

2014

South Jordan City Water Conservation Plan



Rick Maloy, Water Conservation Coordinator
South Jordan City
10/30/2014

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SECTION 1

1. EXECUTIVE SUMMARY AND INTRODUCTION

The South Jordan City 2014 Water Conservation Plan has been prepared to comply with the Utah Water Conservation Plan Act of 1998 amended in 2004 with House Bill 71 Section 73-10-32 (Appendix A). The act requires water conservancy districts and water retailers to file a water conservation plan with the Utah Board of Water Resources and ensure that it is updated every five years. This update outlines South Jordan City's current water conservation efforts and presents its current conservation goals.

As one of the fastest growing Cities in Utah, South Jordan City is increasingly aware of the need to maintain a supply of water to its current and future residents. South Jordan City's staff and City Council are committed to decreasing the City's water use and meeting the State's goal of 25% reduction of gallons per capita per day (gpcd) by the year 2025. Under the direction of the City Council and City Manager, a water conservation coordinator has been funded and hired. This dedicated position will significantly help the city work towards and achieve specific water conservation goals.

SECTION 2

2. DESCRIPTION OF SOUTH JORDAN CITY AND ITS WATER SYSTEM

South Jordan City is located at the south end of the Salt Lake Valley and is home to approximately 62,227 residents. South Jordan City has always made it a top priority to provide clean, safe, drinking water to its residents and businesses. The City maintains its own water system which includes approximately 17,927 residential connections and 548 commercial connections. The City also maintains 232 city owned connections. All of the drinking water provided throughout the City is purchased from Jordan Valley Water Conservancy District (JVWCD), totaling approximately 13,962 acre-feet in 2013. Currently the city has 8 storage tanks with a total of 33.6 million gallons of storage capacity. The City also has 16 metered connections with JVWCD that feed into 7 separate pressure zones.

The city currently provides about 25% of its residents with secondary water for the purpose of irrigation, which accounted for approximately 5,366.76 acre-feet in 2013. The secondary water system mainly consists of a gravity fed system with a few exceptions where a pressurized system is provided. The City's secondary system draws water from five open canals listed in Table 2.1, and owns a total of 5,771 shares with a potential use of 15,944.62 acre-feet. The City is committed to providing quality secondary water to those residents and businesses that currently have access. The City continues to evaluate each new subdivision to determine the cost and ability to use secondary water. Currently the City does not meter any secondary connections due to the design of the City's secondary system.

Canal	Shares	Acre-Feet	Average Demand Acre-Feet
Welby Jacob	2,333	2,333	1,376
Utah Lake	680	3,474.8	1,738
Utah Salt Lake	737	3,382.8	522
South Jordan	718	3,546.9	1,027
Beckstead	243	993.9	331

Table 2.1

SECTION 3

3. CURRENT WATER USE AND FUTURE NEEDS

3.1. *CURRENT WATER USE*

Using information from last year's population and culinary water use South Jordan City's gallons per capita per day (gpcd) is approximately 206.84 gpcd. This is compared to the State average of 260 gpcd and 184 gpcd nationally. If South Jordan's secondary water is added the total use changes to 292.4 gpcd. However, this is a poor reflection of total use since approximately one-fourth of the City uses secondary water. The City's secondary water use is also difficult to calculate due to the lack of metering. The numbers given reflect only a maximum estimate of use for areas with access to secondary water not accounting for those who do not use, or use little, secondary water. For the purposes of providing the most accurate numbers and information for this report, the focus will be culinary water numbers. Please refer to figure 3.1 for total monthly water use in acre-feet.

The City has made good progress in achieving its goals set in 2009 and is on schedule to meet the State's goal of 25% reduction in gpcd by 2025. However, while the City has made progress, we must continue to make every effort possible to continue to reduce its water use while still providing adequate water for residents. Figure 3.2 shows historic use from 2000 to 2013 as well as the City's goal of 25% reduction.

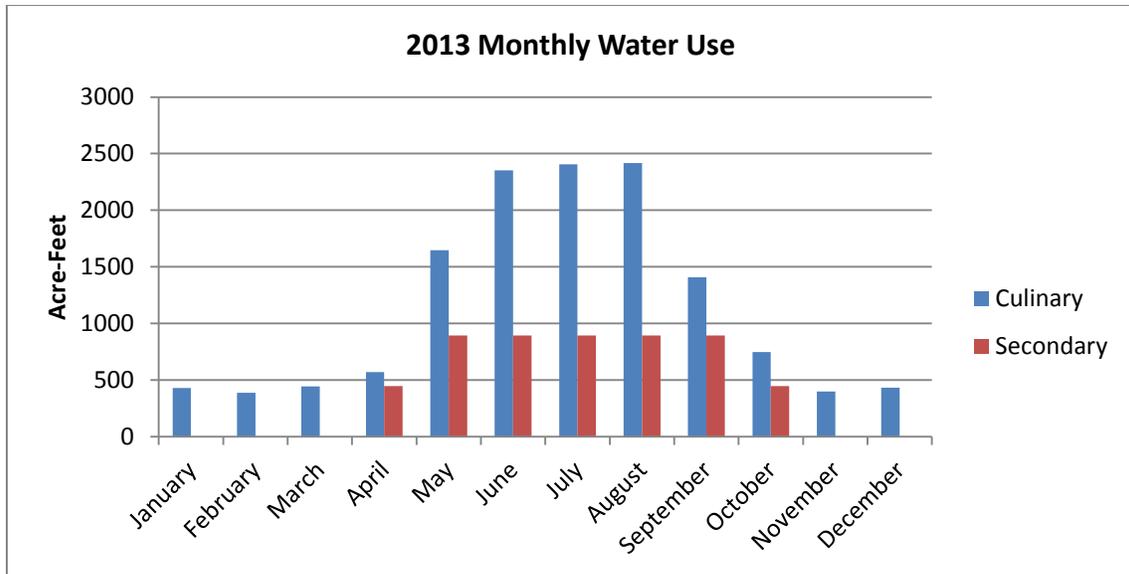


Figure 3.1

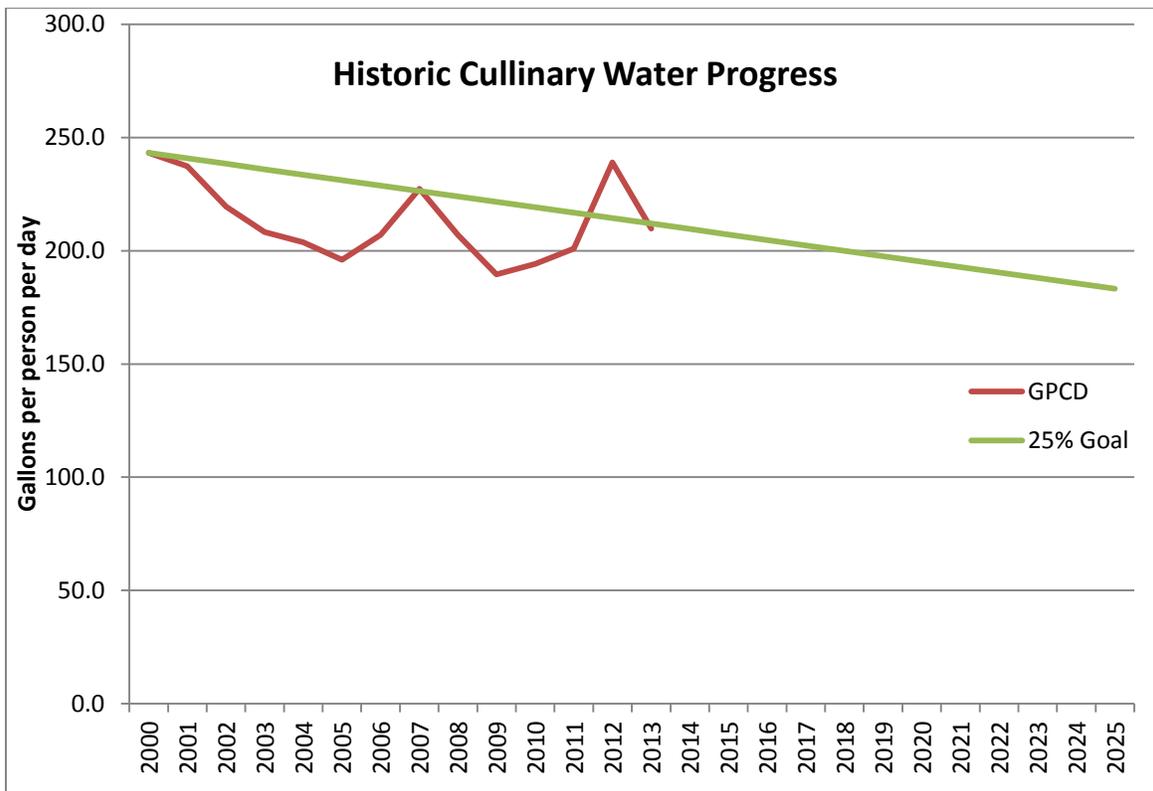


Figure 3.2

3.2. FUTURE WATER NEEDS

South Jordan City is one of the fastest growing Cities in the State and is projected to be built out within the next 20 to 25 years. Best projections with sustained growth put the population at 95,000 residents in about 15 years with about 90% of the City built out. See figure 3.3 for population growth projection. Nearly doubling the City’s current population translates into expanding its water infrastructure and the need to ensure the City continues to have access to clean, safe, drinking water. The City recognizes that population growth will have an impact on water supply and will incur cost associated with additional supply and maintenance. The City welcomes growth and the expansion of services yet through careful and constant conservation the City can delay or even spare costly water projects. South Jordan City has had an annual average population growth of 5.5% and looks to reduce its water use by 25% based on gpcd from year 2000. If the City is to meet this goal it could save over 2 billion gallons total by the year 2025. With growth of the City, JWCD also must ensure the ability to meet future demand. Conservation efforts can also delay the cost of adding additional water collection from more costly sources, in turn allowing the City to keep rates lower.

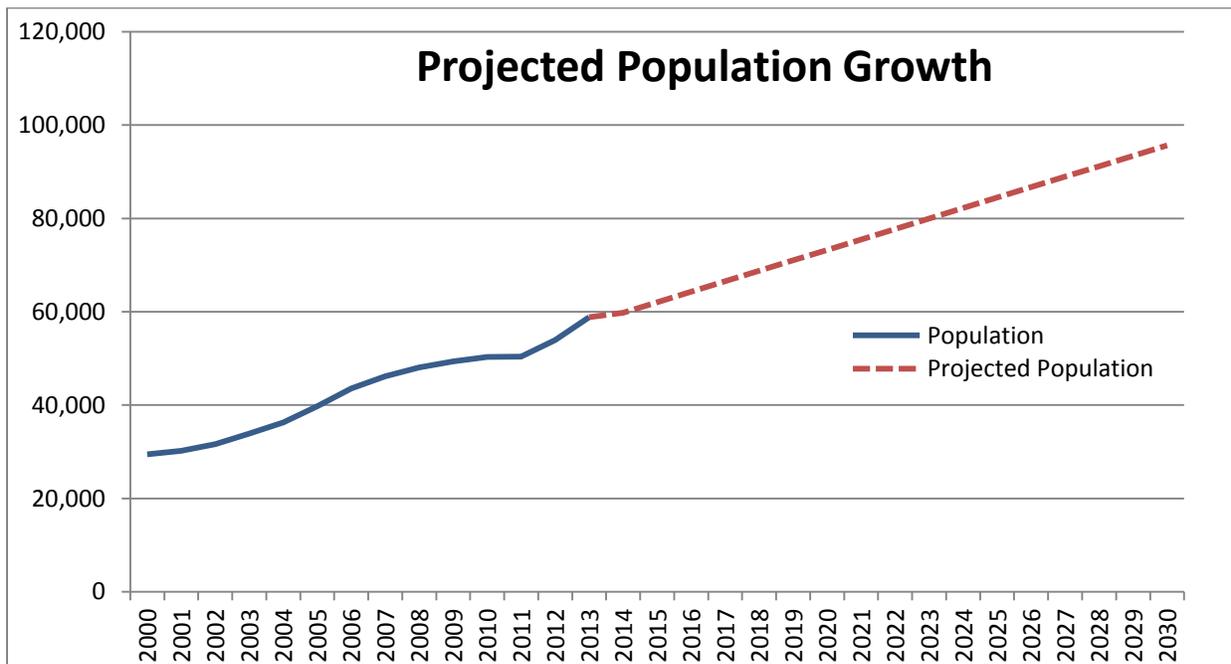


Figure 3.3

SECTION 4

4. CURRENT WATER ISSUES, CONSERVATION MEASURES, AND GOALS

4.1. *Identified Water Conservation Problems and Deficiencies*

South Jordan City has recently reviewed current water conservation practices and has identified some deficiencies and prioritized them to ensure that they are addressed. Some deficiencies are currently being met and a resolution is underway. Following is a list of deficiencies and current or future actions to solve the issue:

- *Water Conservation Program* - The City has had minimal involvement with its water conservation program in the past. While there has been some improvement in the reduction of water use the City has recognized the need for further action. Recently the City has employed a full time water conservation coordinator to address the future an enhanced conservation program and promote the City's water conservation goals.
- *Water Metering and Billing* – The City has an updated metering and billing system, however it is missing features that provide customers with simple conservation information. The City is working on a new system that will provide residents with an online portal in which residents can view real time water consumption data and better understand water use. The utility bill will also be updated featuring new easy-to-read information that will assist in water conservation efforts.
- *Water Conservation Ordinances* - The City's current water efficient landscaping ordinance focuses on commercial properties (Chapter 16.30) (See appendix B.). The City will explore the potential of extending ordinances to affect residential users and ultimately impact residential landscape water use.
- *Public Outreach and Program Use* – Many City residents do not know about the water conservation programs that are offered through the City. Due to limited communication, the City has been unable to reach a majority of the residents resulting in a low impact on the residents and their ability to change water use

habits. The City has focused on fixing this issue with a full time water conservation coordinator and providing funding to reach more residents to make them aware of programs and education offered. As part of this outreach effort, the City is also implementing a conservation website.

- *Secondary Metering* - Lack of meters on the City's secondary system is also a concern. Without accurate secondary measurements, the City must rely on engineered estimates that may not reflect the actual use. Also, without metering the secondary system it is difficult to promote water conservation or hold users accountable for use. Effective metering on the secondary system cannot currently be implemented due to the current gravity fed system.

4.2. *Conservation Goal and Strategic Objectives*

With consideration of the efforts being made and the work that will be implemented, South Jordan City has identified the following goal along with strategic objectives:

Goal – Reduce the City's per capita water use by at least 5% in the next five years. The water-use rate is currently 206.84 gallons of treated water per capita per day (gpcd). Our goal is to lower this to 196.5 gpcd. This would result in a savings of nearly 382 million gallons of water by 2020.

Strategic Objective 1 – Operate an effective water conservation program. Through the City's commitment to reduce water use it is increasingly important to maintain a water conservation program. The water conservation program is designed to educate and promote water conservation along with the implementation of effective practices for the reduction of water. Some of these include the changing of City policies and ordinances, a program for rebates on devices that cut water waste, and insuring that resources are devoted to school education.

Strategic Objective 2 – Implement and maintain a web portal for water users to track real time water use and receive electronic notifications. With the upgrade to a fixed metering network the City is preparing to offer a web

portal where its water users can view their personal water use at any time. This will allow residents to better track water waste and help conserve. It will also allow for users to compare their usage to similar water customers and set personal water use goals. This upgrade to the system will also allow the City and residents with a better system for leak detection, allowing better opportunities to quickly stop leaks and save more water.

Strategic Objective 3 – Maintain the desired look and appeal of South Jordan City while using the best practices for water conservation. The City prides itself in its aesthetic appeal and much of that is a result of green parks and lush trees. The City intends to keep that desired look, but also intends to reduce water use throughout its parks and green space. This may be accomplished by better watering practices, replacement of low efficient irrigation devices, and use of drought tolerant plants throughout City parks and green spaces. The City is currently the highest water user in the City and recognizes the need to conserve and be an example to the residents.

Strategic Objective 4 – Water conservation program marketing. The City is working to provide a comprehensive website focused on educating residents on water conservation. This website will be used to give residents the most up to date information and inform residents about the programs that are offered. With one of the highest causes for water waste being overwatering of grass the City recognizes the need for educating the residents on best practices and the need for conservation. The city is looking into all available options for promoting its conservation program so that it may educate residents and reduce water waste and unnecessary use. The City will also have booths at different community and City events to further promote water the conservation program.

SECTION 5

5. CURRENT WATER CONSERVATION PRACTICES

South Jordan City is committed to reducing water use and has made good progress in its goal of 25% overall reduction. The City has already implemented some effective practices and will continue programs that assist the goal to conserve water. Many of the following practices address aspects of the problems previously identified and the goals listed. These practices plan to further address issues and add to the reduction of water use within the City.

- 5.1. *Water Conservation Program* – South Jordan City has developed a water conservation program and in 2014 hired a water conservation coordinator to help promote conservation throughout the City. The current program is aimed at educating residents and implementing practices that conserve water.
- 5.2. *Tiered Water Rate Structure* - The City currently implements a tiered water rate structure that is designed to promote water conservation (Table 6.1). The City Council has adopted the rate structure in 2012 after a 5 year rate study was conducted. The City will continue to conduct rate studies by a third party every five years to determine if the rates are meeting the City's needs and promoting conservation.
- 5.3. *Public Involvement and Education* – South Jordan City currently offers a wide variety of opportunities to involve and educate its residents about water conservation. The City has offered education and information regarding water conservation through its website and print publications. Currently the City offers two irrigation workshops a year, one in the spring and another in the fall. These workshops are aimed at providing helpful information about irrigation practices and sprinkler systems, including ways to reduce water use. The workshop also provides an opportunity to discuss backflow prevention and maintenance. The City's Water Department also takes time every year as part of National Water Week to visit elementary schools within South Jordan City to help educate fourth graders about the water cycle and water conservation. This program has been a very well

received by parents, teachers, and students. Also as part of water week South Jordan City offers an open house for residents to learn about the water system and how it is maintained.

- 5.4. *Water Conservation Ordinances* – South Jordan City adopted an ordinance for water efficient landscaping on June 18, 2002. The goal of this ordinance is to provide policies for commercial, industrial, multi-family and single family residential developments. The City’s ordinance is found under South Jordan City Code: Chapter 16.30 Water efficient landscaping (Appendix B). The ordinances found in Chapter 16.30 are aimed at ensuring best practices in regards to landscaping and outdoor water use.
- 5.5. *Water Efficient Rebates* – South Jordan City currently offers three rebates as part of a grant program offered through JWCD. The rebates offer an opportunity to help cover or offset the cost of fixtures and plants that will save water. One of the most popular rebates is the Toilet Replacement Rebate. This rebate allows residents to receive \$100.00 for the installation of a High Efficient Toilet (HET). The City also offers a \$100.00 rebate for the replacement of indoor plumbing fixtures to a water-sense fixture such as a low flow showerhead or faucet. The third rebate offered is \$300.00 for the installation of water-wise plants and the use of an efficient watering system. All of the rebates offered by South Jordan City are funded by a grant program through JWCD and are only available as funds are available.
- 5.6. *Water metering* – South Jordan City currently has a complete metering system on all culinary connections including city owned properties. Maintenance staff also work constantly to ensure that meters work and the most accurate data is being provided. Through dedicated metering efforts the City has also lowered its unaccounted water to below 5%. Currently South Jordan City does not meter its secondary system.
- 5.7. *SCADA system* – South Jordan City uses a Supervisory Control and Data Acquisition (SCADA) system to monitor the current and historic data throughout the water system. The SCADA system is used to monitor daily trends to avoid costly peak demand use. It is also used to help maintain security of the system, sending alerts for possible leaks, and breaches in security.

- 5.8. *Promoting JWCD programs and classes* – Through the City’s website, South Jordan City promotes programs such as commercial and residential water audits and other programs provided by JWCD. The City also promotes JWCD’s conservation garden park where residents can learn better landscape practices and drought tolerant planting.
- 5.9. *Backflow program* – The City has implemented a backflow prevention program to ensure the residents have access to clean, safe, drinking water. The City’s backflow technician performs hazard assessments on all city connections, both residential and commercial, as well as new construction. While designed to protect the water supply this program is also used to ensure water is not wasted due to contamination.

SECTION 6

6. CURRENT WATER RATE STRUCTURE

South Jordan City has created a water rate structure that addresses the costs of maintaining the water system at a fair value while promoting water conservation through a tiered water rate structure (Table 6.1). Due to the ever changing political, economic, and social environments, future changes will likely be needed. These changes may include a steeper tier to further promote conservation or increase to meet demand and growth.

Culinary Water Rates

Residential Rate	Area A	Area B	Area C
Base Rate	\$34.88	\$34.88	\$34.88
0-10,000 gal.	\$1.55 per 1000 gal.	\$1.64 per 1000 gal.	\$1.71 per 1000 gal.
10,001-28,000 gal.	\$1.77 per 1000 gal.	\$1.84 per 1000 gal.	\$1.93 per 1000 gal.
28,001-48,000 gal.	\$1.96 per 1000 gal.	\$2.05 per 1000 gal.	\$2.13 per 1000 gal.
48,001 gal. and up	\$2.15 per 1000 gal.	\$2.25 per 1000 gal.	\$2.36 per 1000 gal.

HOA Landscape Rate	Area A	Area B	Area C
Base Rate	\$47.64	\$47.64	\$47.64
0-10,000 gal.	\$1.63 per 1000 gal.	\$1.70 per 1000 gal.	\$1.76 per 1000 gal.
10,001-28,000 gal.	\$1.80 per 1000 gal.	\$1.88 per 1000 gal.	\$1.97 per 1000 gal.
28,001-48,000 gal.	\$1.98 per 1000 gal.	\$2.07 per 1000 gal.	\$2.17 per 1000 gal.
48,001-75,000 gal.	\$2.16 per 1000 gal.	\$2.26 per 1000 gal.	\$2.37 per 1000 gal.
75,001-100,000 gal.	\$2.38 per 1000 gal.	\$2.50 per 1000 gal.	\$2.60 per 1000 gal.
100,001 gal. and up	\$2.63 per 1000 gal.	\$2.77 per 1000 gal.	\$2.90 per 1000 gal.

Commercial Rate	Area A	Area B	Area C
Base Rate	\$73.98	\$73.98	\$73.98
over 8,000 gal.	\$1.84 per 1000 gal.	\$1.93 per 1000 gal.	\$2.00 per 1000 gal.
over 25,000 gal.	\$1.99 per 1000 gal.	\$2.10 per 1000 gal.	\$2.19 per 1000 gal.
over 50,000 gal.	\$2.17 per 1000 gal.	\$2.28 per 1000 gal.	\$2.38 per 1000 gal.
over 75,000 gal.	\$2.40 per 1000 gal.	\$2.51 per 1000 gal.	\$2.62 per 1000 gal.
over 100,000 gal.	\$2.66 per 1000 gal.	\$2.79 per 1000 gal.	\$2.91 per 1000 gal.

Table 6.1

SECTION 7

7. ADDITIONAL CONSERVATION MEASURES

As South Jordan City moves closer toward the deadline of the State's goal of 25% reduction, it is important that we continue our conservation efforts and focus on implementing best practices. Some of these plans include a water conservation website along with water audits to better educate the residents and customers. Through a dedicated effort of City Council and staff, these efforts will be put into action and will ensure getting the City closer to its goal of 25% reduction.

- 7.1. *Water Conservation Website* – The City has recently indicated the need for a water conservation website to inform and educate residents. The website will offer tools and information that can reduce residential water use and give up-to-date information on programs the City offers. It is also a place to find the City's water conservation rebates and participate in discussions that promote water conservation.
- 7.2. *Water Conservation Ordinances* – The City currently has water conservation ordinances in place (Appendix B). However, the City is looking at updating ordinances to further promote water savings and reduce waste.
- 7.3. *Rain Water Collection* – Rain water collection is gaining popularity and was recently legalized in the State of Utah with Senate Bill 32 in 2010. Many people still believe rain water harvesting is illegal, and the City is looking at ways to change this and promote rain water harvesting. The City is committed to ensuring that residents are saving the most water possible and utilizing natural resources.
- 7.4. *System Water Audits and Leak Detection* – The City is constantly improving its water system. One of the updates is better monitoring of its system and alerting staff to potential leaks and problems. The City has an active replacement and maintenance plan to ensure that the City has the most up to date water system. By conducting system audits, the City can better pinpoint areas that need repair or replacement to avoid costly leaks and property damage.

- 7.5. *Fixed Meter Network* – The City is implementing a plan to replace meters and update the software to a fixed meter network. The fixed network will provide City staff and residents with real time water use. This upgrade will better allow residents to see their water use and set goals for conservation. It will also alert residents and City staff of potential leaks and high water use allowing everyone to better manage water use. While there is a high cost associated with the conversion to a fixed network, it is estimated it will pay for itself within the next 15 years.
- 7.6. *Residential Water Audits* – The City is looking at performing residential water audits. Trained City staff will perform a detailed audit for residents. The audit may include landscape efficiency and recommendations for an effective irrigation program. Also, City staff can perform leak checks inside the home to help residents cut indoor water use. Through this program the City hopes to educate its residents on ways to save water and make them aware of programs and rebates.
- 7.7. *Target Highest Water Users* – The City will work to target the highest water users both commercial and residential to offer programs and comprehensive advice to reduce water use. This will allow the City to focus its efforts and resources on a small concentrated population that will have the potential to have the greatest impact.
- 7.8. *Commercial Water Conservation Program* – The City is exploring the possibility of commercial water audits to ensure large water users have the tools available to save water and cut costs. Also, the City may identify older commercial properties to see where updated plumbing fixtures may be helpful in reducing water use and offer programs for replacement.
- 7.9. *City Owned Landscape Conversion* – It is important to the City to maintain a certain aesthetic. The City will also explore other water conscious ways to landscape park strips and green spaces with something other than grass. By replacing grass with other types of ground cover it may reduce water use and better regulate water waste in difficult to irrigate areas.
- 7.10. *Smart Controllers* – The City is moving toward a “central control” system that will allow remote control systems and better management of its properties. The City is also looking at offering rebates for residential use of smart controllers that will

offer better control and weather monitoring to reduce outdoor water use. In the past, the City has offered rebates for smart controllers with low success; however there has recently been an increase in more usable technology through a new program where only proven controllers will be approved. The City anticipates a much better result for this program. Also by incorporating education of smart controllers into the residential audit program it is anticipated there will be a stronger participation in the use of smart controller technology.

- 7.11. *School Education Programs for Teachers and Students* – The City currently offers some education to fourth graders as part of National Water Week, it hoping to provide more education materials to teachers and students. Through education programs in schools there is a greater opportunity to teach good practices that can then be taken home and shared with parents. The City will also be offering a new scholarship program to high school seniors to help promote water conservation and inspire more to think about the need to conserve water.

SECTION 8

8. COST ANALYSIS

8.1. *Water Conservation Program* – As South Jordan City works toward its goal of reducing water use, an integral piece is its water conservation program. While the program facilitates many different aspects the cost under this section directly reflect the cost of a full time coordinator and costs related to maintaining and facilitating a city wide conservation program. This program is new to the City and the costs reflected are projections and the intended impact both through water savings and costs.

The City currently purchases 100% of its water from JWCD through a rate plan that breaks cost down into 5 areas or zones. Each zone has a pre-determined cost associated with cost of delivery and is more expensive the higher the elevation and further west the meter is located. Please refer to Table 8.1 for a breakdown of cost.

Zone	Cost per Acre Foot
Zone A	\$473.83
Zone B North	\$494.04
Zone B South	\$517.99
Zone C	\$535.23
Zone D	\$566.31

Table 8.1

The result of implementing a water conservation program is seen across many areas all of which can impact water use throughout the City. Shown in table 8.2 is a breakdown of costs associated with the City's purchased water from JWCD and the potential savings of meeting our goal of 25% reduction of GPCD. The water savings from now until 2025 could be 10% GPCD and may save nearly 10,000 acre feet of water if the City were to meet this goal.

The City's program overall has minimal costs and is comprised mostly of the salary of a full time Water Conservation Coordinator estimated at \$77,000 per year. Other

costs included in the program are educational materials, promotional items, event costs, and water audits.

Year	Population	Acre Feet Projected Use	Total Projected Water Cost	25% Goal Acre Feet	Total Cost With 25% Reduction
2013	58,839	13632.42	\$7,233,129.82	13,632.42	\$7,233,129.82
2014	62,227	14,417.39	\$7,649,621.13	14,273.10	\$7,573,065.74
2015	63,649	14,746.85	\$7,824,428.87	14,453.11	\$7,668,575.81
2016	64,287	14,894.66	\$7,902,852.30	14,451.79	\$7,667,875.79
2017	66,528	15,413.89	\$8,178,345.31	14,805.80	\$7,855,703.18
2018	68,769	15,933.11	\$8,453,838.32	15,145.86	\$8,036,132.71
2019	71,010	16,452.34	\$8,729,331.33	15,477.16	\$8,211,918.83
2020	73,251	13633.42	\$9,004,824.34	15,798.23	\$8,382,270.73
2021	75,492	17,490.79	\$9,280,317.35	16,109.05	\$8,547,188.43
2022	77,733	18,010.02	\$9,555,810.36	16,409.63	\$8,706,671.92
2023	79,974	18,529.25	\$9,831,303.37	16,699.97	\$8,860,721.21
2024	82,215	19,048.48	\$10,106,796.38	16,980.07	\$9,009,336.28
2025	84,456	19,567.70	\$10,382,289.39	17,249.93	\$9,152,517.15
	Totals:	211770.3202	\$114,132,888.26	201486.1289	\$106,905,107.60

Table 8.2

8.2. *Fixed Meter Network* – The City is currently working on the installation and upgrade of a fixed meter network that will allow real time water use data. With this system the City will also have access to programming that will greatly increase its ability to detect leaks and target water use. This system and program will also allow users to view their personal water use, set goals, and use this information to conserve water.

The City has currently approved the installation of one third of the city to the fixed network system with an initial cost of \$900,000. The cost to this program while high saves the city money in not adding personnel and equipment as well as cost savings for leak detection and conservation. The City intends to add the other two thirds to the fixed network over the next five years with an additional 1.7 million dollars in cost. This would bring the total cost for a city wide fixed network to nearly 2.6 million dollars. Using conservative numbers it is estimated that savings incurred

from the system by not hiring additional personnel and water savings would repay the cost of the system within the next 15 years.

8.3. *Rebate Programs* – The City currently offers three rebate programs and plans to continue offering rebate programs in the future. The City’s rebate programs are a good way to ensure direct water savings by those who participate. Every resident who replaces a high use toilet (ex. 3 gpf) with a high efficient toilet (1.28 gpf or less) is guaranteed to save water. The cost of these rebate programs can be very costly but has a high payoff since there is little change to lifestyle by using high efficient devices. The city currently uses grant funds from JWCD as part of their member agency grant program to cover the cost of the City’s rebate programs. JWCD uses an 18 month fiscal year for the grants and the city plans to use approximately \$35,000 toward its rebate programs through December 2015. An additional \$70,000 is projected to be spent within the next five years on water conservation rebates. The City will continue to look at the cost benefit of each rebate and track water use for those who participate to ensure that the rebates being offered meet the goals of South Jordan City and the water conservation program. Future rebates being considered are for smart controllers and rain barrels for rain water harvesting.

8.4. *Water Conservation Website* – The City is currently developing a water conservation website in an effort to better educate its residents. Included in the design of a website is the design of a water conservation logo. This logo will be used to support the City’s water conservation program and promote its website. The City is planning to spend between \$15,000 and \$20,000 for the website and logo. \$14,000 has been awarded to the City by JWCD as part of their member agency grant program for this purpose. It is also estimated that a yearly maintenance cost would be around \$3,000 to insure the most up to date and user friendly website. In past years the City has had minimal participation in its programs such as its rebate

program and workshops. It hopes that with the addition of the website the City can expand its programs and ensure more water savings.

8.5. *Future City Landscape and City Landscape Conversion* – As the City continues to grow it is important that new city-owned green space is made with water conservation in mind. The City takes pride in its green spaces and park strips but is also looking at ways to reduce water use and waste. The City will continue to look at alternatives to grass, particularly in park strips. The City will also look at updating current ordinances to further promote the use of water-wise plants or ground cover in park strips. While the City does not have a current plan to remove or replace existing grass within park strips we are however looking at costs associated with such programs. The City currently has 340 acres of parks and 24 acres of park strips and uses a total of 1.3 million gallons of water each year.

SECTION 9

9. IMPLEMENTING AND UPDATING THE WATER CONSERVATION PLAN

South Jordan City's Council and staff are committed to ensuring the outlined goals are reached and that appropriate action will be taken. It is understood that the Water Conservation Coordinator will also place a reasonable timeline for each project to insure that our goals are met within the time presented. It is also understood that through authorization of the City Council and under the guidance of the City Manager and their staff funding will be provided for the measures provided in this plan.

It is also recommended that the Water Conservation Coordinator make annual reports on the progress of the water conservation plan and the goals outlined within to the City Council. The water conservation coordinator will also continue to update the plan to insure that it meets changing conditions and needs within the City. This plan will also be updated and resubmitted to the Utah Division of Water Resources in December 2019, as required by legislative House Bill 153. The ordaining ordinance for this water conservation plan is attached as Appendix C.

This water conservation plan was placed on the December 16, 2014 strategic planning agenda and adopted by the city council. The city council is comprised of:

- David L. Alvord, Mayor
- Mark Seethaler, Council Member District 1
- Chuck Newton, Council Member District 2
- Donald J. Shelton, Council Member District 3
- Steve Barnes, Council Member District 4
- Christopher J. Rogers, Council Member District 5

APPENDIX A - House Bill 71

WATER CONSERVATION PLANS

2004 GENERAL SESSION

STATE OF UTAH

Sponsor: Judy Ann Buffmire

Ralph Becker
Duane E. Bourdeaux
Neil A. Hansen

Rosalind J. McGee
Carol Spackman Moss

David Ure
Stephen H. Urquhart

LONG TITLE

General Description:

This bill amends certain provisions related to water conservation plans.

Highlighted Provisions:

This bill:

- ▶ provides for publishing of a report identifying entities who do not have a current water conservation plan;
- ▶ requires that water conservation plans contain existing and proposed water conservation measures;
- ▶ requires that water conservation plans contain a description of the extent to which a retail provider will use certain measures to achieve its conservation goals;
- ▶ requires that water conservation plans contain a clearly stated water use reduction goal and implementation plan for each conservation measure, including a timeline for action and an evaluation process to measure progress; and
- ▶ requires that the Board of Water Resources' report be presented to the Natural Resources, Agriculture, and Environment Interim Committee at its November 2004 meeting.

Monies Appropriated in this Bill:

None

Other Special Clauses:

None

Utah Code Sections Affected:

AMENDS:

73-10-32, as last amended by Chapter 119, Laws of Utah 1999

Be it enacted by the Legislature of the state of Utah:

Section 1. Section 73-10-32 is amended to read:

73-10-32. Definitions -- Water conservation plan required.

(1) As used in this section:

(a) "Board" means the Board of Water Resources created under Section 73-10-1.5.

(b) "Division" means the Division of Water Resources created under Section 73-10-18.

(c) "Retail" means the level of distribution of culinary water that supplies culinary water directly to the end user.

(d) "Retail water provider" means ~~[a person who]~~ an entity which:

(i) supplies culinary water to end users; and

(ii) has more than 500 service connections.

(e) "Water conservancy district" means an entity formed under Title 17A, Chapter 2, Part 14, Water Conservancy Districts.

~~[(e)-(i)]~~ (f) "Water conservation plan" means a written document that contains [ideas, suggestions, or recommendations as to] existing and proposed water conservation measures describing what [can] will be done by [state and local governments,] retail water providers, water conservancy districts, and the end user of culinary water to help conserve water and limit or reduce its use in the state in terms of per capita consumption so that adequate supplies of water are available for future needs.

~~[(ii)]~~ (2) (a) Each ^{["}water conservation plan^{"]} shall contain ~~[recommendations for water saving measures that may include]:~~

(i) a clearly stated overall water use reduction goal and an implementation plan for each of the water conservation measures it chooses to use, including a timeline for action and an evaluation process to measure progress;

(ii) a requirement that each water conservancy district and retail water provider devote

part of at least one regular meeting every five years of its governing body to a discussion and formal adoption of the water conservation plan, and allow public comment on it;

(iii) a requirement that a notification procedure be implemented that includes the delivery of the water conservation plan to the media and to the governing body of each municipality and county served by the water conservancy district or retail water provider; and

(iv) a copy of the minutes of the meeting and the notification procedure required in Subsections (2)(a)(ii) and (iii) which shall be added as an appendix to the plan.

(b) A water conservation plan may include information regarding:

~~[(A)]~~ (i) the installation and use of water efficient fixtures and appliances, including toilets, shower fixtures, and faucets;

~~[(B)]~~ (ii) residential and commercial landscapes and irrigation that require less water to maintain;

~~[(C)]~~ (iii) more water efficient industrial and commercial processes involving the use of water;

~~[(D)]~~ (iv) water reuse systems, both potable and not potable;

~~[(E)]~~ (v) distribution system leak repair;

~~[(F)]~~ (vi) dissemination of public information regarding more efficient use of water, including public education programs, customer water use audits, and water saving demonstrations;

~~[(G)]~~ (vii) water rate structures designed to encourage more efficient use of water;

~~[(H)]~~ (viii) statutes, ordinances, codes, or regulations designed to encourage more efficient use of water by means such as water efficient fixtures and landscapes;

~~[(I)]~~ (ix) incentives to implement water efficient techniques, including rebates to water users to encourage the implementation of more water efficient measures; and

(x) other measures designed to conserve water.

~~[(J) other measures designed to conserve water.]~~

(c) The Division of Water Resources may be contacted for information and technical resources regarding measures listed in Subsections (2)(b)(i) through (2)(b)(x).

~~[(2)]~~ (3) (a) Before April 1, 1999, each water conservancy district under Title 17A, Chapter 2, Part 14, Water Conservancy Districts, and each retail water provider shall:

(i) (A) prepare ~~[or]~~ and adopt a water conservation plan if one has not already been adopted; or

(B) if the district or provider has already adopted a water conservation plan, review the existing water conservation plan to determine if it should be amended and, if so, amend the water conservation plan; and

(ii) file a copy of the water conservation plan or amended water conservation plan with the division.

(b) Before adopting or amending a water conservation plan, each water conservancy district or retail water provider shall hold a public hearing with reasonable, advance public notice.

~~[(3)]~~ (4) (a) The board shall:

~~[(i) study ways to implement the water conservation plans of the water conservancy districts and the retail water providers;]~~

~~[(ii) develop recommendations on how to implement those plans; and]~~

(i) provide guidelines and technical resources to retail water providers and water conservancy districts to prepare and implement water conservation plans;

(ii) investigate alternative measures designed to conserve water; and

(iii) report [its recommendations] regarding its compliance with the act and impressions of the overall quality of the plans submitted to the Natural Resources, Agriculture, and Environment Interim Committee of the Legislature at its meeting in November [1999] 2004.

~~[(b) The board's report to the Natural Resources, Agriculture, and Environment Interim Committee may include a recommendation:]~~

~~[(i) that each water conservancy district and retail water provider devote part of at least one regular meeting of its governing body to a discussion of the water conservation plan and allow public comment on it;]~~

~~[(ii) to implement a notification procedure that includes the delivery of the water conservation plan to the media and to the governing body of each municipality and county served]~~

by the water conservancy district or retail water provider;]

~~[(iii) that certain eligibility requirements, including the adoption of a water conservation plan, be met before a water conservancy district or retail water provider may receive any state funds for water development;]~~

~~[(iv) for the coordination of conservation and drought management plans, and]~~

~~[(v) regarding any other measure designed to conserve water.]~~

(b) The board shall publish an annual report in a paper of state-wide distribution specifying the retail water providers and water conservancy districts that do not have a current water conservation plan on file with the board at the end of the calendar year.

(5) A water conservancy district or retail water provider may only receive state funds for water development if they comply with the requirements of this act.

~~[(4)] (6) Each water conservancy district and retail water provider specified under Subsection ~~[(2)]~~ (3)(a) shall:~~

~~(a) update its water conservation plan no less frequently than every five years; and~~

~~(b) follow the procedures required under Subsection ~~[(2)]~~ (3) when updating the water conservation plan.~~

~~[(5)] (7) It is the intent of the Legislature that the water conservation plans, amendments to existing water conservation plans, and the [study] studies and [recommendations] report by the board be handled within the existing budgets of the respective entities or agencies.~~

APPENDIX B - Water Efficient Landscaping Ordinance

Chapter 16.30

WATER EFFICIENT LANDSCAPING

16.30.010: PURPOSE:

- A. The city council has found that: 1) water resources are limited and conservation efforts must be implemented to sustain growth, 2) much of the city culinary water resources are used for outdoor purposes, including watering landscaping, and 3) the city desires to promote the design, installation and maintenance of landscapes that are both attractive and water efficient.
- B. The city council has determined that it is in the public interest to conserve the public water resources and to promote water efficient landscaping. The purpose of this chapter is to protect and enhance the community's environmental, economic, recreational and aesthetic resources by promoting efficient use of water in the community's landscaped areas, reducing water waste and establishing a process for design, installation and maintenance of water efficient landscaping throughout the city. (Ord. 2007-01, 1-16-2007)

16.30.020: DEFINITIONS:

The following definitions shall apply to this chapter:

ADMINISTRATIVE STANDARDS: The set of rules, procedures and requirements set forth in a landscaping ordinance associated with making permit application, assembling materials for public review, meeting the requirements of the landscaping ordinance, seeking approvals, enforcement, conducting site inspections and filing reports.

BUBBLER: An irrigation head that delivers water to the root zone by "flooding" the planted area, usually measured in gallons per minute. Bubblers exhibit a trickle, umbrella or short stream pattern.

DRIP EMITTER: A drip irrigation fitting that delivers water slowly at the root zone of the plant, usually measured in gallons per hour.

EVAPOTRANSPIRATION (ET): The quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time, expressed in inches per day, month or year. See also definition of Reference Evapotranspiration Rate Or ETO.

EXTRA DROUGHT TOLERANT PLANT: A plant that can survive without irrigation throughout the year once established, although supplemental water may be desirable during drought periods for improved appearance and disease resistance.

GROUND COVER: Material planted in such a way as to form a continuous cover over the ground that can be maintained at a height not more than twelve inches (12").

HARDSCAPE: Patios, decks and paths, but does not include driveways, parking lots and sidewalks.

IRRIGATED LANDSCAPED AREA: All portions of a development site to be improved with planting and irrigation. Natural open space areas shall not be included in the irrigated landscaped area.

IRRIGATION CONTRACTOR: A person who has been certified by the Irrigation Association to install irrigation systems or as otherwise approved by the public services department.

IRRIGATION DESIGNER: A person who has been certified by the Irrigation Association to prepare irrigation system designs, or a landscape architect or as otherwise approved by the public services department.

IRRIGATION EFFICIENCY: The measurement of the amount of water beneficially applied divided by the total amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system hardware characteristics and management practices.

IRRIGATION PLAN: The plan which shows the components of the irrigation system with water meter size, backflow prevention, rain shutoff device, precipitation rates, flow rate operating pressure for each irrigation zone, and identification of all irrigation equipment.

LANDSCAPE ARCHITECT: A person who holds a certificate to practice landscape architecture in the state of Utah.

LANDSCAPE DESIGNER: A person who has been certified by the Utah Nursery and Landscape Association to prepare landscape plans or as otherwise approved by the public services department.

LANDSCAPE EDUCATION PACKAGE: A package of documents which is intended to inform and educate water users in the city about water efficient landscaping. The package includes the principles of water efficient landscape design, a listing of water conserving plants, a listing of certified landscape designers, landscape architects, certified irrigation designers, certified irrigation contractors, an information packet about various area demonstration projects, city's water rates, billing format for water use, and the economics of installing and maintaining water efficient landscaping.

LANDSCAPE IRRIGATION AUDITOR: A person who has been certified by the Irrigation Association to conduct a landscape irrigation audit or as otherwise approved by the public services department.

LANDSCAPE PLAN DOCUMENTATION PACKAGE: The preparation of graphic and written criteria, specifications and detailed plans to arrange and modify the effects of natural features such as plantings, ground and water forms, circulation, walks and other features to comply with the provisions of this chapter. The landscape plan documentation package shall include a project data sheet, a planting plan, an irrigation plan, a grading plan, a soils report, a landscape water allowance and an irrigation schedule.

LANDSCAPE WATER ALLOWANCE: For design purposes, the upper limit of annual applied water

for the established landscaped area. It is based upon the local reference evapotranspiration rate, the ET adjustment factor and the size of the landscaped area.

LANDSCAPED ZONE: A portion of the landscaped area having plants with similar water needs, areas with similar microclimate (i.e., slope, exposure, wind, etc.) and soil conditions, and areas that will be similarly irrigated. A landscaped zone can be served by one irrigation valve, or a set of valves with the same schedule.

LANDSCAPING: Any combination of living plants, such as trees, shrubs, vines, ground covers, flowers, turf or ornamental grass; natural features such as rock, stone or bark chips; and structural features, including, but not limited to, fountains, reflecting pools, outdoor artwork, screen walls, fences or benches.

MULCH: Any material such as bark, wood chips, rocks, stones or other similar materials left loose and applied to the soil.

NONDROUGHT TOLERANT PLANT: A plant that will require regular irrigation for adequate appearance, growth and disease resistance.

PLANTING PLAN: A plan which clearly and accurately identifies and locates new and existing trees, shrubs, ground covers, turf areas, driveways, trails, sidewalks, hardscape features and fences.

PRECIPITATION RATE: The rate at which water is applied per unit of time, usually measured in inches per hour.

RAIN SHUTOFF DEVICE: A device wired to an automatic controller that shuts off the irrigation system when it rains.

RECONSTRUCTED LANDSCAPING: Any existing approved landscaping and irrigation that is removed and replaced as part of new construction.

REFERENCE EVAPOTRANSPIRATION RATE OR ETO: The standard measurement of environmental parameters which affect the water use of plants. ETO is expressed in inches per day, month or year and is an estimate of the evapotranspiration of a large field of four (4) to five inches (5") tall, cool season grass that is well watered. The average growing season ETO for the South Jordan City area is based on the weekly calculation made by Utah State University which can be found on its internet web page. See also definition of Evapotranspiration (ET).

RUNOFF: Irrigation water that is not absorbed by the soil or landscaped area to which it is applied and which flows onto other areas.

SOILS REPORT: A report by a soils laboratory indicating soil type, soil depth, uniformity, composition, bulk density, infiltration rates, and pH for the topsoil and subsoil for a given site. The soils report also includes recommendations for soil amendments.

SPRAY SPRINKLER: An irrigation head that sprays water through a nozzle in a fixed and constant

pattern.

STREAM SPRINKLER: An irrigation head (rotor or impact) that projects water in single or multiple streams.

TURF: A surface layer of earth containing mowed grass with its roots.

WASTE OF WATER: Means and includes, but is not limited to:

- A. The use of water for any purpose, including landscape irrigation, which consumes or for which is applied substantial amounts of excess water beyond the reasonable amount required by the use, whether such excess water remains on the site, evaporates, percolates underground, goes into the sewer system, or is allowed to run into the gutter or street. Every water consumer is deemed to have under his control at all times the water lines and facilities, other than water utility facilities, through which water is being supplied and used to his premises, and to know the manner and extent of his water use and excess runoff;
- B. The excessive use, loss or escape of water through breaks, leaks or malfunctions in the water user's plumbing for any period of time after such escape of water should reasonably have been discovered and corrected. It shall be presumed that a period of forty eight (48) hours after the water user discovers such break, leak or malfunction or receives notice from the city of such condition, whichever occurs first, is a reasonable time to correct such condition; and
- C. Washing sidewalks, driveways, parking areas, tennis courts or other paved areas except to alleviate immediate fire, health or safety hazards.

WATER CHECK: A water use efficiency review. See also definition of Water Use Efficiency Review.

WATER CONSERVING PLANT: A plant that can generally survive with available rainfall once established, although supplemental irrigation may be needed or desirable during the growing season.

WATER USE EFFICIENCY REVIEW: An on site survey and measurement of irrigation equipment and management efficiency, and the generation of recommendations to improve efficiency. (Ord. 2007-01, 1-16-2007)

16.30.030: COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY DEVELOPMENT:

- A. Applicability: The provisions of this section shall apply to landscaping for all new and reconstructed landscaping for public agency projects, private commercial and industrial projects, developer installed landscaping in multi-family residential projects and developer installed landscaping in single-family projects that require project review and approval by the city. Such review may include site plan review, modified conditional use permit review and building permits issued for exterior modifications to commercial and multi-family buildings. This section does not apply to homeowner provided landscaping at single-family projects (see section [16.30.040](#) of this chapter), or registered historical sites.

B. Landscape Plan Documentation Package: A landscape plan documentation package shall be submitted to and approved by the public services department prior to the issuance of any permit or site plan approval. A copy of the approved landscape plan documentation package shall be provided to the property owner, developer or site manager and to the local retail water purveyor. The landscape plan documentation package shall be prepared by a registered landscape architect or a landscape designer. The irrigation plan shall be prepared by an irrigation designer or a landscape architect. City landscaping and irrigation standards shall be incorporated into the landscape plan documentation package. The landscape plan documentation package shall consist of the following items:

1. Project Data Sheet: The project data sheet shall contain the following:
 - a. Project name and address.
 - b. Applicant or applicant's agent name, address, phone and fax number.
 - c. Landscape designer/landscape architect's name, address, phone and fax number.
 - d. Landscape contractor's name, address, phone and fax number.
2. Planting Plan: A detailed planting plan shall be drawn at a scale that clearly identifies the following:
 - a. Location of all plant materials, a legend with botanical and common names, and size of plant materials.
 - b. Property lines and street names.
 - c. Existing and proposed buildings, walls, fences, light poles, utilities, paved areas and other site improvements.
 - d. Existing trees and plant materials to be removed or retained.
 - e. Designation of landscaped zones.
3. Irrigation Plan: A detailed irrigation plan shall be drawn at the same scale as the planting plan and shall contain the following information:
 - a. Layout of the irrigation system and a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers.
 - b. Static water pressure in pounds per square inch (psi) at the point of connection to the public water supply.
 - c. Flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with sprinklers.
4. Grading Plan: A grading plan shall be drawn at the same scale as the planting plan and shall contain the following information:

- a. Property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements.
 - b. Existing and finished contour lines and spot elevations as necessary for the proposed site improvements.
5. Soils Report: A soils report will be required where irrigated landscaped areas consisting of grass or similar turf exceed thirty three percent (33%) of the overall landscaped area. The soils report shall describe the depth, composition and bulk density of the topsoil and subsoil at the site, and shall include recommendations for soil amendments. The planting plan shall incorporate the recommendations of the soils report into the planting specifications.
6. Landscape Water Allowance: The annual landscape water allowance shall be calculated using the following equation:

$$\text{Landscape water allowance} = \text{ETO} \times 1.0 \times 0.62 \times A$$

Where landscape water allowance is in gallons per growing season

ETO= Reference evapotranspiration rate in inches per growing season

1.0=ETO adjustment factor, one hundred percent (100%) of turf grass ETO (growing season adjustment factor)

0.62=Conversion factor, inches/year to gallons/year

A=Total irrigated landscape area in square feet

7. Irrigation Schedule: A monthly irrigation schedule shall be prepared that covers the initial ninety (90) day plant establishment period and the typical long term use period. This schedule shall consist of a table with the following information for each valve:

- a. Plant type (for example, turf, trees, low water use plants).
- b. Irrigation type (for example, sprinklers, drip, bubblers).
- c. Flow rate in gallons per minute.
- d. Precipitation rate in inches per hour (sprinklers only).
- e. Run times in minutes per day.
- f. Number of water days per week.
- g. Cycle time to avoid runoff.

C. Landscape Design Standards: The following standards shall be implemented in the design of landscaping:

1. Plant Selection: Plants selected for landscape areas shall consist of plants that are well suited to the microclimate and soil conditions at the project site. Plants with similar water needs shall be grouped together as much as possible. For projects located at the interface between urban areas and natural open space (nonirrigated), extra drought tolerant plants shall be selected that will blend with the native vegetation and are fire resistant or fire retardant. Plants with low fuel volume or high moisture content shall be emphasized. Plants that tend to accumulate excessive amounts of dead wood or debris shall be avoided. Areas with slopes greater than thirty percent (30%) shall be landscaped with deep rooting, water conserving plants for erosion control and soil stabilization. Park strips and other landscaped areas less than eight feet (8') wide shall be landscaped with water conserving plants and/or grass.
2. Mulch: After completion of all planting, all irrigated nonturf areas shall be covered with a minimum layer of four inches (4") of mulch to retain water, inhibit weed growth, and moderate soil temperature. Nonporous material shall not be placed under the mulch.
3. Soil Preparation: Soil preparation shall be suitable to provide healthy growing conditions for the plants and to encourage water infiltration and penetration. Soil preparation shall include scarifying the soil to a minimum depth of six inches (6") and amending the soil with organic material as per specific recommendations of the landscape designer/landscape architect based on the soils report.
4. Irrigation Design Standards:
 - a. Irrigation: Irrigation design standards for this chapter shall be as outlined in the latest version of the "Minimum Standards For Efficient Landscape Irrigation System Design And Installation" as specified in the city standard specifications. In addition, the following portions of this section shall also be applicable.
 - b. Landscape Water Meter: A water meter and backflow prevention assembly that are in compliance with state code shall be installed for landscape irrigation systems, and the landscape water meter and backflow prevention assembly shall be separate from the water meter and backflow prevention assembly installed for indoor uses. The size of the meter shall be determined based on irrigation demand.
 - c. Pressure Regulation: A pressure regulating valve shall be installed and maintained by the consumer if the static service pressure exceeds eighty (80) pounds per square inch (psi). The pressure regulating valve shall be located between the landscape water meter and the first point of water use, or first point of division in the pipe, and shall be set at the manufacturer's recommended pressure for sprinklers.
 - d. Automatic Controller: All irrigation systems shall include an electric automatic controller with multiple program and multiple repeat cycle capabilities and a flexible calendar program. All controllers shall be equipped with an automatic rain shutoff device.
 - e. Slope Runoff: On slopes exceeding thirty percent (30%), the irrigation system shall consist of drip emitters, bubblers or sprinklers with a maximum precipitation rate of 0.85 inches per hour and adjusted sprinkler cycle to eliminate runoff.
 - f. Valves: Each valve shall irrigate a landscape with similar site, slope and soil conditions and plant materials with similar watering needs. Turf and nonturf areas shall be irrigated on separate valves.
 - g. Drip Emitters And Bubblers: Drip emitters or a bubbler shall be provided for each tree where practicable. Bubblers shall not exceed 1.5 gallons per minute per device. Bubblers for trees shall be

placed on a separate valve unless specifically exempted by the public services department due to the limited number of trees on the project site.

- h. Sprinklers: Sprinklers shall have matched precipitation rates with each control valve circuit.
- i. Elevation Variations: Check valves shall be required where elevation differences will cause low head drainage. Pressure compensating valves and sprinklers shall be required where a significant variation in water pressure will occur within the irrigation system due to elevation differences.
- j. Drip Lines: Drip irrigation lines shall be placed underground or otherwise permanently covered, except for drip emitters and where approved as a temporary installation. Filters and end flush valves shall be provided as necessary.
- k. Overhead Sprinklers: Irrigation zones with overhead spray or stream sprinklers shall be designed to operate between six o'clock (6:00) P.M. and ten o'clock (10:00) A.M. to reduce water loss from wind and evaporation. This would exclude drip or bubbler zones.
- l. Soils With Slow Infiltration: Program valves for multiple repeat cycles where necessary to reduce runoff, particularly slopes and soils with slow infiltration rates.

D. Plan Review, Construction Inspection And Postconstruction Monitoring: The following procedures shall be implemented in the plan review, construction inspection and postconstruction monitoring of landscaping:

1. As part of the site plan review and building permit process, a copy of the landscape plan documentation package shall be submitted to the city for review and approval before construction begins. With the landscape plan documentation package, a copy of the landscape water allowance worksheet shall be completed by a landscape designer and submitted to the city.
2. All landscape plan documentation packages submitted must be certified by a licensed landscape architect or approved landscape designer. The irrigation plan must be prepared by an approved irrigation designer or a landscape architect.
3. All landscape irrigation systems shall be installed by an irrigation contractor. The person representing the contracting firm shall be a full time employee of the firm and shall be directly involved with the project, including at least weekly site visits during construction.
4. All installers, designers and auditors shall meet state and local license, insurance and bonding requirements, and be able to show proof of such upon demand.
5. During construction, site inspection of the landscaping may be performed by the city (see section [16.30.060](#) of this chapter).
6. Following construction and prior to the release of the improvement guarantee bond posted for the project, an inspection shall be scheduled with the public services department to verify compliance with the approved landscape and irrigation plans.
7. Following construction and prior to release of the improvement guarantee bond posted for the project, a water use efficiency review will be conducted by a landscape irrigation auditor. The auditor

shall be independent of the contractor, design firm and owner/developer of the project. The water performance audit will verify that the irrigation system complies with the minimum standards required by this chapter. The minimum efficiency required for the irrigation system is between fifty percent (50%) and sixty percent (60%) for distribution efficiency for all fixed spray systems and between sixty percent (60%) and seventy percent (70%) distribution efficiency for all rotor systems. The auditor shall furnish a certificate to the city, the designer, the installer and the owner/developer certifying compliance with the minimum distribution requirements, and an irrigation schedule. Compliance with this provision is required before the city will release the bond for the project. (Ord. 2007-01, 1-16-2007)

16.30.040: SINGLE-FAMILY RESIDENTIAL DEVELOPMENT:

A. General: The provisions of this section apply to landscaping for all new and reconstructed landscaping for single-family residential dwellings. This section does not apply to residential developments with developer installed landscaping (see section [16.30.030](#) of this chapter), or registered historical sites.

B. Provisions For New Or Reconstructed Landscapes:

1. Landscape Education Package: A copy of a landscape education package shall be given to all new single-family homeowners by the city at the time of application for a building permit and all new or modified water account owners. The landscape education package, prepared by the public services department, shall consist of the following items:

a. Principles of water efficient landscape design.

b. A listing of water conserving plants.

c. A listing of certified landscape designers, certified irrigation system designers and suppliers and certified landscape irrigation contractors.

d. An information packet about the various area demonstration gardens.

e. An information packet about the city water rate schedule, billing format for water use and the economics of installing and maintaining a water efficient landscape.

2. Postinstallation: After the landscaping has been installed, the homeowner may notify the public services department of its completion and request a listing of landscape auditors who can perform a water use efficiency review, also called a water check. The water check will determine the irrigation system efficiency, make recommendations for improvements, and provide the homeowner with an irrigation schedule.

C. Park Strips And Other Landscaped Areas: Park strips and other landscaped areas less than eight feet (8') wide shall be landscaped with water conserving plants and/or grass. (Ord. 2007-01, 1-16-2007)

16.30.050: PROHIBITED WATERING PRACTICES:

- A. Waste Of Water: Regardless of the age of a development (commercial, industrial, office or residential), water shall be properly used. Waste of water is prohibited.

- B. Restricted Watering Time: Watering hours may be restricted by resolution of the city council as needed. (Ord. 2007-01, 1-16-2007)

16.30.060: ENFORCEMENT AND PENALTY FOR VIOLATIONS:

- A. Enforcement Authority: The city building and engineering inspectors, code enforcement officers, police officers and others designated by the city manager are authorized to enforce all provisions of this chapter.

- B. Violation Of This Chapter: Any water consumer who violates any provisions of this chapter shall be issued a written notice of violation. The written notice shall be affixed to the property where the violation occurred and mailed to the consumer of record and to any other person known to the city who is responsible for the violation and its corrections. Such notice shall describe the violation and order that it be corrected, cured or abated immediately or within such specified time as the city determines is reasonable under the circumstances. Failure to receive such notice shall not invalidate further actions by the city. If the notice is not followed, the city may issue a citation for a misdemeanor infraction. If the alleged violator is convicted, the municipal court may order compliance with any of the provisions of this chapter as a condition for receiving continued water service. (Ord. 2007-01, 1-16-2007)

APPENDIX C - City Council Resolution and Minutes