Crystal TP

Water Conservation Plan

July 27, 2010

Prepared for:

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Introduction

The water supply in Nevada is a precious commodity and plays an important role in determining Nevada's future. Nevada is the one of the driest states in the nation as well as one of the fastest growing ones. Nevada's future, both from an economic and a quality of life view, depends heavily upon the wise management of the water supply.

Groundwater, in general, provides about 40 percent of the total water supply used in Nevada. In some areas, groundwater provides the entire water supply. Groundwater usage may vary considerably from year-to-year as it is sometimes pumped to supplement surface water sources.

Water use in Nevada can be classified as:

- Domestic (household, both indoor and outdoor) – Met by public supply or private supply (e.g. wells).
- Commercial (businesses) – Met by public supply or private supply (e.g. non-community systems).
- Industrial (manufacturing/construction) – Met by public supply or private supply (e.g. non-community systems).
- Thermoelectric (electric/fossil fuel/geothermal power generation) – Met by public supply in a minor fraction.
- Mining (mining processes) – Supply source varies widely from operation to operation and is dependent upon the mineral being recovered and the recovery process employed.
- Irrigation (land use) – Met by self-supplied or supplied by irrigation companies or districts.
- Livestock (farm needs) – Supply source varies.

While all classifications of water usages have shown an increase over the years, it has historically been irrigation water use which has accounted for the majority of the water use in Nevada.

It has been estimated that the domestic water use accounts for less than 15 percent of the water used in Nevada, but this is expected to rise to nearly 25 percent as the population increases (based upon existing water use patterns and conservation measures). It is expected that Nevada's population will become increasingly concentrated in its primary urban areas of Las Vegas (Clark County), Reno/Sparks (Washoe County) and Carson City, with varied spillover effects on neighboring counties.

It is vitally important that all residents understand the fundamental science of water, how it is managed in the state, and the issues affecting its management. Water education must become a priority and must include education of children as they are our future.

Because Nevada does not have a comprehensive state-wide conservation program, it is reliant upon the individual water suppliers for developing their own conservation programs. In 1991,

Nevada enacted a law requiring adoption of conservations plans by water suppliers. Minimum standards for plumbing fixtures were adopted in 1991 (Assembly Bill 359) by Nevada and in 1992 minimum flow standards for plumbing fixtures were adopted by the federal government (National Energy and Policy Conservation Act).

Conservation is an essential part of ensuring adequate water supply as it is no longer feasible to develop new sources. It has proven to be a cost-effective way to reduce demands and/or to extend a given water supply. It can easily be pursued by all water users regardless of the water system type. Key to evaluating the program's effectiveness is the water use measurement (through meters and other measurement devices). Various conservation measures can be put into place and the achievement of the goals set with these measures is vital to combating the expected increase in water usage.

Statutory Requirements

This water conservation plan was prepared for Crystal TP in accordance with Nevada Revised Statue (NRS) 540. As outlined in NRS 540.141, the provisions of this plan must include:

a. Public Education
b. Conservation Measures
c. Water Management
d. Contingency Plan
e. Schedule
f. Evaluation Measurements
g. Conservation Estimates

In addition to the provisions of the water conservation plan, listed above, NRS 540.141 also requires a rate analysis to be performed and included with the submittal.

This plan is being submitted to the Nevada Department of Conservation and Natural Resources (DCNR), Division of Water Resources (DWR) for review and approval prior to its adoption by Crystal TP, as required by NRS 540.131.

This plan will conform to all public notice requirements as found in NRS 540 and NRS 118b. This plan is available for public inspection during normal business hours at 1155 West Highway 40, Verdi, NV. The plan will also be posted in a common posting location at the entrance to the trailer park.

This is the first Water Conservation Plan for Crystal TP.

In accordance with NRS 540.131, this plan will be reviewed from time-to-time to reflect changes and must be updated every five (5) years to comply with NRS 540.131 and NRS 540.141. The next update of this plan is to be on, or before, July 27, 2015.

System Description

Crystal TP is a privately-owned residential combined community water system and has a current water operation permit, NV0000193. Water is provided to about 40 tenants of the Crystal TP which is located at 1155 West Highway 40, Verdi, NV. Service boundaries are Highway 40 and the Union Pacific Railroad tracks, covering approximately three and one-half acres of mainly flat terrain. Crystal TP is located in the unincorporated community of Verdi, Washoe County. Crystal TP is not a water company, in the business of selling water to customers, and as such does not have any water customers.

The estimated population served in 2009 was roughly 50 transient individuals. Crystal TP estimates that its tenant base will not increase in the future because the trailer park is built out. The State of Nevada, through its State Water Plan, estimates the population growth for Washoe County through 2020 to be 1.79% annually.

The water supply is from groundwater, not under the direct influence of surface water (e.g. protected wells) and no surface water or groundwater under the influence of surface water sources, located within the Truckee Canyon Segment Basin (#091) of the Truckee River Basin Hydrographic Region (#6). There are a total of two wells supplying the system and a total of one hydro-pneumatic storage tank (2,000 gallon). Each of the sources is identified in the table below (Table 1). Well #1 encountered a pump failure and was recently placed back into service.

Table 1 – Source of Supply

Well No.	Depth (feet)	Production (gpm)
1	130	25
2	600	70

Crystal TP has been granted water rights in the total amount of 15.29 AF (4.982 MG) per year. The current water rights are listed in the table below (Table 2). Application #56810 and #56811 have been certified and the combined duty of certificated water rights may not exceed 4.982 MG (15.29 AF) per year. Application #V05664, not listed, has been vested in the amount of 15.29 AF (4.982 MG) per year. The ownership of the water rights has not yet been transferred from the previous owner (Paul & Emerine Bichler) to the current owner (Glen Highfield). It is anticipated that the filing for this transfer will occur in the near future.

Table 2 – Water Rights

Application (Certificate)	Well No.	Diversion Rate	Annual Use
56810 (13943)	#2	0.22 c.f.s. max	3.90 MG (11.97 AF)
56811 (13944)	#2	0.06 c.f.s. max	1.63 MG (5.00 AF)

Water is pumped from the wells directly into the pressure tank. Currently the water is not treated (due to an exemption for arsenic) but Crystal TP is renovating its pump house to accommodate an arsenic filtering system. Water is then distributed to the tenants through 2-inch PVC piping.

Crystal TP requires, at a minimum, a Grade D1 operator. The owner (Glen Highfield) is the current operator of record.

The plant operator is required to perform monthly, quarterly, and annual monitoring and testing of water quality. Crystal TP does not have any outstanding water quality issues.

The last sanitary survey was performed by the Washoe County Health District Environmental Health Services (WCHD-EHS) and was completed on August 26, 2009, and shows one deficiency with the system. The deficiency was due to the lack of redundancy in the water system (water was being supplied from one well). This deficiency has been addressed and corrected with the replacement of the pump on Well #1 and the placing of it back in service.

Crystal TP is a self-supplied water system and does not currently meter individual trailer spaces for water use. A flat rate monthly space rental charge is assessed for all trailer spaces; this rate includes water, garbage, and sewer. Some space rentals include electricity, while others contract directly with electric provider. Each space contracts individually with gas and cable providers and is responsible for payment to each provider. Because there are no water customers, a tiered rate usage fee is not applicable.

Wastewater collected from the service area is handled by an on-site septic system.

Current trailer space rates were established on January 2010. Space rates are reviewed every year and adjusted accordingly.

Plan Provisions

In accordance with NRS 540.131, this plan will be reviewed from time-to-time to reflect changes and must be updated every five (5) years to comply with NRS 540.131 and NRS 540.141. The next update of this plan is to be on, or before, July 27, 2015.

Crystal TP's owner will oversee the conservation efforts and will be responsible for implementation of conservation programs, monitoring of water use, and will review/revise the conservation plan when needed.

In an effort to promote voluntary conservation and aid in Nevada's future, Crystal TP will enact the voluntary conservation measures found in the ***Conservation Measures*** section. When more stringent measures are needed, the measures found in the ***Contingency Measures*** section will be enacted. All measures can be found in Appendix A.

As required by NRS 540.141, the water conservation plan must include the following provisions:

a. Public Education
b. Conservation Measures
c. Water Management
d. Contingency Plan
e. Schedule
f. Evaluation Measures
g. Conservation Estimates

Each provision is discussed below.

Public Education

Public education is a key for cooperation with conservation efforts, so funding for public education is crucial. Crystal TP recognizes this and will establish a conservation education program and corresponding budget, if economically feasible.

It is the goal of Crystal TP to increase public awareness to conserve water, encourage reduction in lawn sizes, encourage the use of climate-appropriate plants, encourage the use of drip irrigation, and encourage conscious decisions for water use by all its tenants.

The conservation education program includes education materials such as bill inserts, pamphlets, flyers, and posters. New tenants will be provided these materials when service is established, while existing tenants will receive these materials periodically. Materials will also be posted in the common area of the park for all tenants to review. Educational pamphlets will be provided to all tenants upon request and should include an explanation of all costs involved in supplying drinking water and demonstrate how the water conservation practices will provide water users with long-term savings. Education materials should also encourage reduction of lawn sizes, use of drip irrigation, use of climate-appropriate plants, and conservation tips and techniques (see Appendix B).

Conservation Measures

In an effort to promote conservation and voluntarily conserve water, Crystal TP is adopting water-use regulations to promote water conservation during non-emergency situations. These regulations include the following non-essential water use:

1) Use of water through any connection when Crystal TP has notified the tenant in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the tenant has failed to make such repairs within 1 hour after receipt of such notice.
2) Washing aircraft, cars, buses, boats, trailers or other vehicles.

3) Use of water for outside plants, lawn, landscape, and turf areas with even numbered spaces watering on even numbered days and odd numbered spaces watering on odd numbered days. Watering of plants, lawn, landscape, and turf areas are prohibited on Mondays and between the hours of 10 a.m. and 6 p.m. on designated watering days.
4) Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water.

In the event these conservation measures are insufficient to control the water shortage, it may be necessary to implement the mandatory measures discussed in the ***Contingency Plan*** section below.

Crystal TP also promotes the development of water conserving principles into the planning, development, and management of any new landscaping projects. Tenants are encouraged to consult with the local nursery or perform an internet search on the availability of water conservation plants and how to renovate existing landscapes. Tenants are also encouraged to evaluate irrigation management systems using metering, timing, and water sensing devices.

At present, it is not viable for the Crystal TP to offer financial incentives for water conservation to individual tenants.

Water Management

Crystal TP monitors and records water levels at its wells and tanks sites. The system is designed such that the water level in the storage tanks are adjusted automatically when the tank's pressure reaches a particular set-point (on at 45 psi and off at 60 psi).

Working relationships with other local water purveyors is not available at this time as there are no local water purveyors in the vicinity. However, Crystal TP does have two wells, which provides some redundancy. Should both wells be unavailable, then Crystal TP would provide its tenants with bottled water and water trucks can be utilized to fill up the tank until the wells can be repaired and placed back into service.

Crystal TP does not monitor unaccounted for water losses because individual spaces are not metered and there is no comparison to be made between production and space usage. Crystal TP does not have any plans, in the near future, to install individual water meters on individual spaces to allow monitoring or production verses usage figures.

Crystal TP does not have a formal leak detection program. Most mainlines have been replaced within the last 10 years and all leaks are repaired immediately. Crystal TP is taking an active role in ensuring mainlines are in good shape and do not leak.

Crystal TP does not have a formal well head protection program. However, one well is enclosed in a well house and the other has a sealed well head, thus ensuring some level of security.

Crystal TP does not have a formal capital improvement plan in place. However, when replacements are needed, they are replaced.

Crystal TP does not have a system for reusing of effluent. Effluent is treated on-site by a septic system.

Washoe County has adopted a Plumbing Water Conservation Ordinance which applies to structures which are renovated as well as all new construction. This ordinance is furnished to local suppliers and contractors. The Washoe County Building Department checks new construction, renovation, and expansions within Washoe County to ensure compliance with this ordinance.

Contingency Plan

The objective of the contingency plan would be to manage the available resources to ensure continued supply of potable water during periods of drought or extended drought.

It is envisioned that voluntary conservation will be sufficient to ensure an adequate supply of water and reduce water usage. However, if a sustained drought (lack of precipitation) is encountered, it may be necessary to implement mandatory restrictions in order to ensure an adequate supply of water to meet essential needs.

Drought response would be three (3) stages: (1) warning stage, (2) alert stage, and (3) emergency stage. The stages are describes as follows:

In Stage 1, the warning stage, Crystal TP would increase monitoring of its water supplies and would begin creating public awareness of the water supply situation and the need to conserve. Conservation measures at this stage would be voluntary. Retrofit kits (low-flow faucet aerators, low-flow showerheads, leak detection tables, and replacement flapper valves) may be made available, or at cost, and may be actively distributed, if needed.

In Stage 2, the alert stage, Crystal TP would call for wide-based community support to achieve conservation, implement water use restrictions, and impose penalties for ignoring the restrictions. Conservation measures at this stage would be mandatory and violations would incur fines.

In Stage 3, the emergency stage, Crystal TP would declare a drought and water shortage emergency, would enforce water use restrictions, impose fines for violations, and could impose fees for water usage. Media relations would be activated in order to inform the tenants and monetary assistance may need to be secured in an effort to mitigate the effects of the drought (e.g. federal funding assistance). Conservation measures at this stage would be mandatory, violations would incur fines, and renters could pay additional fees for water usage.

When a drought is declared over, voluntary conservation measures (see ***Conservation Measures*** section) will be reinstated and water supplies would continue to be monitored.

Schedule

All of the provisions listed will be in place after this conservation plan has been approved.

Evaluation Measurements

Because individual spaces are not currently metered for water usage, it is impossible to determine the effectiveness of each plan element on an individual renter basis. However, Crystal TP can evaluate the effectiveness of each plan element from the perspective of the whole trailer park. In that regard, as a plan element is activated (e.g. mailing literature or declaring a drought stage), production figures will be compared to same-month historical data to estimate the plan element's effectiveness. This information will be utilized as a basis for any future water conservation plan revision and plan elements.

If there is a decrease in production as a result of a particular measure/incentive, that measure/incentive can be expanded or improved upon, if possible. If it is discovered that a particular measure/incentive is ineffective, it will be discontinued and a new one can then be implemented to take its place.

In addition to changes resulting from audits, updates, and modifications to conservation measures/incentives there will be changes made to meet changing conditions (e.g. tenant growth and demand, changing use, new technologies, etc.).

Conservation Estimates

During the Stage 1 phase of the conservation plan, it is estimated that conservation measures could be expected to provide a 5 to 10% reduction in water use.

During the Stage 2 phase of the conservation plan, it is estimated that conservation measures could be expected to provide a 10 to 15% reduction in water use.

During the Stage 3 phase of the conservation plan, it is estimated that conservation measures could be expected to provide a 15 to 20% reduction in water use.

The estimated water savings for various end-user efforts can be found in Appendix C.

Rate Analysis

Crystal TP is not a water company, in the business of selling water to customers, and as such does not have paying water customers. A rate analysis is not applicable in this case.

Appendices

APPENDIX A
CONSERVATION MEASURES

Stage 1 – Warning Stage

1. Crystal TP would increase monitoring of water supplies.
2. Crystal TP would begin creating public awareness of the water supply situation and the need to conserve.
3. Crystal TP would inform tenants of voluntary conservation measures (non-essential water uses, listed below).
4. Crystal TP could provide tenants with retrofit kits either at cost or free.

Non-essential water uses are:

1) Use of water through any connection when Crystal TP has notified the tenant in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the tenant has failed to make such repairs within 1 hour after receipt of such notice.
2) Washing aircraft, cars, buses, boats, trailers or other vehicles.
3) Use of water for outside plants, lawn, landscape, and turf areas with even numbered spaces watering on even numbered days and odd numbered spaces watering on odd numbered days. Watering of plants, lawn, landscape, and turf areas are prohibited on Mondays and between the hours of 10 a.m. and 6 p.m. on designated watering days.
4) Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water.

Stage 2 – Alert Stage

1. Crystal TP would set conservation goals and call for wide-based community support to achieve those goals.
2. Crystal TP would inform tenants of mandatory conservation measures (non-essential water uses, listed in Stage 1 are now mandatory).
3. Crystal TP would inform tenants of penalties if mandatory conservation measures are not observed (penalties are listed below).
4. Crystal TP would inform tenants of any mandatory conservation water fees.
5. Crystal TP could provide tenants with retrofit kits either at cost or free.

Penalties for violation of mandatory conservation measures are:

1st violation – written warning.
2nd violation – $25.00
3rd violation – $50.00
4th violation – turn-off of water services.

Offenses for separate water use restriction violations will each start at the warning stage (1st violation) and the penalties for the offenses are in addition to the regular rate schedule charges.

Stage 2 water rates could include an additional monthly water conservation usage fee of $25.00, or other such fee as deemed necessary.

Stage 3 – Emergency Stage

1. Crystal TP would declare a drought and water shortage emergency and use media relations to supplement efforts to keep tenants informed.
2. Crystal TP would inform tenants of prohibited water uses (non-essential water uses, listed in Stage 1 are now prohibited).
3. Crystal TP would inform tenants of penalties if prohibited measures are not observed (penalties are listed below).
4. Crystal TP could provide tenants with retrofit kits either at cost or free.
5. Crystal TP would seek monetary assistance in an effort to mitigate the drought (e.g. federal funding).

Penalties for violation of prohibited water use measures are:

1st violation – written warning.
2nd violation – $100.00
3rd violation – turn-off of water services.

Offenses for separate water use restriction violations will each start at the warning stage (1st violation) and the penalties for the offenses are in addition to the regular rate schedule charges.

Stage 3 water rates could include an additional monthly conservation water usage fee of $50.00, or other such fee as deemed necessary.

If any tenant seeks a variance from the provisions of Stage 3, then that tenant shall notify Crystal TP in writing, explaining in detail the reason for such a variation. Crystal TP **s**hall respond to each request.

APPENDIX B
PUBLIC EDUCATION MATERIALS

There are several publications available for use at U.S. EPA website for general distribution (currently located at http://epa.gov/watersense/pubs/index.htm#ideas). These publications include such topics as:

- Simple Steps to Save Water,
- Ideas for Residences,
- Ideas for Commercial,
- Using Water Wisely In the Home,
- Outdoor Water Use in the US,
- Toilet Flush Facts,
- Watering Can Be Efficient,
- Irrigation Timers for the Homeowner, and
- Water Efficient Landscaping,

These publications can be utilized until Crystal TP develops system-specific publications.

There are also numerous website that provide tips for conserving water. One of these is: http://www.wateruseitwisely.com/100-ways-to-conserve/index.php. Tenants can be directed to this website for tips to conserve water.

Specific tips for landscaping that can be provided to the tenants are listed below. During drought conditions outdoor watering restrictions may be imposed, and therefore some of the following tips will not apply.

Tips for Landscaping

Watering:

- Detect and repair all leaks in irrigation systems.
- Use properly treated wastewater for irrigation where available.
- Water the lawn or garden during the coolest part of the day (early morning is best). Do not water on windy days.
- Water trees and shrubs, which have deep root systems, longer and less frequently than shallow-rooted plants which require smaller amounts of water more often. Check with the local nursery for advice on the amount and frequency of watering needed in your area.
- Set sprinklers to water the lawn or garden only—not the street or sidewalk.
- Use soaker hoses and trickle irrigation systems.
- Install moisture sensors on sprinkler systems.

Planting:

- Have your soil tested for nutrient content and add organic matter if needed. Good soil absorbs and retains water better.
- Minimize turf areas and use native grasses.
- Use native plants in your landscape—they require less care and water than ornamental varieties.
- Add compost or peat moss to soil to improve its water-holding capacity.

Maintaining:

- Use mulch around shrubs and garden plants to reduce evaporation from the soil surface and cut down on weed growth.
- Remove thatch and aerate turf to encourage movement of water to the root zone.
- Raise your lawn mower cutting height to cut grass no shorter than three inches—longer grass blades encourages deeper roots, help shade soil, cut down on evaporation, and inhibit weed growth.
- Minimize or eliminate fertilizing which requires additional watering, and promotes new growth which will also need additional watering.

Ornamental Water Features:

- Do not install or use ornamental water features unless they recycle the water. Use signs to indicate that water is recycled. Do not operate during a drought.

APPENDIX C
END-USER WATER SAVINGS

Here are just a few of the end-user water savings that could be realized:

Leaky Faucets

Issue: Leaky faucets that drip at the rate of one drip per second can waste more than 3,000 gallons of water each year.

Fix: If you're unsure whether you have a leak, read your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, you probably have a leak.

Leaky Toilets

Issue: A leaky toilet can waste about 200 gallons of water every day.

Fix: To tell if your toilet has a leak, place a drop of food coloring in the tank; if the color shows in the bowl without flushing, you have a leak.

Showering

Issue: A full bath tub requires about 70 gallons of water, while taking a five-minute shower uses 10 to 25 gallons.

Fix: If you take a bath, stopper the drain immediately and adjust the temperature as you fill the tub.

Brushing Teeth Wisely

Issue: The average bathroom faucet flows at a rate of two gallons per minute.

Fix: Turning off the tap while brushing your teeth in the morning and at bedtime can save up to 8 gallons of water per day, which equals 240 gallons a month!

Watering Wisely

Issue: The typical single-family suburban household uses at least 30 percent of their water outdoors for irrigation. Some experts estimate that more than 50 percent of landscape water use goes to waste due to evaporation or runoff caused by overwatering.

Fix: Drip irrigation systems use between 20 to 50 percent less water than conventional in-ground sprinkler systems. They are also much more efficient than conventional sprinklers because no water is lost to wind, runoff, and evaporation. If the in-ground system uses 100,000 gallons annually, you could potentially save more than 200,000 gallons over the lifetime of a drip irrigation system should you choose to install it. That adds up to savings of at least $1,150!

Washing Wisely

Issue: The average washing machine uses about 41 gallons of water per load.
Fix: High-efficiency washing machines use less than 28 gallons of water per load. To achieve even greater savings, wash only full loads of laundry or use the appropriate load size selection on the washing machine.

Flushing Wisely

Issue: If your toilet is from 1992 or earlier, you probably have an inefficient model that uses at least 3.5 gallons per flush.
Fix: New and improved high-efficiency models use less than 1.3 gallons per flush—that's at least 60 percent less than their older, less efficient counterparts. Compared to a 3.5 gallons per flush toilet, a WaterSense labeled toilet could save a family of four more than $90 annually on their water bill, and $2,000 over the lifetime of the toilet.

Dish Washing Wisely

Issue: Running dishwasher partial full and pre-rinsing dishes before loading the dishwasher.
Fix: Run the dishwasher only when it's full and use the rinse-and-hold dishwasher feature until you're reading to run a full load. Pre-rinsing dishes does not improve cleaning and skipping this step can save you as much as 20 gallons per load, or 6,500 gallons per year. New water-saver dishwashers use only about 4 gallons per wash.

Estimated water savings from EPA Water Conservation Guidelines 1998 (Appendix B, Table B-1):

Type	Estimated Usage (gpcpd)	Conservation Usage (gpcpd)	Savings (gpcpd)	Savings (%)
Toilet	18.3	10.4	7.9	43 %
Clothes Washers	14.9	10.5	4.4	30 %
Showers	12.2	10.0	2.2	18 %
Faucets	10.3	10.0	.3	3 %
Leaks	6.6	1.5	5.1	77 %

Benchmarks from selected conservation measures from EPA Water Conservation Guidelines 1998 (Appendix B, Table B-4):

Category	Measure	Reduction of End Use (% or gpcpd)
Universal metering	Connection metering	20 %
	Sub metering	20 – 40 %
Costing and pricing	10% increase in residential prices	2 – 4 %
	10% increase in non-residential prices	5 – 8 %
	Increasing-block rate	5 %
Information and education	Public education and behavior changes	2 – 5 %
End-use audits	General industrial water conservation	10 – 20 %
	Outdoor residential use	5 – 10 %
	Large landscape water audit	10 – 20 %
Retrofits	Toilet tank displacement devices (for toilets using > 3.5 gallons/flush)	2 – 3 gpcpd
	Toilet retrofit	8 – 14 gpcpd
	Showerhead retrofit (aerator)	4 gpcpd
	Faucet retrofit (aerator)	5 gpcpd
	Fixture leak repair	0.5 gpcpd
	Governmental building (indoors)	5 %
Pressure management	Pressure reduction, system	3 – 6 % of total production
	Pressure-reducing valves, residential	5 – 30%
Outdoor water use efficiency	Low water-use plants	7.5 %
	Lawn watering guides	15 – 20 %
	Large landscape management	10 – 25%
	Irrigation timer	10 gpcpd
Replacements and promotions	Toilet replacement, residential	16 – 20 gpcpd
	Toilet replacement, commercial	16 – 20 gpcpd
	Showerhead replacement	8.1 gpcpd
	Faucet replacement	6.4 gpcpd
	Clothes washers, residential	4 – 12 gpcpd
	Dishwashers, residential	1 gpcpd
	Hot water demand units	10 gpcpd
Water-use regulation	Landscape requirements for new developments	10 – 20 % in sector
	Greywater reuse, residential	20 – 30 gpcpd