallons per Flush** - Measure of the water that is used by a toilet in standard measurement each time the toilet flushes.

**Facilities** - For the purposes of this Water Conservation and Management Plan, the term Facilities is all encompassing and includes all major institutions, field units, community corrections centers, regional offices, central offices, probation and parole offices, Virginia Correctional Enterprises facilities, Virginia Correctional Educational facilities, Academy for Staff Development and any other facilities, offices or institutions that are under the purview of the Virginia Department of Corrections.

**Lpf - Liters per Flush** - Measure of the water that is used by a toilet in metric measurement each time the toilet flushes.



**Mixing Valve** - A device installed on showers and lavatories, which allows mixing of hot and cold water that is comfortable to the user.

**VADOC - Virginia Department of Corrections** - The state agency for whom this Water Conservation and Management Plan is provided. This Water Conservation and Management Plan is for the VADOC purposes only and is not intended for other state agencies of differing missions.

**Virginia Drought Monitoring Task Force** - A panel of personnel created to monitor drought conditions in the Commonwealth. The Task Force is comprised of representatives from the Department of Environmental Quality, State climatologist, the Virginia Departments of Agriculture and Consumer Services, State Health Department, Department of Forestry, Department of Emergency Services, Game and Inland Fisheries, the Virginia Cooperative Extension Service, Farm Service Agency-USDA, the National Weather Service, and the U.S. Geological Survey.

**Water Conservation** - The practical and common sense approach to the normal use of water. For the purposes of this Water Conservation and Management Plan, water conservation covers not only normal water use but also use during drought conditions and emergency situations.

**Water Conservation Manager** - The person appointed and/or assigned the duties and responsibilities of implementing and enforcing the Water Conservation and Management Plan. The Water Conservation Manager has the authority to enforce the plan.

### Section 3.0

#### Water Conservation

##### I. Infrastructure

Where water saving fixtures or devices are utilized, they must conform to the Uniform Statewide Building Code and Waterworks Regulations. Plan submittals must be made to A&E Services for review and issuance of building permits where applicable. Facilities should purchase devices as described below as replacements to existing fixtures.

##### A. Offender Housing Units and Cells

1. Showerheads: Showers will have restrictor (water saver) devices and the devices must be installed so that removal cannot be performed without the use of special security tools. All replacement showerheads must be equipped with similar restrictor (water saver) devices as the showerhead being replaced.
2. Shower mixing valves: All shower mixing valves should have the capabilities of being controlled by either time limitations, motion detection, or any other control that limits the time a shower operates and prevents prolonged use.
3. Toilets: Because all toilets require sufficient pressure and flow to prevent stoppages, no restrictor device will be allowed. Water saver toilet designs can only be utilized where security is not jeopardized. Toilet flushometers should be specifically designed to lessen the amount of gpf while not affecting the proper amount of water necessary for full flush. Flush valves with the requirement of no more than 1.6 gpf should be used.
4. Sinks (lavatories): All mixing valves should be equipped with specifically designed devices that limit prolonged use such as timers, flow controllers, motion detectors, automatic on/off operation, etc. Although aerators are typically a low cost means of water use reduction, they should not be used in areas where offenders can easily remove them.
5. Water coolers: Use single nozzle, push-button or handicap push bar only.
6. Water-cooled ice makers: Water-cooled ice makers use an extremely high amount of water and will not be installed. Those facilities that have water-cooled ice makers should replace them with air or refrigerant type machines.

##### B. Food Preparation Areas and Mess Hall



1. **Hose Bibs:** Utilize water restrictor devices that are manufactured into the hose bib. Use of water restrictors that are easily removed should not be used.
2. **Toilets: Offender access -** Because all toilets require sufficient pressure and flow to prevent stoppages, no restrictor device will be allowed. Water saver toilet designs can only be utilized where security is not jeopardized. Toilet flushometers should be specifically designed to lessen the amount of gpf while not affecting the proper amount of water necessary for full flush. Flush valves with the requirement of no more than 1.6 gpf should be used.  
**Employee Access -** In those areas with limited or no access to offenders, self-contained tank type toilets should be used. Water saver devices are built-in the flushometer and limit the water use to 1.6 gpf or less.
3. **Sinks (lavatories):** All mixing valves should be equipped with specifically designed devices that limit prolonged use such as timers, flow controllers, motion detectors, automatic on/off operation, etc. Although aerators are typically a low cost means of water use reduction, they should not be used in areas where offenders can easily remove them.
4. **Water coolers:** Use single nozzle, push-button or handicap push bar only.
5. **Water-cooled ice makers:** Water cooled ice makers use an extremely high amount of water and will not be installed. Those facilities that have water-cooled ice makers should replace them with air or refrigerant type machines.
6. **Miscellaneous equipment:** Food preparation equipment sometimes uses water to heat or cool food during the preparation process. The Food Service Supervisor should have all equipment evaluated to see if there is water dependent equipment in the kitchen and determine the water use rate. If it is found that the water rate is more than the standard, the equipment should be replaced with non-water use equipment.

C. **Industries, Medical, Educational Areas:**

1. **Toilets: Offender access -** Because all toilets require sufficient pressure and flow to prevent stoppages, no restrictor device will be allowed. Water saver toilet designs can only be utilized where security is not jeopardized. Toilet flushometers should be specifically designed to lessen the amount of gpf while not affecting the proper amount of water necessary for full flush. Flush valves with the requirement of no more than 1.6 gpf should be used.  
**Employee access -** In those areas with limited or no access to offenders, self-contained tank type toilets should be used. Water saver devices are built-in the flushometer and limit the water use to 1.6 gpf or less.
2. **Sinks (lavatories):** All mixing valves should be equipped with specifically designed devices that limit prolonged use such as timers, flow controllers, motion detectors, automatic on/off operation, etc. Although aerators are typically a low cost means of water use reduction, they should not be used in areas where offenders can easily remove them.
3. **Water coolers:** Use single nozzle, push-button or handicap push bar only.
4. **Showers:** Where safety or chemical showers are required, no water restriction devices will be utilized. These specialized showers are for safety and should not be tampered with. Replacement safety or chemical showers should be specifically designed to include water saver devices in keeping with the safety aspect of the equipment. Where domestic showers are installed, use timed, flow controlled, motion detection, etc., devices that limit prolonged use. The use of restrictor type showerheads is required.
5. **Medical or dental equipment:** All medical and dental equipment will be equipped with water saving devices.
6. **X-Ray Equipment:** Utilize recyclable or reclaimable equipment where practical. Replacement equipment should be specifically designed for recyclable or reclaimable water use and/or utilizes other means of processing.



- D. Laundries: Industrial, Commercial, or Personal - All equipment should be specifically designed with low water use requirements. Full loads should be practiced in order to get the most use of singular loads rather than numerous light loads.
- E. Administrative and Outside Secure Perimeter Buildings:
1. Toilets: Use self-contained or tank type water saver toilets with water saver devices. Where toilets with flush valves are existing, turn the flow control valve to minimal control in order to reduce the amount of gpf but not to the point that prevents clean flushes. Replacement flushometers should be specifically designed with the latest designs in water saver technology.
  2. Showers: Use restrictor type showerheads and limit the time of showering. Mixing valves should be so equipped with devices to prevent prolonged use and water loss.
  3. Lavatories (sinks): The use of aerators is encouraged. Use water saver devices and/or designs.
  4. Water coolers: Use single nozzle, push-button or handicap push bar type only.
  5. Hose Bibs: Use water restrictor aerators and water saver fixtures.
  6. Washing Machines: Use washing machines equipped with water level control and water saver devices. Do not wash partial loads. Limit washing to once per week.
  7. Power Plants: Most of the older facilities maintain a steam generated facility for the purposes of heat and hot water. These facilities should change to non-potable water systems to eliminate the use of potable water. Where the chemical constituents of the non-potable water increases the amount of scaling or other undesirable components and increases the cost of chemicals, all components of the condensation system should be properly maintained. Water reuse or reclamation systems are encouraged.
  8. Motor Vehicle Maintenance Areas: Eliminate the practice of using water to clean motors or parts. Purchase and use high pressure washers and/or steam jennies as both limit the amount of water used for cleaning. Where water is used for cleaning, ensure that a functional spray nozzle is used at all times.
- F. Office Buildings
1. Toilets: Use self-contained or tank type water saver toilets with water saver devices. Where toilets with flush valves are existing, turn the flow control valve to minimal control in order to reduce the amount of gpf but not to the point that prevents clean flushes. Replacement flushometers should be specifically designed with the latest designs in water saver technology.
  2. Showers: Use restrictor type showerheads and limit the time of showering. Mixing valves should be equipped with devices to prevent prolonged use and water loss.
  3. Lavatories (sinks): The use of aerators is encouraged. Use water saver devices and/or designs.
  4. Water coolers: Use single nozzle, push-button or handicap push bar type only.
  5. Hose Bibs: Use water restrictor aerators and water saver fixtures.
  6. Cafeterias: Water saving devices should be used on all plumbing appliances. Maintain faucets, hose bibs and toilet flush valves in good working order. Thawing of frozen foods with water should not be performed.
  7. Irrigation: Automatic on/off timed devices should be used. Set timers such that irrigation is performed during early morning, late afternoon or non-peak demand periods.

## **II. Water Loss Reduction Program**

Water loss reduction pertains to those areas of the water system where the loss of water is reduced by immediately attending to system leaks, maintaining observation of water use programs, maintaining a good preventative maintenance program, minimal use of water for cleaning, and the reduction and monitoring of agricultural use.

The Virginia Department of Corrections has defined five distinct categories of water use which is based on a



normal use rate of 110 gallons per person per day (gpd):

- Conservative water user - those Facilities that are below 110 gpd.
- Normal water user - those Facilities that use 110 gpd
- Liberal water user - those Facilities that use 111 to 120 gpd
- Heavy water user - those Facilities that use 121 to 130 gpd
- Excessive water user - those Facilities that use above 130 gpd

The above water user categories are guidelines for normal use times. However, during drought conditions (Part II, section 4.0), the water use gpd should be lowered to 100 gpd.

**A. Water Use Monitoring**

Monitoring water use is a must for a successful water loss program. The only viable avenue of effectively monitoring water use is through the installation of water meters. Strategically placed water meters can differentiate those areas of high use from those areas of moderate or low use. Water metering and an effective reading system will enable the Water Conservation Manager to pinpoint areas of high water loss. It is highly encouraged that all facilities install water meters especially in those areas that are suspected of being high water use areas. ESU will assist in the location of water meters and make recommendations as to the purchasing and installation of the meters. A&E Services will review water meter installation drawings and issue building permits where applicable.

**B. Water Use Reporting**

1. The ESU reports on institutional water use on a monthly basis. The institutions are required to submit water reports and water invoices (those institutions with municipal water connections) to the ESU. The ESU compiles this information and reduces it to a monthly water use report formatted with bar graphs to show each institution their reported water use (on a per person basis) for that particular month.
2. These monthly reports are vital to a good water loss reduction program because it shows the amount of water use and can be paramount in searching for ways to reduce the amount of water being used.
3. The designated Water Conservation Manager at each institution must record water use readings by reading the water meters on a monthly basis. The Water Conservation Manager will submit these readings to the ESU for inclusion into the monthly water use report.
4. The reading of the water meters will allow the Water Conservation Manager to observe water use and investigate high or excessive water use areas.

**C. Water Distribution and System Leaks**

1. The facility maintenance department will investigate sudden increases in water use immediately.
2. The facility maintenance department will make repairs to leaks immediately.
3. A good preventative and corrective maintenance program will be implemented and maintained.
4. Leaking faucets, showerheads, shower mixing valves, worn water hoses, etc. will be repaired immediately.
5. Toilets flush valves that do not shut off immediately after each flush and continue to discharge water will be repaired immediately.
6. Frost proof hydrants should be installed to prevent freezing that can result in damaged pipes.
7. Steam and condensation lines at facilities that utilize low pressure steam for heating and hot water purposes should have a good preventative maintenance program to reduce the amount of potable water used for make-up.

**D. Observation of Offender Bathrooms**

Staff should observe offender bathrooms to prevent excessive shower time, sinks that are left on, and toilets that are constantly wasting water. Staff should cut off any showers and faucets left on and report any system failures to the maintenance departments for repair.



**E. Preventative and Corrective Maintenance**

1. Regulate the water flow valve to all toilets to prevent excessive water flow but not regulated to the point where the toilets do not have sufficient pressure to maintain effective flushing therefore causing several flushes to clean bowl.
2. Perform regular maintenance on all toilets to prevent excessive flushing times and leaking flush valves and toilets.
3. Perform regular maintenance on all showers and lavatory mixing valves to prevent constant running and/or dripping.
4. Maintain a good inventory of toilet, shower and lavatory parts so that defective or worn fixtures can be replaced in a timely fashion.
5. Maintain a good inventory of emergency repair equipment, pipe fittings and pipe (comparable to the installed piping) to allow quick and immediate repairs.
6. Constantly observe wet areas on floors, basements, grounds, etc. If excessive or constant, investigate and repair if necessary.
7. The purchase and regular use of leak detection equipment is recommended.

**F. Food Preparation Areas**

1. The Director of Food Services and Food Services staff provide guidance as to the correct menus, mixtures of ingredients, etc., to maintain the preparation of proper and healthy meals. Follow these directions as provided to ensure water is not being wasted in the preparation of food.
2. The Director of Food Services and Food Services staff will require the reduction of water used for washing utensils and food serving equipment. Schedule wash times. Dishwashers should be used as a first resort as they conserve more water than sink washing.
3. The Director of Food Services and Food Services staff must constantly observe wasteful water use and will immediately notify the Buildings and Grounds staff of all necessary repairs.
4. The use of water to thaw frozen foods should only be allowed if absolutely necessary per Food Services Director/Manager discretion.

**G. General Cleaning**

1. The use of water for washing down docks, sidewalks, concrete platforms, etc., should be held to an absolute minimum.
2. Where cleaning of these areas is required to maintain proper sanitation, use well maintained water hoses, ensure that washers are installed on hose ends and use automatic on/off water nozzles. Hoses without nozzles and left running for the duration of the cleaning process will not be allowed.
3. Remove all hoses from hose bibs after use and keep stored in a place where they are not susceptible to damage.
4. High pressure washers and steam jennies use limited amounts of water. Therefore, where possible, it is recommended that high pressure washers or steam jennies be used vs. water hoses.

**H. Agricultural**

For agricultural use, it is recommended that a separate non-potable water system be utilized (i.e., separate groundwater wells, surface withdrawal or impoundment). If this is not feasible, the following guidelines for water loss reduction should be followed:

1. Major crop irrigation should be performed with the latest technology where water saving equipment is incorporated.
2. Crop irrigation should only be performed during times of low water system demand such as early morning or late afternoon.
3. Greenhouse watering systems should be designed and equipped so that recycling or reclaimable water systems are utilized. Master water control valves equipped with timed devices should be used.



4. Field livestock watering devices should be limited. If used, they should be of the automatic on/off design and well maintained to prevent constant running.
5. All automatic watering devices must be protected from freezing to prevent situations where pipes can burst.
6. Wash downs of livestock pens, dairies, meat processing plants, etc., should be held to a minimum. When wash down occurs, hoses should be well-maintained, washers kept in good working order and automatic on/off nozzles utilized.
7. Washing of Agri-Business equipment should be kept to a minimum. The use of high pressure washers or steam jennies is encouraged.
8. The use of water in vegetable processing areas should be held to a minimum. Equipment with low water use or water saving devices should be utilized.

I. Irrigation

Irrigation of lawns and grounds should be kept to a minimum. Professionally installed irrigation systems are preferred because they are designed and installed with water saving and timed devices. Irrigation should only occur during low demand times such as early morning or late afternoon. These irrigation times also lessen the amount of water loss due to evaporation.

J. Office Buildings

Employees should be mindful of water conservation and take the effort to shut off any lavatories left running, report all constant flushing toilets to maintenance, and upon seeing wet areas on floors, grounds and parking areas, report to maintenance.

### **III. Water Use Education Program**

A. Assignment of Duties

The Organizational Unit Head will assign the duties of Water Conservation Manager to existing staff. This staff member should have some experience with plumbing and plumbing fixtures, experience with making repairs to water distribution systems, and a general knowledge and dedication to water conservation

B. Duties and Responsibilities

The staff member whom is assigned the duty of managing and overseeing water conservation will develop and maintain an education program to ensure continual water conservation based on, but not limited to, the following criteria:

1. Enforce the Water Conservation and Management Plan. Report any non-conformance and misuse of water resources to the Organizational Unit Head.
2. Routinely (at the discretion of the Water Conservation Manager) hold meetings with unit staff to keep them informed of the latest in water conservation technology and inform them of any amendments to this Water Conservation and Management Plan.
3. Maintain a posting system of newsletters, reports, drought reports, etc. where all staff can see and have access to them. Maintain electronic copies of reports for staff to study and read at their leisure.
4. Conduct meetings and in-house seminars with all unit staff to keep them informed of water conservation efforts, latest equipment technology and discuss issues of existing water conservation efforts in and around the institution or office.

C. Environmental Services Unit

1. The Environmental Services Unit will be tasked with administering the Water Conservation and Management Plan. This includes the initial drafting of this plan, implementation and amendments. The Water Conservation Manager will copy the Environmental Services Unit on all reports and keep the ESU informed of accomplishments, non-conformances and issues.





2. The ESU Service Area Manager for the respective institution will routinely meet with the Water Conservation Manager during institutional visits to discuss progress. The Service Area Manager will assist the Water Conservation Manager with implementation of this plan including the water use education program, assistance and advice for equipment and any support for mandated actions.

#### **IV. Water Reuse**

Water reuse methods will be investigated and applied in those areas where the health and safety of the employees and offenders is not jeopardized and where feasible. The domestic use of water is limited in its capabilities of reuse, however, non-domestic use, i.e., laundries, power plants, wastewater plants, cooling water, etc., will take every step feasible to reuse water.

#### **V. Water System Auditing**

It is required that the institution personnel maintain monthly records of the water used and submit to the Environmental Services Unit for compilation into the statewide monthly water use report. The Water Conservation Manager will keep a system of records on the institutional water use and compliance with this Water Conservation and Management Plan for viewing by the Environmental Services Unit Area Managers.

These records will include, but not be limited to, reports on compliance, reports of major leak repair, instituted methods and practices of water conservation which differ from this plan, reports on water use education and any other pertinent information pertaining to the overall water conservation program.

## **PART II**

### **Section 4.0**

#### **Water Use During Drought Conditions**

Section 3.0 provided general information and guidance to conserve water which should be followed during normal water use. This section encompasses conditions when a drought has been declared. Drought conditions bring about concerns over water supplies, and it is in the best interest of all users to curtail water use over what normal or day-to-day conservation requires.

Drought conditions in the Commonwealth are monitored by the Drought Monitoring Task Force, which is headed up by the Department of Environmental Quality in conjunction with the State climatologist. Recommendations for curtailment of water use are a result of drought conditions as reported by this task force. The task force does not demand the curtailment of water use but advises the waterworks owner on conditions which may warrant concern. The representative for the owner in the Department of Corrections is the Director. The Director has instructed the Environmental Services Unit to advise him on drought conditions based on information they receive from the Drought Monitoring Task Force and will be recommending what level of drought severity code to employ.

The Task Force has developed a Drought Monitor, and for the purposes of this Water Conservation and Management Plan, the severity codes will be arranged based upon the Task Force Drought Monitor.

#### **I. Drought Severity Codes**

Drought conditions vary in severity. Therefore, it is best to classify the actions to be taken with respect to the curtailment of water use and then conform those severity levels to the Drought Task Force Drought Monitor. Depending on the drought severity level, the action taken could range from no action to drastic water curtailment steps. Also, because drought severity can differ in different sections of the state, an announced code condition could differ for each institution.

The following severity codes are to be followed when directed by the Environmental Services Unit who after advising the Director has received his instructions.

##### **A. Code Blue**

Code Blue drought conditions persist when the Drought Monitor stipulates a “D0” or abnormally dry situation. This is a situation where the Drought Task Force would recommend voluntary curtailment of



water use but be more concerned with outdoor fires. The following steps must be taken when a “Code Blue” severity level is announced:

1. Conserve water use as per Section 3.0 of this Water Conservation and Management Plan.
2. Each unit should voluntarily curtail the use of water.
3. The level of voluntary curtailment should be limited to reduced vehicle washing, irrigation, and the washing down of docks, sidewalks, floors, etc.
4. The Environmental Services Unit will monitor the Drought Task Force report for changes in the severity level of the Drought Monitor.

#### B. Code Yellow

Code Yellow drought conditions persist when the Drought Monitor stipulates a “D1” and “D2” which means a moderate and severe drought, respectively. The Drought Monitoring Task Force would elevate the level of voluntary curtailment to stricter limits on the use of water.

During code yellow and code Red drought conditions, the water use per person per day must be reduced to a maximum use rate of 100 gallons. All facilities should strive to meet this level of use. This is in difference to the normal water use rate as discussed in Part I, section 3.0, subsection II, 1<sup>st</sup> paragraph.

The following steps must be taken when a “Code Yellow” severity level is announced:

1. Water conservation as stipulated in Section 3.0 of this Water Conservation and Management Plan should be maintained.
2. Curtail washing of vehicles to once per week. Automatic cutoff devices (spray nozzles, etc.) should be installed on hoses and kept functional. Ensure that water hoses are free from leaks and that washers are installed at each end of connection.
3. Curtail the irrigation of flowers, shrubbery and lawns to once per week and irrigate only during low flow periods (early morning or late afternoon). Irrigate by hand watering using spray nozzles installed on water hoses. Eliminate the use of sprinklers for the irrigation of flowers, shrubbery and lawns.
4. Curtail the use of water for wash-down. Where wash-downs of loading docks, floors, walls, etc., are critical to good sanitation practices, it should be done so with the use of automatic cut-off devices and limited times per day.
5. Institutional washing machines should be limited to once per week and used for full loads only.
6. Pay special attention to system leaks. Make repairs as soon as possible.
7. Office personnel should be cognizant of faucets left on and shut them off. Toilets constantly flushing and wet areas on lawns, floors, etc. should be reported to maintenance.

#### C. Code Red

Code Red drought conditions persist when the Drought Monitor stipulates a “D3” and “D4” which means an extreme and exceptional drought, respectively. It is the most serious level of drought conditions that persists. The Drought Monitoring Task Force would elevate the level of recommended mandatory curtailment on the use of water.

During code yellow and code Red drought conditions, the water use per person per day must be reduced to a maximum use rate of 100 gallons. All facilities should strive to meet this level of use. This is in difference to the normal water use rate as discussed in Part I, section 3.0, subsection II, 1<sup>st</sup> paragraph.

The following steps must be taken when a “Code Red” severity level is announced:

1. Notify your respective Regional Office, Central Office and ESU.
2. Notify your local emergency services and inform them that you are either in short supply or are out of water for fire suppression purposes and have them standby.
3. Cease all washing of vehicles.



4. Cease all irrigation of flowers, shrubbery, lawns, etc.
5. Washing of loading docks, floors, sidewalks, walls, etc., should be stopped unless in violation of sanitation concerns. The Food Service Director will consult with their respective Sanitarian for guidance.
6. Cease all use of institutional washing machines. For the duration of the Code Red Drought Condition, send clothes to VCE laundries.
7. Restrict offender showering. Each institution should put offenders on scheduled showering times so that each offender does not shower but every third day. Showering should be held to 10 minute maximum.
8. Food service should prepare cold plate meals only. This will reduce the amount of water used for food preparation and the use of water for washing utensils.
9. The Water Conservation Manager with assistance of institutional personnel will contact vendors for price and availability of bottled water, bulk water tank trucks for hauling and portable toilets.

### **PART III**

#### **Section 5.0**

##### **Water Use Emergencies**

This Section 5.0 covers those emergency water outages whether they are brought about by mechanical failure, Code Red drought conditions or fire. An emergency is declared when the day-to-day activities of the unit are seriously affected as a result of loss of water.

##### **Emergency Water Outage Plan**

1. Immediately notify the Organizational Unit Head, Regional Administrator, Chief of Corrections Operations, office building manager, office building owner, maintenance, Water Conservation Manager, and Environmental Services Unit Area Manager.
2. Notify your local emergency services and inform them that you are either in short supply or are out of water for fire suppression purposes and have them standby.
3. Cut-off master valves to specific buildings to prevent low water pressure causing flush valves to malfunction.
4. In locations where the institution has a water storage tank, shut off the master valve leaving the storage tank until a full evaluation of the emergency situation can be performed. This is to prevent losing precious stored water. In the event the water source is shut off, the facility needs to maintain a constant outlook for fire and cut the water back on in the event of fire.
5. Cease all unnecessary water use activities not crucial to the operation of the unit (i.e., washing vehicles, general cleaning, washing machines, irrigation, etc.)
6. Food service will prepare “cold plate” meals, only.