

Baker Water & Sewer GID

Water Conservation Plan

Background / System Information

The Baker GID public water system (PWS WP0863-12C) serves customers within the town of Baker, Nevada. The total service area is approximately two square miles. The estimated year round population served (in 2013) is 65. There are approximately 30 seasonal and an unknown number of transient water users. Residential customers are metered and billed at a uniform rate. Meters are installed on new residential services, and on existing services. The 3 commercial services are all metered. Residential customers are billed on a flat or base plus increasing block or rate basis; commercial customers are billed on a base plus basis.

The system is located in the Snake Valley. Water is supplied from one drilled well using a submersible pump. Above-ground storage consists of a 250,000 gallon reservoir. Approximately 11 million gallons were pumped in 2013.

Full-time disinfection is practiced. Wastewater collected from the area is managed through individual septic systems or flows to an evaporation lagoon, located north of the town of Baker. There is no reclaimed water system within the Baker GID service area.

The original Conservation Plan for the system was developed in 1994. In the future 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 Baker GID 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.
- Encourage reduction in lawn sizes and use of arid and semiarid plants.
- Identify specific water conservation measures.
- Propose plan to identify and reduce leakage.
- Increase reuse of effluent where applicable.
- Provide a drought contingency plan.
- Implementation schedule.
- Plan effectiveness metrics.
- Variable pricing analysis.
- Water savings in gallons/person/day

RECEIVED
2014 JUN 23 PM 1:34
STATE ENGINEERS OFFICE

- How will rate structure impact conservation

Public Awareness

The Baker GID's efforts to enhance public awareness of the need to conserve water include the following:

- New customers are verbally encouraged to conserve water when they open a water service account.
- Periodically, educational literature are placed in water bills. Educational materials include tips on Conservation landscaping, 5 basic ways to conserve water, 25 things you can do to prevent water waste and water leak loss calculators.

Lawn sizes and use of arid and semiarid plants

The Baker GID encourages the public to practice scientific turf management, makes literature and resources such as the Turf Institute, available to customers. There are very few traditional lawns in the town of Baker. Most homeowners and Great Basin National Park utilize native plants for landscaping.

Specific water conservation measures

The White Pine County Building Department checks new construction, renovation, and expansions within the County to insure compliance with plumbing codes.

- All residential meters are tested every ten years, and replaced if under-registering by more than 5%
- The plumbing code, which specifies low-flow fixtures, is enforced.
- All commercial customers are metered and pay a metered water rate charge based on usage.
- A residential metering program is in place, requiring water meters to be installed on all new construction and anytime a property changes ownership. These meters are read monthly to obtain usage information for billing purposes. All residential and commercial customers are metered.

Plan to identify and reduce leakage

- The Baker GID has in place a capital improvement plan to replace distribution lines at the anticipated life-cycle end.

RECEIVED
JUN 23 PM 3:34
ENGINEERING OFFICE

- Monthly, we audit production vs. sales 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

Currently, there are no plans in place to reuse effluent within the service area.

Drought contingency plan

Nevada is an arid state and White Pine County 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 levels at our Well Site.

When the Baker GID 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 Baker GID's 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 Baker GID's water system are considered a waste of water and as such are not permitted.
3. Water from the Baker GID's 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 Baker GID's water system allowed to pool, pond, or run-off of applied areas is considered a waste of water and as such is not permitted.

RECEIVED
 2014 JUN 23 PM 1:34
 STATE ENGINEERS OFFICE

2. Leaks occurring on the customer side of each meter in the Baker GID's 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 Baker GID's potable water system unless required by health and safety requirements.
4. No washing of vehicles with hoses is permitted with the Baker GID's water supplied through the Baker GID's potable water system, except with hoses equipped with automatic shut off.
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 fountains or decorative purposes is permitted.

Stage 3 Drought or Emergency

1. Water from the Baker GID's 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 Baker GID's 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 Baker GID's potable water system unless required by health and safety requirements.
4. No washing of vehicles with hoses is permitted with the Baker GID's water supplied through the Baker GID's potable water system, except with hoses equipped with automatic shut off.
5. Water used for watering vegetation, including lawns, landscaping, and gardens is limited as follows:
 - a. Residences with even numbered addresses: Monday, Wednesday, & Saturday;

RECEIVED
2014 JUN 23 PM 1:34
STATE ENGINEERS OFFICE
4

- b. Residences with odd numbered addresses: Tuesday, Thursday & 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 fountains or decorative purposes 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 Baker GID's 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 Baker GID's 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 Baker GID's potable water system unless required by health and safety requirements.

4. No washing of vehicles with hoses is permitted with the Baker GID's water supplied through the Baker GID's potable water system, except with hoses equipped with automatic shut off device.

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;

STATE ENGINEERS OFFICE
2014 JUN 23 PM 1:34
RECEIVED
5

- 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 fountains or decorative purposes 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 and read monthly for billing purposes.

Plan effectiveness metrics

Historical well production will be compared to estimated population each year to determine the gallons per capita per day (gpcpd) consumption. For 2013, the gross production, divided by the estimated population, is 123 gpcpd. When average annual consumption is significantly greater than 200 gpcpd, plan revision will be considered, to include additional conservation measures. At the present time, well production, less commercial sales, provides a gross gpcpd estimate. The same calculation applied to winter sales, provides an estimate of non-irrigation household use.

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. It is estimated that metering alone will be the major driver of conservation, by raising awareness of individual account use. Metering alone, without a rate structure change, but with the public education elements, can be expected to provide a ten percent reduction in water use, or 12 gpcpd.

Variable pricing analysis

The present residential and commercial water rate structure is a base plus rate. Rates are scheduled to be reviewed annually and adjusted, to meet budgeted costs. Each time rates are altered, the water usage patterns will be analyzed to determine price sensitivity. The amount of water conserved as a result of actual price changes, in terms of gpcpd, will be used in future analyses.