

***Water Conservation Plan***

**JFDI Conference and Training Center**

**December 2007**

**Submitted to Division of Water Resources, Nevada**

**Pursuant to NRS 540.121-540.151**

## *Introduction*

JFDI operates an executive conference and training center on a 70 acre ranch near Alamo, Nevada. JFDI's water system consists of 2 water wells that pump into ground level water storage tanks that provide supply to a booster pump station that pressurizes the system. Wastewater is treated in a package wastewater treatment plant and plant effluent is applied to pasture land on the ranch. Water conservation is a vital part of an integrated water resource plan. Water conservation can influence utility bills, the need for future facilities or timing of those facilities, drought protection, and the rate at which new resources are needed.

In developing its water conservation strategies, there are several planning objectives that JFDI seeks to achieve. JFDI conservation efforts satisfy NRS 540.121 through 540.151 by implementing conservation programs that provide:

- a) Methods of public education to (1) increase employee and public awareness of the limited supply of water in the State and the need to conserve water, and (2) encourage reduction in the size of lawns and encourage the use of plants that are adapted to arid and semiarid climates;
- b) Specific conservation measures required to meet the needs of the facility, including, but not limited to, any conservation measures required by law;
- c) Management of water to (1) identify and reduce leakage in water facilities, inaccuracies in water meters and high pressure in water supplies, and (2) increase the use of effluent; and
- d) A contingency plan for drought conditions that ensures a supply of potable water.

To satisfy the objectives of NRS, JFDI's conservation plan consists of four categories that address: public education, other conservation measures, system management, and conservation during drought periods. The first three categories with their various conservation measures, the target audience, and JFDI's primary conservation programs are summarized in Table 1.

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**Table 1: Conservation Measures**

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	Goal	Primary Target
<b>A. Public Education</b>		
Employee and public education	1, 2	Employees, public
Assigned time watering schedule	1, 2, 3	Employees
<b>B. Other Conservation Measures</b>		
Water management programs – Assigned time watering schedule (no watering between noon and 7:00 pm)	1, 3	Employees
Serve Bottled Water to Customers	1, 3, 4	Food Service, Customers
Effluent Reuse Irrigation	1, 4	Ranch
<b>C. System Management</b>		
Leaks and system repairs	1, 4	Employees
System operating pressures	1, 4	Employees
<b>D. Drought Responses</b>		
Expand no watering times: 10:00a to 7:00p	1	Employees

- 1 Reduces water use/waste
  - 2 Education
  - 3 Peak day savings
  - 4 Minimize operation and maintenance to distribution facilities
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## ***Public Education***

*Public Education* JFDI will distribute the water conservation plan to all employees in 2008 and approximately once per year thereafter, water conservation educational materials will be distributed to all employees (typically around the beginning of the summer season).

*Landscaping Recommendations* JFDI will direct facilities/maintenance employees to utilize arid and semi-arid plants in future landscaping additions/changes. Employees can access a free landscape guide (published by Truckee Meadows Water Authority) that includes arid and semi-arid plants recommended for our climate at [www.tmwlandscapeguide.com](http://www.tmwlandscapeguide.com).

*Assigned Time Water Schedule* The major component of JFDI's Water Conservation Plan is an assigned time watering schedule as follows:

Assigned Time Watering Schedule will be as follows:

No watering is allowed between noon and 7:00 pm

*Water Waste* Water waste by JFDI employees or customers is strictly prohibited and will not be tolerated.

## ***Other Conservation Measures***

*Effluent Reuse Irrigation* JFDI utilizes wastewater effluent to irrigate the pasture land of the ranch, thereby reducing well water usage.

*Bottled Water* JFDI serves bottled water to conference and training attendees (customers) thereby reducing well water usage.

## ***System Management***

*Leaks and System Repairs* JFDI is very aggressive with repairs of water line breaks and leaks as soon as is practicable. The vast majority of all leaks are repaired as soon as possible.

*System Pressure Standards* High water system pressures exceeding may increase the possibility of main breaks or accelerate the development of leaks. Excessive pressure results in more water delivered through the tap since flow rate is proportional to pressure. This can result in such forms of water waste as sprinkler overspray, faucet splashing, and higher leakage flow rates. JFDI carefully controls system pressures such that normal system pressure ranges between 40 psi and 60 psi which saves water vs. operating at higher pressures.

*Assigned Time Watering* As discussed under the public education section, JFDI continues to implement assigned time watering to help manage the delivery of water throughout the distribution system.

## ***Conservation Response During Drought Conditions***

During periods of successive drought years it becomes important to further reduce potable water use; water use by JFDI is expected to decrease during these periods. Additionally, drought response measures should be those proven to reduce summer demands. JFDI monitors its well water levels on a seasonal basis and will determine from water well measurements whether a drought condition exists such that water conservation efforts need to be increased. If JFDI determines a drought emergency condition exists or if a temporary well or pump outage has

occurred, JFDI will call for increased conservation by employees. Additionally, no watering times will be expanded to 10:00 a.m. to 7:00 p.m.

### ***Goals***

The goal of this water conservation plan is to reduce total system water consumption by 10% in normal years and by 15% in drought years.

### ***Summary***

All of the measures outlined under the sections of Public Education, Other Conservation Measures, and System Management comprise JFDI's plan for conservation regardless of whether it is a drought or non-drought year. Depending on water supply conditions for any given year, JFDI increases conservation efforts especially during droughts. The goal during droughts is to further reduce water use in the event successive drought years are experienced. The plan satisfies the requirements of NRS 540.121 through 540.151.