Stagecoach GID

Water Conservation Plan

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TABLE OF CONTENTS

Introduction

The water supply in Nevada is a precious commodity and plays an important role in determining Nevada's future. Nevada is the driest state in the nation, with a statewide average annual precipitation of 9-inches, 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.

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.

This plan is available for inspection during normal business hours at 5000 Navajo Trail, Stagecoach, NV, 89429 as well as on the **Stagecoach GID** website at www.http//stagecoachgid.com **or** http://www.water.nv.gov (press on the programs tab, press on the water conservation plan tab, then select the county the water system is in.)

The original Water Conservation Plan for **Stagecoach GID** was developed in 1992 and modified in 1997, 1999, 2000, 2004, 2007, 2014, and 2020.

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, **10/31/2025**.

Statutory Requirements

This water conservation plan was prepared by **Stagecoach GID** in accordance with Nevada Revised Statue (NRS) 540.

Implementation

The different stages of drought will follow in accordance with State recommendations. However, in the need for localized protection of the water aquifer, stored water supply, or water production, **Stagecoach GID** will implement the Conservation Plan for drought conditions depending on the need of the system. (An example of this would occur if both production wells were inoperative at the same time.)

System Description

Stagecoach GID is a public-owned, residential and commercial, non-transient community water system and has a current water operation permit, NV0000224. **Stagecoach GID** serves water to 600 metered customers in its service area in Stagecoach Valley, which is located in Lyon County. The service area boundaries are defined complexly with Highway 50 splitting the GID in two areas of north and south. The north section is bound by Highway 50 to the south, Boyer Lane on the west, Iroquois Trail and Cheyenne Trail to the north, and Osage Drive and Santa Fe Trail on the east. The south section is bounded by Cheryl Street on the south, David Avenue on the west, Caroline Way on the north, and Leegard Avenue on the east. **Stagecoach GID** covers approximately 65-square miles. The town of Stagecoach is located in the Stagecoach Valley. The service area's terrain is mountainous to slightly sloped.

The estimated population served in 2019 was 1,528 persons. **Stagecoach GID** estimates that its customer base will increase by 0.01% on a yearly basis through 2020. The State of Nevada, through its State Water Plan, estimates the population growth for Lyon County through 2020 to be 2.79% annually.

The water supply is from groundwater which is located within the Dayton Valley Basin. There are a total of 2-wells, in operation, supplying the system and a total of 5 storage tanks. Each of these is identified in the tables below (Table 1 and Table 2).

Table 1 – Source of Supply

Well No.	Depth (feet)	Production (gpm)
W01-Central Well	**738-Feet**	**550-GPM**
W05-Churchill Downs	**281-Feet**	**500-GPM**

Table 2 – Storage Tanks

Tank Name or No.	Volume (gallons)
ST01-PT 25 MG Tank 250K	250,000
ST02-PT 1 MG Tank 100K	100,000
ST03-PT 29 MG Tank 290K	290,000
ST04-PT 13 MG Tank 130K	130,000
ST05-PT 500K Tank	500,000

Stagecoach GID has been granted water rights in the total amount of 2299.15 AF per year of which 85.00 AF per year are leased to the Turf Farm and Iron Mountain Nursery. The current water rights are listed in the table below (Table 3).

Table 3 – Water Rights

Permit No.	Well No. & Name	Rate of Diversion (max, CFS)	Annual Use (AFA)
39076	Churchill Ranchos 1		39.22
40500	Churchill Ranchos 2		39.19
57841	Central Well		12.00
58067	Central Well		312.91
61078	Central Well		140.00
62517	Central Well		345.99
68189	Central Well		24.57
68190	Central Well		57.08
68191	Central Well		55.76
68192	Central Well		20.79
77279	Central Well		5.00
56450	Central Well		93.88

62518	Churchill Downs Well		412.30
63643	Churchill Downs Well		448.58
65479	Churchill Downs Well		8.00
70312	Churchill Downs Well		7.56
72185	Churchill Downs Well		61.54
77282	Churchill Downs Well		6.04
81042	Churchill Downs Well		6.72
81637	Churchill Downs Well		1.34
81755	Churchill Downs Well		6.48
81756	Churchill Downs Well		1.94
81757	Churchill Downs Well		2.24
81966	Churchill Downs Well		75.1
62869	Churchill Downs Well		29.92
78701	Leased (Turf Farm)		40.00
78703	Leased (Turf Farm)		40.00
82832	Leased (Iron Mtn. Nursery Well)		5.00

Water is pumped from the wells to the storage facilities either directly or via a booster pump after the storage tank to a tank at a higher elevation. Water is disinfected at each well and each booster. Water is then distributed to the customers through 2-inch, 6-inch, 8-inch, 10-inch and 12-inch PVC and C-900 gravity feed lines.

Stagecoach GID requires, at a minimum, a Distribution 2 operator.

The system operator is required to Perform **Daily / Weekly / Quarterly / Monthly / Yearly** monitoring and testing of water quality. **Stagecoach GID** does not currently have any outstanding water quality issues.

The last sanitary survey performed by the Nevada Department of Environmental Protection (NDEP) was completed in June 2019 and shows no deficiencies with the system.

Stagecoach GID charges a metered rate. **Stagecoach GID does** have a tiered rate usage fee for **commercial users**. A breakdown of the customer type, number, and charge is found in the tables below.

Residential customers are billed a $63.00 monthly fee for 25,000-gallons in addition to a $3.00 per 1,000-gallons of usage over the allotted amount. The fees are detailed in the table below (Table 4).

Table 4 – Residential Customers and Use Charges

Meter Size	Number	Monthly Fee	Quantity Fee, $/1,000 gallons
Residential			
0.75-inch	600	$63.00 for 25,000-gallons	$3.00 per 1,000-gallons over base amount

Commercial customers are billed a varying charge based on meter size for 25,000-gallons in addition to a tiered rate depending on usage. The fees are detailed in the table below (Table 5).

Table 5 – Commercial Customers and Use Charges

Meter Size	Number	Monthly Fee	Quantity Fee, $/1,000 gallons
Commercial			
1-inch	2	$84.90 for 25,000-gallons	$3.50/1,000-gallons up to including 50,000-gallons $4.00/1,000-gallons from 51,000 to 100,000-gallons $5.00/1,000-gallons for 101,000-gallons and above

1.5-inch	0	$103.01 for 25,000-gallons	
2.0-inch	0	$131.80 for 25,000-gallons	
3.0-inch	0	$188.60 for 25,000-gallons	
4.0-inch	0	$246.11 for 25,000-gallons	
6.0-inch	0	$360.39 for 25,000-gallons	

Wastewater collected from the service area is handled by individual septic systems. Stagecoach GID also has an Ordinance in place requiring installation of Denitrification Septic Systems on any new or failed system. We currently monitor and maintain 80 such systems.

Current water rates were established on July 1, 2020. Water rates are reviewed every year.

Plan Provisions

Stagecoach GID Office Staff 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.

To promote conservation and aid in Nevada's future, **Stagecoach GID** will enact the conservation measures found in the ***Conservation Measures*** section. When more stringent measures are needed, **Stagecoach GID** will continue with these measures and the measures found in the ***Contingency Measures*** section. All measures can be found in Appendix A.

Public Education

Public education is a key for cooperation with conservation efforts, so funding for public education is crucial. **Stagecoach GID** recognizes this and will establish a

conservation education program and corresponding budget by FY 2021/2022. The estimated line item budget for public education will be $1,000.00.

The conservation education program includes:

1. Bill inserts,
2. Pamphlets,
3. Flyers,
4. Posters,
5. Monthly take home coloring pages for kids,
6. Links to water conservation education on the SGID website.

New customers will be provided these materials when service is established, while existing customers will receive these materials periodically through bill inserts, direct mail, or request from the office.

Educational pamphlets will be provided to all customers upon request and should include:

1. An explanation of all costs involved in supplying drinking water.
2. Demonstrate how the water conservation practices will provide water users with long-term savings.
3. 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).

Specific Conservation Measures and Incentives

To promote conservation of water, **Stagecoach GID** has adopted #1, in Ordinance, below. **Stagecoach GID** encourages water users to follow the other measures below to promote water conservation during non-emergency and emergency conditions.

These measures include the following:

1) In the **Stagecoach GID** Ordinance, under the Standard Operating Policies for Water/Wastewater, #2, “Customers will receive 30-day shut-off notices if they ignore our request to fix leaks on their property. If they do

not fix the leak within 30-days of the notice, they will be turned off until the leak is fixed, but will not be charged a reconnect fee."

2) Use of water which results in flooding or run-off in gutters, waterways, patios, driveway, or streets is prohibited.
3) Use of water for washing aircraft, cars, buses, boats, trailers, or other vehicles without a positive shut-off nozzle on the outlet end of the hose is prohibited.
4) Use of water through a hose for washing buildings, structures, side-walks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off or waste without a positive shut-off is prohibited.
5) Use of water for watering streets with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public is determined by the gov-ernment agency in control of the streets.
6) Use of water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used, is determined by **Stagecoach GID** at the time wa-ter is needed.
7) Use of water for more than minimal landscaping in connection with any new construction is prohibited.
8) Use of water for outside plants and turf areas using a hand-held hose without a positive shut-off valve is prohibited.
9) Use of water for decorative fountains or the filling or topping off decora-tive lakes or ponds is prohibited in Stage 3 of the **Drought Conditions**. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water.
10) Use of water for the filling or refilling of swimming pools needs to be monitored and managed responsibly by the resident of the property.
11) Service of water by any restaurant except upon the request of the patron needs to be monitored by the restaurant owner.

In the event these conservation measures are insufficient to control the water shortage, **Stagecoach GID** may wish to implement the measures discussed in the ***Contingency Plan*** section below.

Incentives Plan NRS 540.151

Stagecoach GID promotes the development of water conserving principles into the planning, development, and management of new landscape projects such as public parks, building grounds, and golf course. Customers 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. Customers are also encouraged to evaluate irrigation management systems using metering, timing, and water sensing devices.

Stagecoach GID provides the following incentives for conservation:

Stagecoach GID will establish and maintain a separate page on its website, Stagecoachgid.com, promoting Water Conservation and the following informational incentives:

1. Water Awareness
   a. Check for and promptly repair any leaks
   b. Running Toilets
   c. Only run full loads of dishes and laundry
   d. Water during early morning or evening hours, do not water when its windy
2. Efficient Landscaping
   a. Drip Irrigation Systems
   b. Native and Drought Tolerant Plants
   c. Xeriscape

3. Water Efficient Technology
   a. Low flow shower heads and low flush toilets
   b. Aerated faucets
   c. High efficiency appliances – Dishwasher, Washing Machine, Water Heater – Water Sense or Energy Star

4. Fun for Kids
   a. Water Conservation facts
   b. Coloring Pages

Water Management

Stagecoach GID monitors and records water levels at both wells and tank sites. SCADA records the static and pumping levels of the wells and the water level in each tank.

Stagecoach GID last 5-years for the water system water production vs. usage:

2019 Produced 100,478,000-gallons
Sold 82,826,000-gallons to residents / commercial
Production and Sales were increased due to Construction water Sales for the Highway 50 widening project.
1,706,000-gallons to flushing
With a 15.87% loss in water.

2018 Produced 89,922,000-gallons
Sold 72,595,000-gallons to residents / commercial
1,809,000-gallons to flushing
With a 17.26 % loss in water.

2017 Produced 83,785,000-gallons
Sold 70,829,000-gallons to residents / commercial
(there are no flushing figures available prior to 2018)
With a 15.46% loss in water.

2016 Produced 87,514,000-gallons
Sold 70,603,000-gallons to residents / commercial
With a 19.32% loss in water.

2015 Produced 88,103,000-gallons
Sold 73,173,000-gallons to residents / commercial
With a 16.95% loss in water.

In 2018 it was discovered the SCADA System numbers used to determine our water production were not producing an accurate view of the system integrity. Meter system readings have since been taken from the well meter in 2019. **Stagecoach GID** continues to actively monitor unaccounted for water losses and will continuously progress to achieve an annual water loss of 10% or less.

Evaluation methods are examined to locate leaks, if significant differences are found.

Stagecoach GID does not have a formal leak detection program. All large leaks are repaired immediately and small leaks (less than 1 gallon per minute) are repaired within 72-hours after a USA DIG marking is completed.

The policy of **Stagecoach GID** with respect to meter replacement is the meters are replaced on an as needed basis.

The **Stagecoach GID** distribution system consists of 3-pressure zones, pressure-isolated by pressure reducing control valves. The system design is such that water pressure is in the range of 45 - 75 pounds per square inch throughout the system.

Stagecoach GID does not have a system for reusing wastewater effluent. Wastewater is collected in septic tanks or goes through Denitrification septic systems.

Contingency Plan for Drought Conditions

The Contingency Plan is based on information collected and published by the State of Nevada Drought Plan. This can be found at http://water.nv.gov/programs/planning/StateDroughtResponsePlan2012.pdf.

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 consumer conservation will be sufficient to ensure an adequate supply of water and reduce water usage. However, if a sustained drought is encountered, it may be necessary to implement this Conservation Plan and adopt, if necessary, any other drought response measurements set in the **State of Nevada Drought Plan** to meet the systems essential needs.

Stagecoach GID plans for drought response would be four (4) stages of drought response: (1) Drought Watch Stage[2], (2) Drought Alert Stage[2], (3) Drought Emergency Stage[2], and (4) End of Drought Stage[2]. The stages are described as follows:

In Stage 1, the Drought Watch Stage:

Stagecoach GID would:

1. Increase monitoring of its water supplies.
2. Begin creating public awareness of the water supply situation and the need to conserve.
3. Watering of plants, lawn, landscape and turf areas is prohibited between the hours of 10:00am and 4:00pm.
4. Inform customers of conservation measures to use.
5. Continue to inform the customers of potential leaks on the customer side of the meter.
6. Alert the customer via mail, email or in person of water running down the street, pooling, ponding, or any other form of overwatering.

In Stage 2, Drought Alert Stage:

Stagecoach GID would:

1. Continue with Stage 1 restrictions.
2. Set conservation goals and call for wide-based community support to achieve conservation.
3. Limit the use of fire hydrants to fire protection uses only or construction needs.
4. Implement even numbered addresses will have watering on Tuesdays, Thursdays and Saturdays and odd numbered addresses will have watering on Wednesdays, Fridays and Sundays. No watering will be allowed on Mondays.
5. Implement water use restrictions.
6. Impose penalties for ignoring the restrictions.
7. Conservation measures at this stage would be required and violations would incur fines.

In Stage 3, Drought Emergency Stage:

Stagecoach GID would:

1. Continue the restrictions listed in Stage 1 and Stage 2.
2. Declare a drought and water shortage emergency.
3. Enforce water use restrictions.
4. Impose fines for violations.
5. Impose higher fees for water usage.
6. Media relations would be activated to inform the customers.
7. Monetary assistance may need to be secured to mitigate the effects of the drought (e.g. federal funding assistance).
8. Conservation measures at this stage would be required.
9. Rationing would be imposed at 104-gallons per capita per day, gpcpd.

In Stage 4, End of Drought Stage:

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

Schedule for Carrying Out the Plan

All the provisions listed are currently in place and are actively working to achieve results with the exception of the following:

a. Establish a Conservation Education Budget beginning with the FY 2021/2022 Budget
b. Design Stagecoachgid.com Water Conservation Web Page with informational incentives and links to water conservation tips and resources. Completion date goal is Dec 2020.

Meter Installation

A capital improvement plan is in place, is currently being funded through rates, and there are plans to replace distribution lines at their anticipated useful life. Lines that historically require an above average number of repairs will be prioritized for earlier replacement.

As capital improvement projects are presented to **Stagecoach GID**, funds are used from the reserve fund accounts to finance the projects.

Standards for Water Efficiency for New Development.

Lyon 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 Lyon County Building Department checks new construction, renovation, and expansions within Lyon County to ensure compliance with this ordinance.

Tiered Rate Structures

Currently, **Stagecoach GID** does not anticipate any further water conservation savings due to a change in rate structure. **Stagecoach GID** will continue to monitor the water usage and will re-visit this issue each time rates are reviewed. If so warranted, when a change occurs, this conservation plan will be updated to reflect the new rates.

The commercial rate structure does use a tiered rate structure. Every commercial meter utilizes the same tiered rate structure. The structure is as follows: Base Rate $84.90/up to 25,000-gallons, $3.50 per 1,000-gallons for usage from 26,000 to 50,000-gallons; $4.00 per 1,000-gallons from 51,000 to 100,000-gallons; and $5.00 per 1,000-gallons from 101,000-gallons and above.

Watering Restrictions

During Drought Stage 1 use of water for outside plants, lawn, landscape, and turf areas must be done cautiously and effectively. The watering of outside plants, lawns, landscape, and turf areas should be watered before the hottest part of the day. Spring and summer months usually have the hot part of the day between **10 A.M.** and **4 P.M.** Any outside watering during these hours is forbidden.

During Drought Stage 2 and 3, these additional restrictions will be implemented. Even numbered addresses will have watering on **Tuesday, Thursday and Saturdays** and odd numbered addresses watering on **Wednesday**, **Friday and Sundays**, except that this provision shall not apply to commercial nurseries, golf courses and other water-dependent industries.

500 or more connections:

Evaluation Measurements

An audit comparing water production with metered amounts, found in the **Water Management** section, will be performed prior to the implementation of measures / incentives. Additional audits will then be done every year thereafter. Results from the initial audit will be compared with those of the subsequent annual audits to determine the effectiveness of the measures / incentives.

In 2019, the amount of water used per capita per day was about 123 gpcpd. This value is determined by the gallons sold through residential and commercial meters (82,826,000) less construction water figures (14,850,000). This number is divided by an estimated population (1515) and divided by 365-days.

In 2018, the amount of water used per capita per day was about 137 gpcpd. This value is determined by the gallons sold through residential and commercial meters (72,595,000) less construction water figures (1,538,000). This number is divided by an estimated population (1422) and divided by 365-days.

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.

Usage amounts measured will include summer use, average use per connection, and per capita use. If there is a decrease in usage because of a measure / incen-

tive, that measure / incentive can be expanded or improved upon, if possible. If it is discovered that a measure / incentive is ineffective, it will be discontinued, then 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. customer 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% reduction in water use, or 6 gpcpd.

During the Stage 2 phase of the conservation plan, it is estimated that conservation measures could be expected to provide a 10% reduction in water use, or 12 gpcpd.

During the Stage 3 phase of the conservation plan, it is estimated that conservation measures could be expected to provide a 15% reduction in water use, or 19 gpcpd.

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

References:

1. Nevada State Water Conservation Planning Guide:
   http://water.nv.gov/documents/Water%20Conservation%20Planning%20Guide%20-%20Draft.pdf

2. State of Nevada Drought Plan:
   http://water.nv.gov/programs/planning/StateDroughtResponsePlan2012.pdf

3. The Nevada State Water Plan
   http://water.nv.gov/programs/planning/stateplan/documents/NV_State_Water_Plan-complete.pdf

4. U.S. Drought Monitor:
   https://droughtmonitor.unl.edu/

Appendices

APPENDIX A
CONSERVATION MEASURES

Stage 1 – Drought Warning Stage

Stagecoach GID would:

1. Increase monitoring of water supplies.
2. Begin creating public awareness of the water supply situation and the need to conserve.
3. Prohibit watering of plants, lawn, landscape and turf areas between the hours of 10:00AM and 4:00PM.
4. Inform customers of voluntary conservation measures (non-essential water uses, listed below).

Non-essential water uses are:

1) Use of water through any connection when **Stagecoach GID** has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to make such repairs within 30 days after receipt of such notice.
2) Use of water which results in flooding or run-off in gutters, waterways, patios, driveway, or streets.
3) Use of water for washing aircraft, cars, buses, boats, trailers or other vehicles without a positive shut-off nozzle on the outlet end of the hose. Exceptions include washing vehicles at commercial or fleet vehicle washing facilities operated at fixed locations where equipment using water is properly maintained to avoid wasteful use.
4) Use of water through a hose for washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off or waste.
5) Use of water for watering streets with trucks, except for initial washdown for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public.
6) Use of water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

7) Use of water for more than minimal landscaping in connection with any new construction.
8) Use of water for watering outside plants and turf areas using a hand-held hose without a positive shut-off valve.
9) 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.
10) Use of water for the filling or refilling of swimming pools.
11) Service of water by any restaurant except upon the request of the patron.

Stage 2 – Drought Alert Stage

Stagecoach GID would:

1. Set conservation goals and call for wide-based community support to achieve those goals.
2. Limit the use of fire hydrants to fire protection uses only.
3. **Even numbered addresses** watering of outside plants, lawn, landscape, and turf areas will be limited to watering on **Tuesday, Thursday and Saturdays** and **odd numbered addresses** on **Wednesday, Friday and Sundays**, except that this provision shall not apply to commercial nurseries, golf courses and other water-dependent industries. Watering of plants, lawn, landscape, and turf areas is prohibited between the hours of **10 A.M** and **4 P.M.**
4. Implement water use restrictions.
5. Impose penalties for ignoring the restrictions**.**
6. Conservation measures at this stage would be mandatory and violations would incur fines.

Penalties for violation of mandatory conservation measures are:

1st violation – written warning.
2nd violation – $50.00
3rd violation – $100.00
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 allotments rationing benchmark is set at 111 gpcpd.

Stage 3 – Drought Emergency Stage

Stagecoach GID would:

1. Declare a drought and water shortage emergency.
2. Enforce water use restrictions.
3. Impose fines for violations.
4. Impose higher fees for water usage.
5. Media relations would be activated to inform the customers.
6. Monetary assistance may need to be secured to mitigate the effects of the drought (e.g. federal funding assistance).
7. Conservation measures at this stage would be required.
8. Rationing of water will be imposed.

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 allotments rationing benchmark is set at 104 gpcpd.

If any customer seeks a variance from the provisions of Stage 3, then that customer shall notify **Stagecoach GID** in writing, explaining in detail the reason for such a variation. The request will go before the Board at a properly agendized meeting. The Board of Trustees will determine if the request is worthy of a variance.

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). 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 **Stagecoach GID** develops system-specific publications.

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

Specific tips for landscaping that can be provided to the customers 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, call the GID to 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 ready 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 promo-	Toilet replacement, residential	16 – 20 gpcpd

tions		
	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