

SUN VALLEY
GENERAL IMPROVEMENT DISTRICT
WATER CONSERVATION PLAN



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Sun Valley G.I.D Water System

Water Conservation Plan

Background / System Information

The Sun Valley General Improvement District (G.I.D.) public water system (PWS NV0000211) serves customers within the Sun Valley hydro basin. The total service area is approximately nine square miles. The estimated population served (in 2007) is 20,000. Residential customers are metered at a uniform rate. The system is currently 100% metered with a requirement of immediate installation on new residential and commercial services. Residential customers are billed on a base plus uniform rate basis; commercial customers are billed on a base plus progressive unit charge basis.

The system is located in Sun Valley, Washoe County, Nevada to the north of Reno between Spanish Spring and Golden Valley. The water is supplied to the District from the Truckee Meadows Water Authority through 10" and 16" main lines that feed into the Sun Valley main pumping station. There is also a secondary wholesale point from Truckee Meadows Water Authority located at the Boundary Tank site at the top of West 7th Avenue on the ridge between Sun Valley and Golden Valley. The main pump station pumps the water through five vertical turbine pumps capable of pumping approximately 4500 GPM to the water storage facilities. There are currently nine water storage tanks in the system totaling 9.4 million gallons of water storage. The system has four pressure zones; The Southern Zone, the Central Zone, the Chocolate Zone and the Sidehill/Chimney Zone. There are three booster pump stations which pump water to the upper, Sidehill/Chimney zone in addition to the Boundary Pump Station which supplies water to the Boundary Tank. Several pressure reducing valve (PRV) stations are located throughout the system to regulate pressures from higher pressure zones to lower pressure. All water received from Truckee Meadows Water Authority is pretreated and requires no additional treatment or chlorination. Wastewater collected from the area is gravity fed through the wastewater collection system and treated at the Truckee Meadows Water Reclamation Facility in Sparks. There is no reclaimed water system within the Sun Valley service area.

The original Conservation Plan for the system was developed in 2003, and modified in 2008. The plan is to be reviewed at five year intervals, with modifications to meet changing system conditions.

Plan Elements

This plan describes the drinking water conservation and drought management efforts in the Sun Valley G.I.D service area, along with implementation schedules. The plan components conform to Nevada regulations as outlined by the Nevada Department of Conservation and Natural Resource, Division of Water Resources. Plan elements address the following areas:

- Increase public awareness of the need to conserve water
- Landscaping and use of arid and semiarid plants
- Identify specific water conservation measures
- Propose plan to identify and reduce leakage
- Provide a drought contingency plan
- Implementation schedule

Public Awareness

The Sun Valley G.I.D. efforts to enhance public awareness of the need to conserve water include the following:

- Various informational hand outs are available in the public lobby located at 5000 Sun Valley Blvd. The hand outs include a residential indoor and outdoor watering guide, a water conservation pamphlet and a bathroom and laundry pamphlet.
- Periodically, educational literature is placed in water bills, or messages appear printed in the quarterly news letter. Educational materials include tips on Conservation landscaping and ways to conserving water.
- We participate in Water Week activities and other public outreach opportunities to raise public awareness of water use.

Landscaping and use of arid and semiarid plants

The Sun Valley G.I.D. encourages the public to practice efficient water management in landscape and promote Zeroscape and drip systems to conserve on outdoor watering. Local nurseries are encouraged to promote the use of drip irrigation and climate-appropriate plant materials.

Specific water conservation measures

- All residential meters are tested every ten years, and replaced if under-registering by more than 5%
- The Sun Valley G.I.D. Tariff includes a provision that water service can be shut off for wasting water. This is enforced by visual inspection for runoff, following-up on citizen reports, and review of use at metered services. Typically a verbal or written warning is issued, followed by a shut-off when cooperation is not forthcoming.
- All commercial customers are metered and pay a metered water rate charge based on usage
- All residential customers are 100% metered.
- Sun Valley G.I.D. has a toilet retrofit program in place where the District provides low flow toilets and installation to qualifying customers, reducing water usage and the amount of wastewater to treat.
- Provide products such as Dripstop washer replacements for leaking faucets at no cost to the customers.
- Monitor meter reads for abnormal water usage and contact customers to determine the cause.
- Provide free dye packets to customers for testing toilets for leaks.
- Provide no charge leak checks to customers to verify leaks and help customers to determine the size and location.
- Promote voluntary outdoor watering schedule

Plan to identify and reduce leakage

- The Sun Valley G.I.D. has in place a capital improvement plan to replace distribution lines at the anticipated life-cycle end.
- Monthly, we audit production vs. sales and authorized usage to determine the amount of unaccounted water and infrastructure leakage index. We also compare current to historical same-month production. When production increases unexpectedly, we initiate a leak survey.

- It is our written policy to repair leaks in a timely manner. All large leaks are repaired immediately and small leaks (less than 1 gallon per minute) within 48 hours.

Reuse of effluent

Effluent is treated by a separate entity, and is reused for irrigation purposes. Currently, there are no plans in place to reuse effluent within the service area.

Drought contingency plan

Nevada is an arid state and Sun Valley is continuing to grow and water requirements are increasing. The area is subject to drought cycles; therefore, it is necessary to have a drought contingency plan. The objective of our plan is to manage the available resources to insure continued supply of potable water during periods of drought. We monitor water purchased versus water sold and record the information. We work with other local water purveyors to insure adequate supplies are available. We have installed an inter-tie with the Truckee Meadows Water Authority to provide them with an emergency water supply and we have constructed a second wholesale point where TMWA provides us with an addition point of service for the valley.

When the Sun Valley G.I.D. has found that a water scarcity condition exists or is likely to exist and has proclaimed the existence of a drought or emergency condition, it shall also declare an appropriate drought or emergency stage for its service area which may be Stage 1, Stage 2, Stage 3, or Stage 4, described as follows:

Stage 1 Drought or Emergency

1. Water from the Districts water system allowed to pool, pond, or run-off of applied areas is considered a waste of water and as such is not permitted.
2. Leaks occurring on the customer side of each meter in the Districts water system are considered a waste of water and as such are not permitted.
3. Water from the Districts water system which runs down the street due to excessive watering or poorly maintained sprinklers is considered a waste of water and as such, is not permitted. If a sprinkler system is broken and left on for more than two (2) hours, the water will be shut off by the Town until it is fixed.
4. During a Stage 1 Drought or Emergency, lawn watering, including landscaping and the watering of a garden, will NOT be permitted between the hours of 1:00 pm and 5:00 pm

Stage 2 Drought or Emergency

1. Water from the Districts water system allowed to pool, pond, or run-off of applied areas is considered a waste of water and as such is not permitted.
2. Leaks occurring on the customer side of each meter in the Districts water system are considered a waste of water and as such are not permitted.
3. No hard surfaces including sidewalks, driveways, parking areas, or decks may washed or hosed down with water supplied through the Sun Valley G.I.D. potable water system unless required by health and safety requirements.
4. No washing of vehicles with hoses is permitted with the Districts water supplied through the Districts potable water system, except with hoses equipped with automatic shut off device or at facilities designated on the Districts billing records as a commercial vehicle wash.
5. Water used for watering vegetation, including lawns, landscaping, and gardens is limited as follows:
 - a. Residences with even numbered addresses: Monday, Wednesday, & Saturday;
 - b. Residences with odd numbered addresses: Tuesday, Thursday & Sunday;
 - c. Commercial and Industrial Customers: Tuesday and Friday; and Sunday;
 - d. All watering of lawns, landscaping, and gardens is prohibited between the hours of 1:00 pm and 5:00 pm
6. No use of water for and decorative purpose is permitted.

Stage 3 Drought or Emergency

1. Water from the Districts water system allowed to pool, pond, or run-off of applied areas is considered a waste of water and as such is not permitted.
2. Leaks occurring on the customer side of each meter in the Districts water system are considered a waste of water and as such are not permitted.
3. No hard surfaces including sidewalks, driveways, parking areas, or decks may washed or hosed down with water supplied through the Districts potable water system unless required by health and safety requirements.

4. No washing of vehicles with hoses is permitted with the Districts water supplied through the Districts potable water system, except with hoses equipped with automatic shut off device or at facilities designated on the Districts billing records as a commercial vehicle wash.
5. Water used for watering vegetation, including lawns, landscaping, and gardens is limited as follows:
 - a. Residences with even numbered addresses: Wednesday & Saturday;
 - b. Residences with odd numbered addresses: Tuesday & Sunday;
 - c. Commercial and Industrial Customers: Tuesday & Friday;
 - d. All watering of lawns, landscaping, and gardens is prohibited between the hours of 1:00 pm and 5:00 pm
6. No use of water for and decorative purpose is permitted.
7. Water from the towns potable water system used for general construction or maintenance activities, including dust control, compaction and concrete curing, is considered a waste of water and as such is not permitted.

Stage 4 Drought or Emergency

1. Water from the Districts water system allowed to pool, pond, or run-off of applied areas is considered a waste of water and as such is not permitted.
2. Leaks occurring on the customer side of each meter in the Districts water system are considered a waste of water and as such are not permitted.
3. No hard surfaces including sidewalks, driveways, parking areas, or decks may washed or hosed down with water supplied through the Districts potable water system unless required by health and safety requirements.
4. No washing of vehicles with hoses is permitted with the Districts water supplied through the Districts potable water system, except with hoses equipped with automatic shut off device or at facilities designated on the Districts billing records as a commercial vehicle wash.
5. Water used for watering vegetation, including lawns, landscaping, and gardens is limited as follows:
 - a. No watering from December through February;

- b. Watering will only be allowed one day per week during March, April & May.
 - c. Watering will be allowed two days per week from June 1st through August 15th:
 - 1. Residences with even numbered addresses: Wednesday & Saturday;
 - 2. Residences with odd numbered addresses: Tuesday & Sunday;
 - 3. Commercial and Industrial Customers: Tuesday & Friday;
 - d. One day per week August 16th through September;
 - e. All watering of lawns, landscaping, and gardens is prohibited between the hours of 1:00 pm and 5:00 pm
6. No use of water for and decorative purpose is permitted.
7. Water from the towns potable water system used for general construction or maintenance activities, including dust control, compaction and concrete curing, is considered a waste of water and as such is not permitted.
8. During a Stage 4 Drought or Emergency, the planting or installing of new lawns is prohibited from July through September.

Implementation schedule

All of the plan elements listed are currently in place. The plan is to be reviewed every five years, and updated as system needs change.

100% of residential and commercial services are metered. Residential and commercial meters are being read electronically.

Plan effectiveness metrics

Historical demands will be compared to estimated population each year to determine the gallons per capita per day (gpcpd) consumption. For 2007, the average daily demand flow is 100 gpcpd. With average annual consumption is significantly greater than 600 gpcpd, plan revision will be considered, to include additional conservation measures.

When a plan element is activated, such as mailing literature or declaring a drought stage, production in terms of gpcpd will be compared to same month historical data to estimate effectiveness.

Variable pricing analysis

The present residential and commercial water rate structure is a uniform rate. Residential and commercial accounts are billed at a base rate plus a usage charge per one thousand gallons of water. There are no plans to change the rate structure only to promote conservation. Rates are scheduled to be reviewed annually and adjusted, to meet budget costs.

Water savings in gallons/person/day

The current water usage of Sun Valley is 100 gpcpd, which is estimated to be 66% of the national average of 150 gpcpd. Sun Valley G.I.D. will continue to monitor the water usage of its population and water use regulations will be amended as needed.

Rate structure impact on water conservation

At this time, Sun Valley G.I.D does not anticipate any further water conservation in terms of gpcpd due to rate structure alterations. The District will continue to monitor the gpcpd consumption of its customers and will re-visit this issue each time rates are reviewed.