

SALEM CITY

WATER CONSERVATION PLAN

DRAFT

(HAL Project No.: 406.18.100)

October 2025

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CHAPTER 1 – INTRODUCTION

In response to projected future growth along the Wasatch Front, the citizens and leaders of Salem City are concerned about the future water supply in the region. The Utah State Legislature has passed legislation requiring public water suppliers to prepare a Water Conservation Plan and update the plan periodically. The City prepared the original Water Conservation Plan in 1999 and has updated the plan in 2003, 2010, 2014, and 2020. This report is the 2025 update of the City's Water Conservation Plan.

Water must be accounted for before effective water conservation goals and programs can be implemented. This report uses state and City data to account for current water consumption, assesses the water conservation alternatives available to the City, sets goals to conserve water, and identifies existing and proposed water conservation measures to be implemented by the City.

CHAPTER 2 – EXISTING WATER SYSTEM

Salem City, located on the southern end of Utah County, had an estimated population of about 12,025 people as of 2024 (Division of Water Rights, 2025). The City is south of Spanish Fork, northeast of Payson, and west of the Wasatch mountains.

Irrigation systems provided the foundation for Salem City’s growth. In 1869, the Salem Canal was built, bringing Spanish Fork River water to the City. The Strawberry Valley Irrigation Project was completed in 1916, which brought water from Strawberry Reservoir. Since its beginnings, Salem has enjoyed the plentiful water available to them. With the City growing quickly, proper steps need to be taken to ensure that this resource remains available for future generations.

In 2008, Salem City built a pressurized irrigation system to enable residents to irrigate using non-potable canal water. This has allowed the City to reserve high-quality drinking water for indoor use only, which reduces cost and preserves a potentially sensitive groundwater supply.

A map of the existing service area is provided on Figure 2-1.

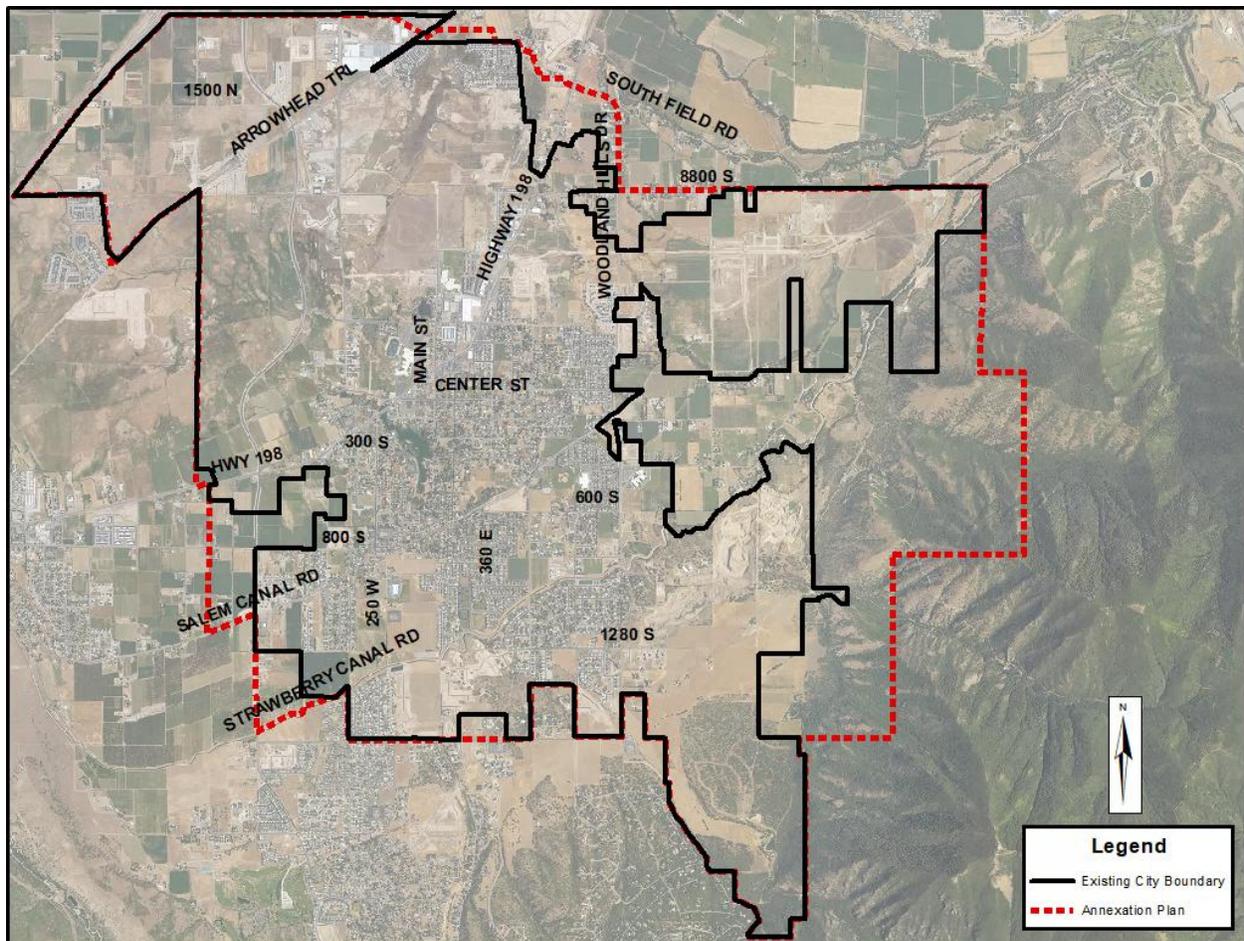


Figure 2-1. Existing Service Area

The City currently has 3,391 connections to the drinking water system, with a large majority of them being residential. Connections by type are shown in Table 2-1.

**Table 2-1
2024 Drinking Water System Connections**

Connection Type	Total Connections
Residential	3,232
Commercial	95
Industrial	13
Institutional	51
Total	3,391

The City currently has 2,624 connections on the pressurized irrigation water system, with a large majority of them being residential. Connections by type are shown in Table 2-2.

**Table 2-2
2024 Irrigation Water System Connections**

Connection Type	Total Connections
Residential	2,552
Commercial	33
Industrial	2
Institutional	35
Agriculture	2
Total	2,624

INVENTORY OF WATER RESOURCES

The City currently produces drinking water from two wells (Maple Canyon Well and Storage Reservoir Well) and the Water Canyon Springs Group. Other than seasonal spring flow variations, the City has not observed any occurrences of groundwater depletion. Salem participates in the Mount Nebo Water Agency Groundwater Management Program, which is a coordinated effort among cities in southern Utah County to preserve groundwater resources. A summary of the City’s existing drinking water sources is shown in Table 2-3.

**Table 2-3
Existing Drinking Water Sources**

Source	Peak Day Source Capacity (gpm)	Annual Source Capacity (ac-ft)
Maple Canyon Well	810	980
Storage Reservoir Well	2,500	2,520
Water Canyon Springs Group	160	110
Total	3,470	3,610

The Strawberry High Line Canal currently serves as the chief supply to the City’s pressurized irrigation system. Table 2-4 contains a summary of the pressurized irrigation water source used by Salem City.

**Table 2-4
Existing Pressurized Irrigation Water Sources**

Source	Peak Day Source Capacity (gpm)	Annual Source Capacity (ac-ft) ²
Highline Canal ¹	9,000	1,688

1. Irrigation water for the secondary system is diverted from the Highline Canal into the East and West Ponds. Water from the BYU Well is pumped into the Highline Canal and later diverted into the ponds.
2. Listed capacity is what would be available on a dry year with Salem City’s available water shares as of 2024. Actual available source capacity varies based on the flow of the Spanish Fork River.

WATER USE

Water supplied to the Salem City drinking water system from years 2006 to 2024 is summarized in Figure 2-2.

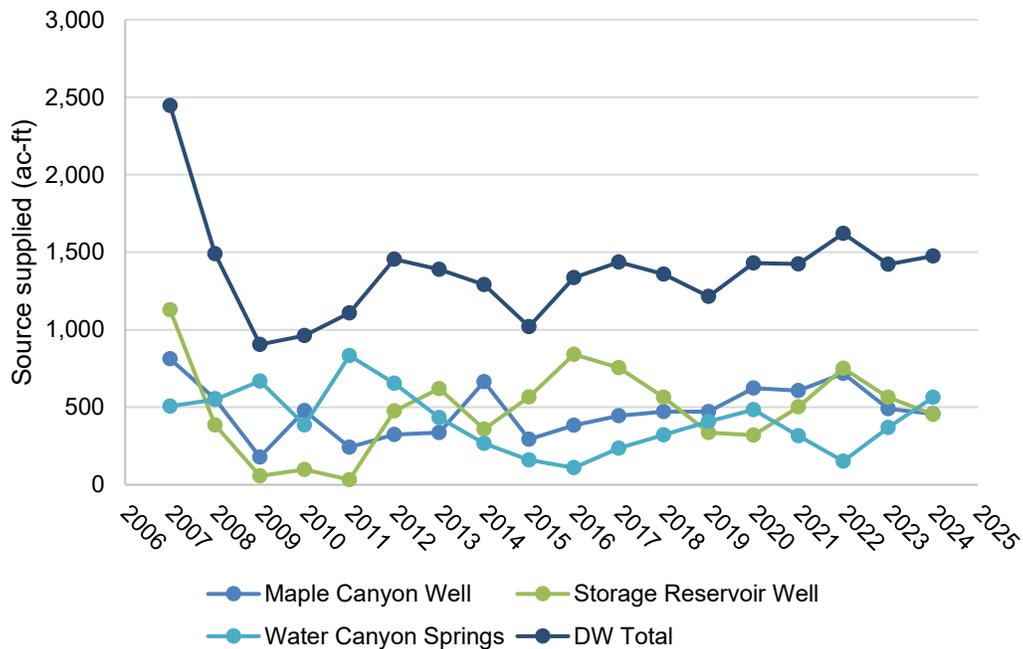


Figure 2-2. Historical Water Supply of Drinking Water

Water supplied to the Salem City pressurized irrigation system is summarized in Figure 2-3.

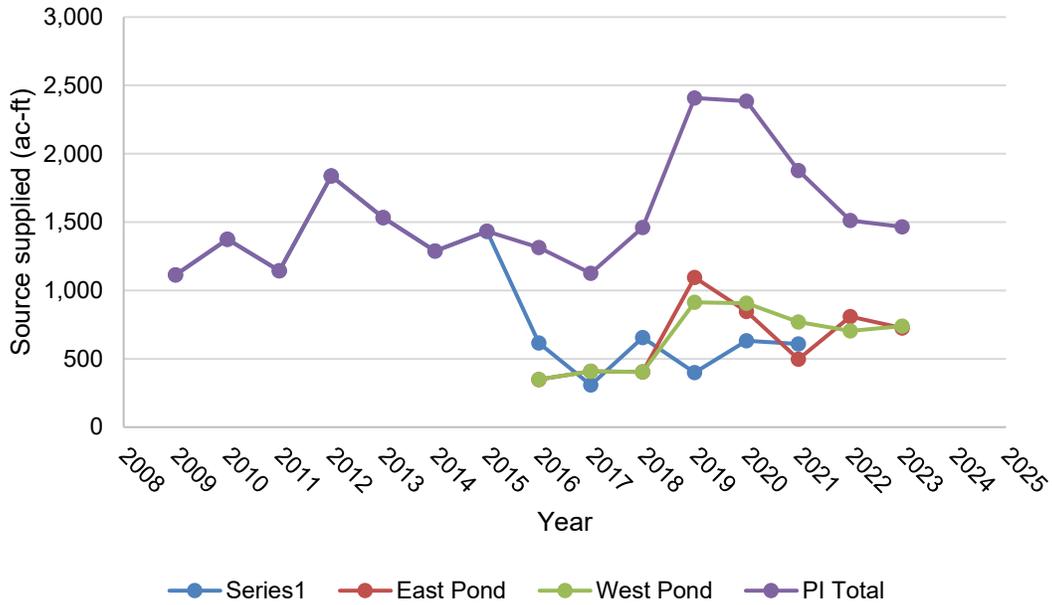


Figure 2-3. Historical Water Supply of Irrigation

Prior to 2019, the City tracked water use with customer categories of either “residential” or “commercial/other.” In 2019, the City modified their tracking system to be consistent with the categories that must be reported to the Utah Division of Water Rights. Reported water usage quantities for the prior 16 years are shown in Table 2-5.

**Table 2-5
Drinking Water Used by Each User Type**

Year	Annual usage in ac-ft (% of total)			
	Residential	Commercial ¹	Industrial	Institutional
2024	870 (82%)	144 (14%)	10 (1%)	39 (4%)
2023	787.26 (84%)	71.59 (8%)	19.51 (2%)	59.09 (6%)
2022	997.7 (91%)	54.28 (5%)	22.86 (2%)	24.58 (2%)
2021	856.91 (91%)	51.16 (5%)	8.69 (1%)	28.47 (3%)
2020	988.4 (92%)	49.51 (5%)	10.58 (1%)	28.37 (3%)
2019	534.03 (86%)	59.93 (10%)	3.85 (1%)	20.15 (3%)
2018	546.51 (84%)	94.95 (15%)	0 (0%)	12.87 (2%)
2017	541.17 (79%)	137.14 (20%)	0 (0%)	2.47 (0%)
2016	566.96 (83%)	116.33 (17%)	0 (0%)	0 (0%)
2015	503.35 (84%)	93.43 (16%)	0 (0%)	0 (0%)
2014	488.41 (86%)	80.88 (14%)	0 (0%)	0 (0%)
2013	485.8 (86%)	76.72 (14%)	0 (0%)	0 (0%)
2012	504.4 (85%)	90.72 (15%)	0 (0%)	0 (0%)
2011	426.48 (85%)	78.13 (15%)	0 (0%)	0 (0%)
2010	438.4 (83%)	87.7 (17%)	0.41 (0%)	0 (0%)
2009	888.3 (87%)	137.99 (13%)	0 (0%)	0 (0%)

1. In many prior years, the City has not distinguished industrial and institutional use from commercial use when reporting water use data.

Table 2-6 shows a comparison of the water produced by Salem City sources and the billed water use for years 2010 through 2024. Possible explanations for the unaccounted water use include leaks in the distribution system, meter inaccuracies, unmetered culinary water use in the pressurized irrigation system, and miscellaneous unmetered water use (such as pipe flushing, etc.).

**Table 2-6
Comparison of Drinking Water Supplied to Drinking Water Use**

Year	Measured Water Supplied (ac-ft)	Metered Water Use (ac-ft)	Percentage Loss
2024	1,475	1,136	23%
2023	1,423	1,011	29%
2022	1,621	1,199	26%
2021	1,425	963	32%
2020	1,430	1,145	20%
2019	1,216	869	29%
2018	1,359	903	34%
2017	1,436	880	39%
2016	1,335	855	36%
2015	1,020	742	27%
2014	1,290	621	52%
2013	1,389	1,014	27%
2012	1,455	1,190	18%
2011	1,108	794	28%
2010	961	660	31%

Figure 2-4 shows the percentage loss between water supply and water use; losses have decreased over time, especially in the last several years. This improvement is likely due to enhanced metering accuracy, proactive leak detection, and targeted infrastructure upgrades. Existing conservation measures include replacing water services as leaks are detected and during pipeline replacement projects. Many of the City’s older galvanized steel services have already been replaced, further reducing losses and improving overall system efficiency.

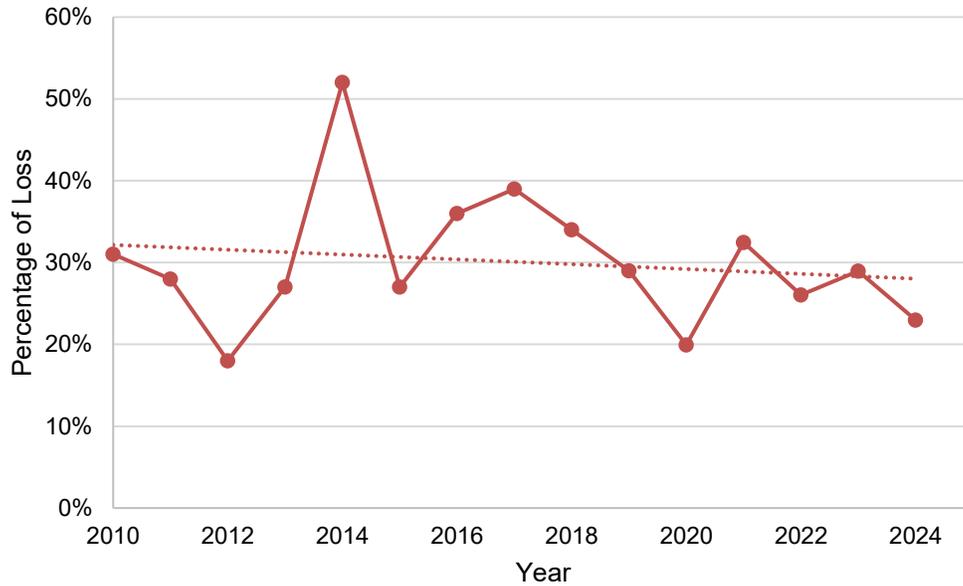


Figure 2-4. Percentage Loss Between Measured Source and Metered Use (Drinking Water System)

EXISTING AND FUTURE WATER USE

Figure 2-5 shows the historical water use in Salem City from 2000 to 2024. The per capita water use for the City from 2008-2013 was approximately 278 gallons per capita per day (gpcd), and from 2014-2019 it was 279. In the most recent period, 2020 to 2024, average use decreased to 250 gpcd. Based on this data, water conservation does appear to be occurring on a city-wide scale.

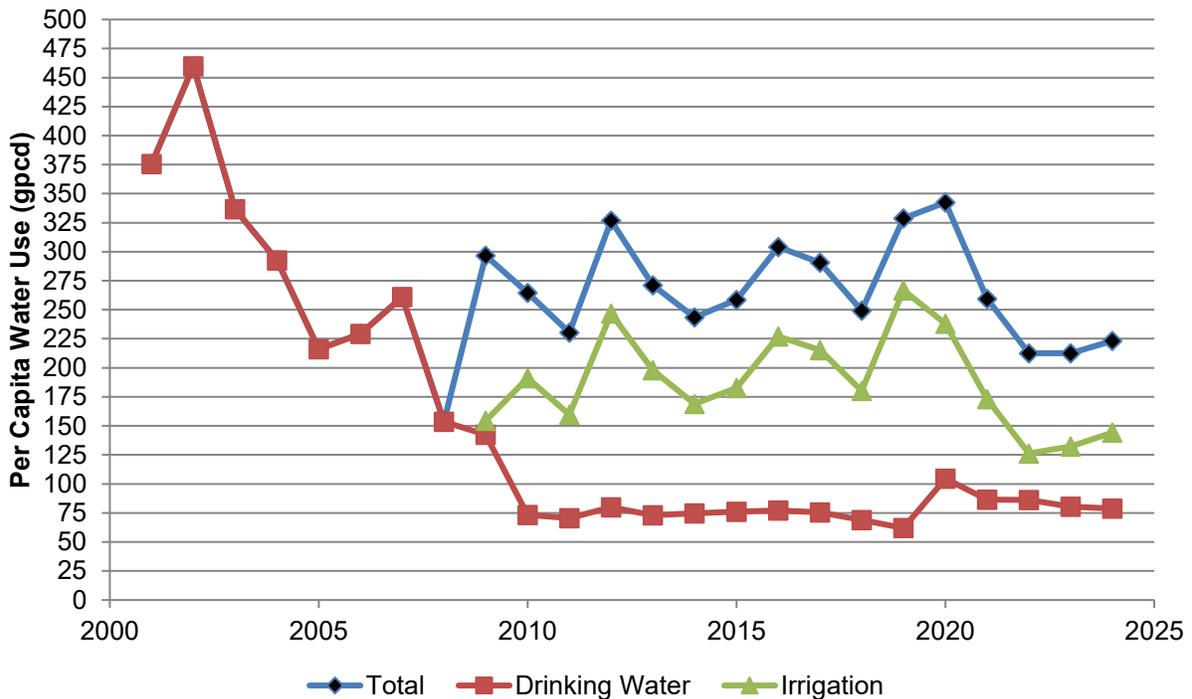


Figure 2-5 Salem City Historical Water Use

The Salem City population is estimated to be 15,102 in 2030. At a per capita water use of 216 gpcd (average gpcd from 2022 to 2024), the estimated 2030 water use in Salem will be approximately 3,655 ac-ft/yr. If the City meets the regional goal of decreasing water use by 20%, this amount could be reduced to 2,924 ac-ft/yr.

In 2060, the population is estimated to be 39,219. At a per capita water use of 216 gpcd, the City would use approximately 9,492 ac-ft/yr in year 2060. If the City meets the regional goal of decreasing water use by 32%, this amount could be reduced to 6,454 ac-ft/yr.

Figure 2-6 shows the historic and projected water use of Salem City assuming two scenarios: 1) no further water conservation and 2) a 32% reduction in per capita use by 2060. The graph also includes the reliable water supply, which is considered the limiting factor against the physical water supply, infrastructure capacity, and available water rights. The chart illustrates the potential effectiveness of water conservation and its ability to extend the capacity of a finite supply and delay the need for future source projects.

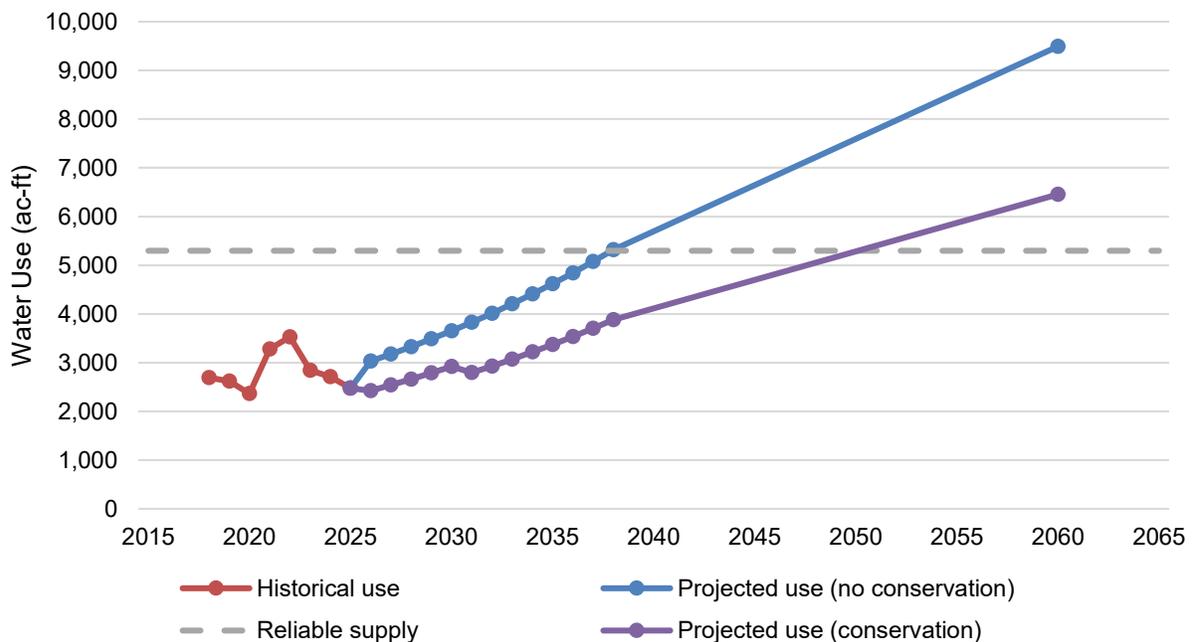


Figure 2-6: Salem City Historic and Projected Water Use

Wells will be needed to supply future drinking water source. The City is planning to eventually drill 3 more wells near the Viridian Farms development, Cemetery Tank, and Zone 9. Developers are required to dedicate water rights to the City to support their developments. Each well is expected to deliver an average of about 2,500 gpm of flow at a cost of \$4M to \$6M each.

Trends indicate a decrease in water usage per connection with an increase in meter installations. In the 2019 Water Conservation Plan, Salem City indicated that secondary metering would help reduce water usage. Meter installation was paired with water conservation education. It has been successful thus far, and paired with tiered rates, decreases in water usage may continue to occur.

The City has already seen a total decrease of 25% in water usage and 45% decrease in water usage per acre. The complete installation of meters on all secondary water connections will help Salem understand the current water usage and better track progress moving forward.

CHAPTER 3 – CONSERVATION ISSUES AND GOALS

Identified Problems

The City is concerned with the potential waste of water from inefficient indoor/outdoor water use and from system wide losses. The following specific concerns have been identified by the City:

- Water loss from line breaks or leaks in the system
- Unmetered water use from hydrants or contractors
- Illegal unmetered connections
- Water loss from leaks on the customer's side of the meter
- Customers' lack of education concerning landscape water requirements

GOALS

The City of Salem has set goals to address the identified problems and to promote conservation. Based on Utah's Regional M&I Water Conservation Goals report (HAL and BC&A, 2019), the regional water conservation goal for the Provo River Region is a 20% reduction from the 2015 baseline by 2030. The 2015 baseline was established as 222 gpcd, resulting in a goal of 179 gpcd by 2030. Salem City's gpcd has historically ranged between 342 and 212 gpcd when considering both indoor and outdoor water usage.

From 2001 to 2024, the City's average gallons per capita per day (gpcd) for both drinking and secondary water has shown a downward trend. The City will continue working to further conserve its water resources and meet the regional water conservation goal.

The following water conservation goals have been identified by the City:

- The City will continue to implement the water conservation measures currently in effect as defined in Chapter 4.
- The City will determine potential causes for unaccounted drinking water and attempt to reduce this water loss.

WATER METERING AND PIPELINE REPLACEMENT

Salem City currently meters water use at all drinking water connections and reads meters on a monthly basis. Salem City replaces meters as they become old or defective and as budget allows. Salem City does not have a program to replace and/or upsize old or undersized water pipelines in streets that need to be re-constructed. Problem pipes are replaced if they are leaking and causing difficulties for the City. These projects are implemented as City budget allows. It is important to replace old pipes continuously as this will help minimize loss within the system.

Secondary water metering and tiered billing rates were implemented in the Salem irrigation system starting in 2023 (see Appendix E for Salem City water billing rates). The City has already seen the effect of metering and its ability to reduce water use in the secondary water system. The city will continue to bill secondary water customers based on metered use to stay on track with regional conservation goals.

IDENTIFIED PROBLEMS

Salem City is concerned with the potential waste of water from inefficient indoor/outdoor water use and from system-wide losses. Specific concerns identified by the City are included in Table 3-1.

**Table 3-1
Water Conservation Concerns**

Concern	Description
Significant unaccounted water	City records show a consistent trend of significant unaccounted water (see Table 2-5). Many pipes in the drinking water distribution system are old and are undersized and may be leaking.
Irrigation from Drinking Water	As can be inferred from the increase in residential drinking water usage during the summer months, some residents are using drinking water for irrigation purposes even when pressurized irrigation water is available. This is likely out of convenience or habit.
Inefficient Irrigation	There is need for a better understanding of landscaping water requirements and efficient water-use habits and practices. A small percentage of residents know how much water is required to maintain healthy landscaped areas and how to efficiently use water outdoors. Some citizens' irrigation practices are based on convenience rather than plant needs.
Rates	City Council action is required for each adjustment of the water rates. The city council strives to minimize the additional financial burdens on residents. Consequently, water rates may not be keeping up with the increasing costs.
Meter Problems	Some drinking water meters are old and may not be providing accurate information. These should be replaced, but staff time and financial constraints have not provided the opportunity for them to be changed yet.
High Water Use Landscaping	Salem City families traditionally have landscapes with large garden areas, grass, and other water intensive landscaping. The irrigation needs of these landscapes create a water use peak in July that will require the capacity of the pressurized irrigation system to be increased.
Overflow	Salem uses springs within its system to deliver drinking water. During times of low usage and higher spring flow, significant water can overflow from the tanks. There is a holding pond for this water that allows it to recharge as much as possible.
Delivery System Constraints	Salem currently receives all pressurized irrigation through deliveries from the Highline Canal, which are not always available when there is demand for pressurized irrigation. Drinking water is often used early and late in the season to provide water to the pressurized irrigation ponds when the Highline Canal Water is not yet available.
Drinking water Source for Pressurized Irrigation	Drinking water is currently used for areas of the City where pressurized irrigation is not available and as a supplement to the pressurized irrigation ponds when the system does not have sufficient water. This use of drinking water for irrigation is not only more expensive, but also increases the quantity withdrawn from the aquifer and may jeopardize future supplies.

GOALS

Salem City has set goals to address the identified problems and to promote conservation. The City is currently promoting water conservation measures similar to the State of Utah water conservation campaign that was instituted in 2001 of a 25% reduction by 2025. The City is also working to meet the regional conservation goals. There is a regional goal to reduce per capita water use 20% from 2015 to 2030. The average water use from the last 6 years was 265 gpcd. There is a large need for conservation practices to reach the regional goal of 179 gpcd by 2030.

Although Salem City was able to complete the statewide goal from 2001, they will continue to work towards conservation and the goal from the 2015 Draft MI Water use Data report. The goals listed in Table 3-2 have been identified by Salem City to continue to promote conservation.

**Table 3-2
Water Conservation Goals**

Goal	Description
Reduce per capita use	Salem City is a member of the Utah Lake Basin Water System. This region has set a goal to reduce water consumption 19% by 2030.
Detect leaks	Contract with a leak detection company to survey the water system to locate water leaks that the Water Department staff is unable to find.
Replace inefficient fixtures	Encourage residents to replace old, high water-use toilets and shower heads with more efficient models.
Reduce loss due to overflow	Upgrade SCADA capabilities to sense when water is overflowing at the springs and configure system to discharge into the pressurized irrigation reservoir.
Continue public education	Inform residents of water conservation ideas through the city newsletter, website and other public outreach programs. The educational materials will cover issues such as irrigation efficiency, low water use landscaping, the importance of water conservation as it directly relates to Salem, and other available resources for water conservation.
Continue to replace meters	Continue to replace old or malfunctioning drinking water meters.
Plan continuously	Regularly Update Salem's Drinking Water Master Plan and Pressurized Irrigation Master Plan, and evaluate all proposed developments to ensure consistency with the City's plan. This will not only enable the City to provide capital facilities to keep up with the growth that is occurring, but also facilitate efficiency upgrades to enhance conservation of precious groundwater resources. This is especially important in the expansion of the pressurized irrigation system to preserve drinking water resources.

CHAPTER 4 – CONSERVATION MEASURES & IMPLEMENTATION

Salem City believes that water conservation is an important factor for allowing the City to meet water demands into the future. Although the City hasn't appointed a water conservation coordinator, staff are aware of the conservation goals and work together to implement the goals. Contact information for Salem City is listed below:

Address: 30 West 100 South
Salem, UT 84653

Phone: 801-423-2770

EXISTING CONSERVATION MEASURES

Table 4-1 identifies water conservation measures that are currently being implemented by Salem City. The measures will continue to be implemented according to the plan indicated in Table 4-1. It is believed that existing conservation measures and public education programs are working based on the continued water use rates seen since 2002.

**Table 4-1
Existing Conservation Measures**

Conservation Measure	Implementation Plan
<u>Public Education:</u> Promote water conservation measures to City residents through public education. (See Appendix A for public education material)	Advertise conservation measures through: <ul style="list-style-type: none"> • The City's website • The annual Water Quality Report • The City Newsletter
<u>Require Water Saving Fixtures:</u> City has adopted the International Plumbing Code which requires water saving plumbing fixtures for new development.	Check building plans for water saving fixtures during building permit reviews and enforce compliance through building inspections for new construction.
<u>Replace Old Water Service Laterals:</u> New copper or poly laterals installed in place of galvanized steel or other old laterals.	Replace with copper or poly water services as leaks are detected and as part of any pipeline replacement project. Many of the old galvanized steel services have been replaced to date.
<u>Replacement Program of Old Water Meters:</u> New accurate radio-read meters installed as old meters are replaced.	<ul style="list-style-type: none"> • Replace meters on an as-needed basis due to costs.
<u>Restrict customer watering</u>	City ordinances prohibit watering between 10:00 AM and 6:00 PM. The City also enacts voluntary day-of-week watering restrictions, and has authority to restrict water use further if it is warranted.
<u>Restrict Water Use for Public Landscaped Areas:</u> Practice water-wise irrigation for City facilities.	Sprinkler irrigation at new public landscaped areas is: <ul style="list-style-type: none"> • adjusted based on weather • performed during the cooler parts of the day
<u>Using the pressurized irrigation system to decrease aquifer withdrawals</u>	Use surface water to supply the pressurized irrigation system (to the extent possible).

PROPOSED CONSERVATION MEASURES

Table 4-2 identifies water conservation measures that are proposed to be implemented by Salem City in the future, in addition to existing conservation measures shown in Table 4-1.

**Table 4-2
Proposed Conservation Measures**

Conservation Measure	Implementation Plan
<u>Landscaping Ordinances:</u>	Update City landscaping ordinances to provide incentives to incorporate xeriscaping on existing landscaping.
<u>Meter Construction Water and include in Water Use Records:</u> Construction water is currently not metered or included in the City's overall water use records.	Begin to meter construction water. Include metered construction water in monthly and annual usage records.
<u>Re-evaluate rates annually</u>	Commission a rate study to revise rates on an annual basis and structure them to incentivize conservation (work in progress).
<u>Replacement Program for Old Pipelines:</u>	Establish a regular budget for pipeline replacement. Replace old/undersized pipelines: <ul style="list-style-type: none"> • Whenever a street is redone • According to master planned projects • As leaks are detected
<u>Estimate Fire Hydrant Testing and Flushing Flows:</u>	Compute estimates of the duration and flow rates for fire hydrant testing and flushing programs performed by the fire department and City maintenance staff.
<u>Require Separate Meters for Large Irrigated Areas:</u>	Separate meters for landscaping are required for commercial or industrial connections with large landscaped areas.
<u>Evaluate Water Rate Structure:</u> The current rate structure promotes water conservation through increasing rates and higher overage costs during peak water use times.	The City will re-evaluate the water rate structure annually to evaluate whether the current rate structure continues to promote water conservation as the City deems necessary.

REFERENCES

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https://waterrights.utah.gov/asp_apps/generalWaterUse/WaterUseList.asp>

APPENDIX A

PUBLIC EDUCATION MATERIALS

ADDITIONAL WEBSITES PROMOTING WATER CONSERVATION:

- SLOW THE FLOW campaign website: <http://www.slowtheflow.org/>
- Jordan Valley Water Conservation District's conservation website: <http://www.jvwcd.org/conservation/>
- Utah Division of Water Resources' main water conservation website: <http://www.conservewater.utah.gov/>
- Utah Division of Water Resources' water conservation education for kids website: <http://www.watereducation.utah.gov/conservation/>

General Lawn Tips

Mowing

When mowing your lawn, don't remove more than 1/3 of the grass blade each mowing. Also, leaving the mulched grass clippings on the lawn and not bagging them can keep the lawn cooler and help hold in moisture. Mow at a height of 3 inches to 3.5 inches tall through the summer. This promotes healthier, deeper roots.

Aeration

By aerating your lawn each year, you can allow air, water and nutrients to move deeper into the soil. This process helps drive grass roots deeper into the soil. Deeper roots generate a healthier, greener lawn. Proper aeration combats compaction of your soil and keeps the soil permeable. This means water can more easily flow to the deep root zone of your grass.

Don't Over-Water

Over-watering can weaken lawns, making them more prone to damage from insects, weeds, fungus and disease. It is okay to "stress" by watering your lawn less; this will help the root zone grow deeper into the soil!

**FREE
WATER
CHECK**

Free Water Check

You can have your sprinkler efficiency checked by a pro, for free! They will also develop a customized watering schedule for your lawn. Sign up at www.slowtheflow.org/watercheck or by calling 1-877-728-3420

General Lawn Watering Tips:

- Stop thinking of "watering your lawn" and start thinking of "refilling the soil moisture reservoir" under your lawn.
- Remember, water less often, but water more deeply! This will provide healthy roots and save water.
- Water in cycles so water will have time to penetrate the soil and reach the root zone.
- Make sure your sprinklers are only watering landscaped areas, not sidewalks, driveways, porches or streets.
- Make sure you apply the right amount of water each time you water, then check the weekly lawn watering guide online at www.conservewater.utah.gov to find out how many times to water each week.

Utah Division of Water Resources

Mission: To Plan, Develop, Conserve and Protect Utah's Water Resources



For more information on water conservation visit us on the web at www.conservewater.utah.gov or www.slowtheflow.org



Maintain a Healthy Lawn and Stay Water Wise!



www.slowtheflow.org

www.conservewater.utah.gov

Should I Water My Lawn Today?

Before You Water Your Lawn, You Should...

Check Your Sprinkler System

An important step in using water wisely is proper maintenance of irrigation systems. If sprinklers are not kept in good working condition, they can waste water as well as have detrimental effects on your landscape. Turn on your sprinklers during daylight hours to inspect the system for broken, clogged or misaligned heads. **Sprinklers should have head-to-head coverage.** This means water from one sprinkler reaches all the way to the next sprinkler. This allows for maximum efficiency in water coverage.



Check the Weather Report

If precipitation is forecast for the coming week, you should postpone your lawn watering. The weather forecast for any given area of the state can be found at www.wrh.noaa.gov/slc/. Consider installing an automatic rain shutoff device on your sprinkler system. Place a rain gauge (anything that catches water that can be measured) in your backyard to monitor rainfall and irrigation.



Check the Lawn Watering Guide

The Utah Division of Water Resources publishes a weekly lawn watering guide for the entire state. This useful tool can be found online at www.conservewater.utah.gov. The goal is to help residents apply the same amount of water that was used by evaporation and plant processes in the previous week.



Check to See if Your Lawn Needs Water

Only water your lawn when it needs water. If you leave footprints in the grass when you walk on it, then it is time to water! Test your soil moisture with a soil probe or use a long (6 inches) screwdriver to see how moist the soil is. If the screwdriver goes into the soil easily, this means the soil is still moist. Don't water your lawn!

Check Your Application Rate

To determine the application rate, you will need at least four test containers. Place the containers in the grass. Turn your sprinklers on for 15 minutes. Make sure to turn on all stations that water the test area. Measure in inches the depth of water in each of the containers. Calculate the average and multiply this by four. This is your application rate in inches per hour. Then calculate how many minutes you need to water to put 1/2 inch of water on your lawn. You should only apply 1/2 inch of water each time you water.

Check the Time of Day

Avoid watering your landscape during the hottest hours of the day (10 am until 6 pm) to minimize evaporation. Watering during the cooler times of the day reduces evaporation, allowing more water to get to the roots of the grass.

Automatic Timers or Controllers

These devices are wonderful and allow the user freedom and convenience in lawn watering. **However, they need to be adjusted throughout the watering season (April to October).** Also, timers should be turned off during and after rainstorms! For even more efficient watering, check into "smart controller" technology at your local sprinkler supplier or our website www.conservewater.utah.gov.

Water in Cycles

By dividing your watering time into shorter cycles with a rest time in between, more water will be able to penetrate the soil and reach the root zone. Watering in cycles also minimizes runoff.



If the only time you use your lawn is to mow it, think about taking that lawn area out and putting in a lower maintenance, lower water using plant type!

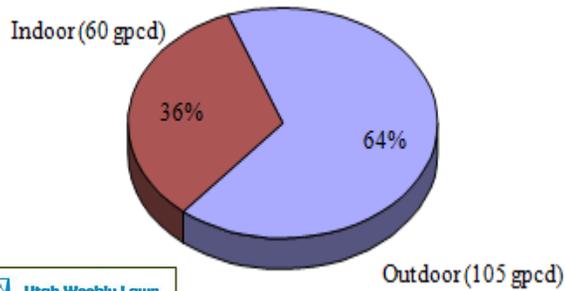
See www.slowtheflow.org for more water wise landscaping tips.

General Water Information

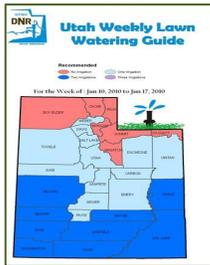
Outdoor Watering

The DWRe has focused water conservation efforts primarily on residential water use with an emphasis on outdoor landscapes because this category has the greatest potential for water conservation. With 64% of the residential water being used outdoors, Utahns can conserve millions of gallons water annually if they water more efficiently. One of these ways is to use a smart controller that allows homeowners a more efficient way to water using only what the plants actually need.

Residential (165 gpcd)



Based on 2010 per capita data



Check the Lawn Watering Guide

The DWRe already provides a statewide network of weather stations for Utahns to use. The weather stations track ET and tell Utahns in a given region how many times they should water during the week. If you don't yet have a smart controller installed, visit the Lawn Watering Guide online at: www.conservewater.utah.gov to see how many times you should water each week.

General Lawn Watering Tips:

- Stop thinking of “watering your lawn” and start thinking of “refilling the soil moisture reservoir” under your lawn.
- Remember, water less often, but water more deeply! This will provide healthy roots and save water.
- Water in cycles so water will have time to penetrate the soil and reach the root zone.
- Make sure your sprinklers are only watering landscaped areas, not sidewalks, driveways, porches or streets.
- Make sure you apply the right amount of water each time you water, then check the weekly lawn watering guide online at www.conservewater.utah.gov to find out how many times to water each week.

Utah Division of Water Resources

Mission: To Plan, Develop, Conserve and Protect Utah's Water Resources



For more information on water conservation visit us on the web at www.conservewater.utah.gov or www.slowtheflow.org



Save Water Automatically!

Install a Smart Controller on Your Sprinkler System



www.slowtheflow.org
www.conservewater.utah.gov

How Does a Smart Controller Work?

Smart Controllers Water to Evapotranspiration (ET)

ET is defined as the amount of water a plant and its environment loses from evaporation and transpiration. Simply put, transpiration is water the plant uses to grow and survive, and evaporation is water lost from the surrounding soil. The factors that affect ET, are temperature, wind, precipitation, humidity and solar radiation. ET is usually expressed in inches of water over a certain time period; commonly, a day, week, month or year. The Division of Water Resources' (DWRe) main emphasis in water conservation education is for residents to water to the ET requirements of their landscapes as efficiently as possible. Smart controllers can assist residents in accomplishing this. Smart controllers can reduce outdoor water consumption by an average of 15% to 30%!



Smart Controllers Automatically Adjust Sprinkler Schedule

Once a smart controller is properly installed, the controller will automatically regulate your sprinkler system. This means that you will no longer have to adjust your sprinkler times and duration for seasonal changes and will still have a healthy beautiful lawn! Watering plants with the correct amount of water that is required by the plant, is the healthiest way to grow plants.

Smart Controllers Use Weather Stations or Soil Moisture Sensors

Some smart controllers use weather data and local sensors to manage the property's sprinklers. These types of controllers receive data from either sensors and/or weather stations and then turn the sprinklers on or off based on these weather conditions. These controllers can also turn the sprinklers off in the event of rain, high winds or low temperatures.

Other smart controllers use soil moisture probes that measure how much water is in the soil. As you water your landscape, imagine that there is a reservoir of water under the ground and you are filling it up. The soil moisture probe will measure how full that reservoir is. Once the reservoir level drops below a certain level the probe will turn the sprinklers on and re-fill the soil storage reservoir. These types of smart controllers can also turn off sprinklers during rain events.



Smart Controllers Help Save and Maintain Healthy Landscapes

Plants only require a certain amount of water to maintain health. Too much water, can actually damage your grass. Overwatering promotes fungal growth and insect activity. A smart controller can eliminate over watering.

Smart Controllers Cost

Smart controllers can cost anywhere from \$100 to several thousand dollars, seeming to be an expensive investment. However, when you consider what you are saving in both monthly water charges and water, a smart controller can have a fairly fast payback time frame.

Companies that Make Smart Controllers

- Acclima
- Accurate Weather Set
- Accuwater
- Alex-tronics
- Aqua Conserve
- Baseline
- Calsense
- Dynamax
- ET Water Systems
- Hunter
- Hydropoint-Weather Trak
- HydroEarth
- Irrisoft-Weather Reach
- Irritrol
- Irrrometer
- Rain Bird
- Rain Master Irrigation System
- Signature Controls
- Toro
- WCS
- Hydrosaver
- Water 2 Save
- Weather Set
- Weathermatic

DWRe does not endorse any product.

Remember if we each save a little we'll all save a lot!

See www.slowtheflow.org for more water wise landscaping tips.

Salt Lake City Ordinance regulates what can be planted in park strips in order to protect public safety, provide access for utilities, and maintain an aesthetic standard for our community. The rules are pretty simple, and for more information, visit our web site at www.slcsaveh20.com. By following the guidelines, you can make our streets beautiful and help ensure the safety of kids and pedestrians.

- 33 percent of the space must contain plants. Of course, you can plant more!
- Groundcovers and continuous planting should be no more than 18 inches tall.
- Individual plants used as accents or specimens may be 36 inches tall, as long as they don't block site lines from the roadway or driveway.
- The use of concrete or mortar is prohibited in park strips that are wider than 24 inches or have existing trees.
- Plants with thorns or barbs are prohibited.



Additional Plants

<p><i>Arabis caucasica</i> Rockcress Sun 4-9" high x 12" wide Spring bloom</p>	<p><i>Helianthemum nummularium</i> Rockrose Sun to part shade 6" high x 18" wide Late spring bloom</p>
<p><i>Aubrieta deltoides</i> False Rockcress Sun 4-9" high x 12" wide Spring bloom</p>	<p><i>Lavandula x intermedia</i> Hyb. Lavender Sun 30" high x 24" wide Summer bloom</p>
<p><i>Juniperus ssp.</i> Juniper Sun 8-24" high x 3-8" wide Evergreen</p>	<p><i>Rhus aromatica</i> 'Gro-low' Gro-low Sumac Sun to shade 2' high x 5' wide Fall color</p>
<p><i>Dianthus ssp.</i> Cottage Pinks Sun 6-12" high x 8-24" wide Early summer bloom</p>	<p><i>Santolina ssp.</i> Lavender Cotton Sun 18" high x 36" wide Summer</p>
<p><i>Veronica liwanensis</i> Turkish Speedwell Sun to part shade 2" high x 18" wide Early summer</p>	<p><i>Zauschneria arizonica</i> Hummingbird Trumpet Sun 3' high x 2' wide Late summer</p>



Salt Lake City
Department of Public Utilities

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Salt Lake City
Department of Public Utilities



FROM
TO
Zero
Xeriscape

A GUIDE TO
PLANTING PARK STRIPS



Create a beautiful, water-wise park strip.

It's the garden space we love to hate—the park strip—that little strip of soil between the sidewalk and the street. Too hot, too full of tree roots, too narrow, and worst of all, too hard to water efficiently.



But with just a little planting know-how and following some common-sense guidelines, this space can be transformed into a water-wise oasis of color and texture.

Perennials For the Park Strip



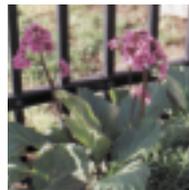
Cerastium tomentosum
Snow-in-Summer
Sun
4" high x 20" wide
Spring bloom



Thymus ssp.
Thyme
Sun
3" high x 24" wide
Early summer bloom



Antennaria rosea
Pink Pussytoes
Sun to part shade
2" high x 15" wide
Early summer



Bergenia cordifolia
Heartleaf Pig-squeak
Part to full shade
12" high x 18" wide
Early spring bloom



Phlox subulata
Moss Phlox
Sun
4" high x 24" wide
Spring bloom



Lavandula angustifolia
English Lavender
Sun
15-24" high x 15-24" wide
Summer bloom



Coreopsis grandiflora
Perennial Tickseed
Sun to part shade
12-24" high x 18-24" wide
Spring bloom



Festuca ovina glauca
Dwarf Blue Fescue
Sun to part shade
8-24" high x 20" wide
Evergreen



Anacyclus dupressus
Mt. Atlas Daisy
Sun
4" high x 12" wide
Early summer bloom



Corydalis lutea
Golden Corydalis
Part to full shade
12" high x 12" wide
Spring bloom



Sedum spectabilis
'Autumn Joy'
Autumn Joy Sedum
Sun
18" high x 24" wide
Fall



Geranium ssp.
Cranesbill
Sun to part shade
18-24" high x 24" wide
Spring bloom

1. Measure the site.

The square footage is determined by multiplying the strip depth by its length.

2. Determine site needs.

Is the park strip in sun or shade; for how long; and for what time of day? Knowing this will help in selecting the right plants for the space.

3. Make a plan.

City ordinance requires that 33 percent of a park strip contains plants, but the calculation is based on expected size after a three-year establishment period.

4. Select the plants.

Pick plants that are appropriate for your site: ones that won't be too tall, too wide, get the right sun, and not need a lot of water.

5. Prepare the soil.

Many plants need soil rich in organic material, and you can provide it by digging in compost before you plant. However, native plants want soil low in fertility and quick draining.

6. Plant!

After removing plants from their containers, rough up the root ball so the roots aren't in a tight ball. Place plants so that the top of the root ball is above the existing grade by one inch (this ensures good drainage).



7. Water.

Even water-wise plants need time to establish. Use a screwdriver inserted into the soil near the root ball to determine if the plants need water. If the screwdriver goes in easily, the roots have enough water.

8. Mulch.

To keep the soil moist and cool and to reduce weeds, place 3 to 4 inches of compost, bark, or fine gravel over the strip, taking care to not bury the plants or the water meter.

PHOTOS: STEPHANIE DUER

APPENDIX B

RESOLUTION AMENDING THE SALEM CITY WATER CONSERVATION PLAN

APPENDIX C

PUBLIC MEETING NOTIFICATION

APPENDIX D

PUBLIC MEETING MINUTES

APPENDIX E

SALEM CITY WATER RATES