<Job Corps Center>
Water Conservation Program Plan

<Month, Year>

[This template is based on one used in the Job Corps Center of Environmental Excellence Program. For more information on this program, contact Tom Fisher of the Engineering Support Contractor (ESC), at 703-516-2235. Note that any evaluation provided by the ESC may inform, but does not fulfill, the requirements of this plan.]

PURPOSE

The purpose of this plan is to conserve water by implementing Federal standards in the efficiency, operation, and use of water at <JC Center>. It also is to ensure that any new water fixtures installed at <JC Center> meet Federal building efficiency standards.

SECTION 1: PLAN SCOPE

This plan applies to all indoor potable water fixtures and fittings within <JC Center> at <Address>. It also applies to the maintenance and operation of the water system and fixtures at the center, and to the use of the water system by staff, students, faculty, and visitors.

To the extent possible, irrigation use is to be provided on separate water meters, eliminated entirely, or provided by non-potable, cistern, or greywater or site storm runoff sources.

This plan implements four approaches to achieve water conservation goals:

1. Plumbing fixture and water system upgrades
2. Leak repair
3. Efficient irrigation practices
4. Education and training of the Center community in best practices

SECTION 2: PLAN GOALS

The goals of the Water Conservation Program appear below. Also, see Section 5 for other implementation requirements.

1. By January 1, 2015, <JC Center> will reduce total water use to 84 percent or less of the 2007 benchmark year.
2. By January 1, 2015, <JC Center> will reduce water intensity to TBD gallons per student per month.
3. This plan mandates a conversion to high-performance plumbing fixtures and fittings as part of any future indoor plumbing renovations or replacements. Any replacement fixtures will meet or exceed the following Universal Product Code/IPC Standards, and <JC Center> will strive to meet or exceed the following Environmental Protection Agency WaterSense Standards wherever possible:

Table 1: U.S. EPA WaterSense Standards

Fixture	UPC/IPC Standards	EPA WaterSense Standards	Recommended New Fixture Standards
Water Closet	1.6 Gallons per Flush (GPF)	1.28 GPF	1.28 GPF or dual flush with 1.1 GPF and 1.3 GPF
Urinal	1.0 GPF	0.5 GPF	Waterless
Public Lavatory Faucet	0.5 Gallons per Minute (GPM)	Not Rated	0.5 GPM (vandal proof aerators recommended)
Private Lavatory Faucet	2.2 GPM	1.5 GPM	0.5 GPM (vandal proof aerators recommended)
Kitchen Pre-rinse Spray Valve	2.2 GPM	Not Rated	1.6 GPM
Shower	2.5 GPM	2.0 GPM	1.6 GPM

4. Operations and Maintenance personnel shall be trained to maintain the water system at the Center such that all fixtures operate as intended, and that the piping and equipment used to deliver water to fixtures is fully functioning, free of leaks, and safe from damage such as from freezing or accidents.
5. The center community shall be educated and encouraged to employ water saving practices as well as provided an understanding of why conservation of water is important. At a minimum, one orientation training a year shall be provided, as well as covered in any student and staff orientation materials the center may use.
6. <JC Center> shall adopt and implement a water use reduction program to include education, guidance, incentives, and enforcement as needed to meet or exceed the Center's water use reduction goals.

PERFORMANCE METRIC AND TARGETS

A water efficiency assessment shall be performed as part of any future indoor plumbing renovations, balancing economy with water efficiency goals. <JC Center> has set the following water efficiency goal:

> By January 1, 2015, 16 percent minimum reduction in measured indoor plumbing fixture and fitting potable water use from the facility's 2007 water intensity (Gallons per Gross Square Feet) baseline.

SECTION 3: RESPONSIBLE PARTY

< The Green Team Coordinator> shall implement and/or facilitate this plan within <JC Center>in coordination with other appropriate personnel, including but not limited to, the center's Facility

Manager and any procurement staff. < The Green Team Coordinator> shall ensure that this plan is distributed to all relevant personnel, with the aim of promoting and maintaining the goals of this plan.

SECTION 4: PERFORMANCE EVALUATION

The indoor potable water intensity will be evaluated every 6 months by the Office of Job Corps.

The best management practices described in this plan will be evaluated annually for compliance, and the outcome submitted to the Regional Office Project Manager and Office of Job Corps Division of Facilities and Asset Management Director.

SECTION 5: DELIVERABLES, PROCEDURES AND STRATEGIES

The focuses of the water conservation program plan are as follows.

Equipment upgrades.

The Department of Labor (DOL) has and will continue to fund the installation of high-efficiency plumbing fixtures. The lowest initial cost and biggest savings are generated through the replacement of lavatory aerators, showerheads, and kitchen pre-rinse spray valves. The centers shall provide lists of standard efficiency showerheads, aerators and kitchen pre-rinse spray valves. If this equipment has not been replaced within the past 3 years, it is very likely to be standard efficiency.

Renovations and Improvements.

Should any significant renovations or improvements be made to any center building, a serious consideration for water-saving measures as part of the design and construction shall be included. When submitting to DOL for approval, a cost/benefit analysis will include, if feasible:

- Equipment costs
- Installation labor
- Water-utility savings
- Sewage-utility savings
- Hot-water energy savings

Best Management Practices.

- The center shall provide documentation that operations and maintenance personnel have received training in water-system management and best practices.
- A Center Operations guide shall provide equipment reference, warranty information and maintenance guidance.
- To the extent possible, separately measure utility, site irrigation, and cooling-tower water usage.
- An annual report detailing water saving operations and maintenance measures as well as, to the extent possible, measurements exhibiting actual use. If possible, this shall be provided on a building-by-building basis.
- Provide, as part of the water conservation plan, a list of water meters at the center and the buildings or equipment they measure.

Locate Leaks

- Provide, as part of the water conservation plan, a graph of 24 hours of hourly water usage from the center's master meter. The graph should show peaks in water usage in the morning, evening, and at meal times. Overnight usage should be low or close to zero if no leaks are present although consider automatic water users such as cooling towers, evaporative coolers or water-cooled ice machines. The graph can be used to determine whether the center has significant leaks and to quantify water usage at different times of day.
- Leaks must be located in order to be fixed. Centers should fix all visible leaks such as toilets that run without being flushed and leaking lavatories. To locate other leaks the centers should take the following actions.
    - Check water-usage records at all meters on the center. If one meter shows higher-than-expected usage, start in that location. Typically, dormitories use most of the water on center, followed by the dining hall. Academic and vocational spaces use much less water.
    - Look for outdoor areas that are soft and possibly wet and greener than the surroundings.
    - Leaks may show up in the sewer. A check of manholes for running water may help locate leaks.

Irrigation

- Prepare a site plan showing all areas that are irrigated. Describe the function of land that is irrigated, such as ball fields, central assembly areas, or center welcome areas. Estimate the amount of land that is irrigated in acres. Provide the dates when irrigation is started and ended (e.g., from May 1st to September 30th). Provide the frequency of irrigation (e.g., once a week). Provide the time of day of irrigation Provide the duration of irrigation, and the amount of water used. Describe the irrigation system. Does the center have in-ground, automatic irrigation or does the center rely on hoses attached to hose bids on buildings? Does the irrigation drip or spray? Are there timers or water sensors or other control devices? Describe conditions when irrigation is not performed, such as wind, time of day, previous rain, etc. Describe any leaks in the irrigation system.

Follow these rules when irrigating:

- Irrigate in the early morning or evening.
- Do not irrigate when it is windy.
- Use drip irrigation where feasible.
- Measure rain water. Irrigate so that total water is 1 inch per week.
- Irrigate, at most, twice a week.
- Irrigate bushes and trees only during establishment, and when they show signs of stress.

Student and Staff Initiatives

Centers are encouraged to get creative in conserving water. The center's Green Team can be a valuable resource in promoting water savings. Water conservation should be focused on providing competitions with tangible benefits, such as a contest between dormitories or trades, to reduce water usage.

Each year, incoming or new students, staff, and faculty shall be provided a water-use training orientation as a part of a general center greening effort.

- The training shall include specific water-saving measures that students can easily master. These include, but are not limited to:
    - Saving water at hand washings and sinks
    - Shower-water saving
    - Water-saving fixture use (toilets, kitchen, shop sinks, etc.)
    - Reporting leaks and malfunction
    - Exterior water use
    - Use of non-potable water
- The training shall also include information on why water saving is important for many different professions such as culinary arts, landscaping, maintenance, and plumbing, and specific water-saving concepts, and measures that students can easily master, including:
    - The water cycle in the regional climate
    - The costs of delivering, pumping, and piping water
    - The cost of hot water
    - The cost of sewer and septic systems
    - The depletion of aquifers
- An orientation to water usage at the center shall be provided in any handouts or student and staff orientation guidance, publications, etc.

SECTION 6: TIME PERIOD

This plan shall take effect on <Date> and shall continue indefinitely or until amended and/or replaced by a subsequent policy.

Signed and executed on this ___ day of _____, <YYYY>.

<The Company>
By:

_____
<Name Center Director>

RELEVANT DEFINITIONS

Non-potable Water is water that is not suitable for human consumption without treatment that meets or exceeds EPA drinking water standards.

Plumbing fixtures and fittings are receptacles, devices, or appliances that are either permanently or temporarily connected to the building's water distribution system and receive liquid or liquid-borne wastes and discharge wastewater, liquid-borne waste materials, or sewage either directly or indirectly to the drainage system of the premises. This includes water closets (toilets), urinals, lavatories, sinks, showers, and drinking fountains.

Potable Water is water that is suitable for drinking, and is supplied from wells or municipal water systems.