

WATER CONSERVATION PLAN

for the

CITY OF WASHINGTON TERRACE



December 2015

prepared by

WASHINGTON TERRACE CITY

and

JONES AND ASSOCIATES
Consulting Engineers

CITY OF WASHINGTON TERRACE

WATER CONSERVATION PLAN

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1.0 - INTRODUCTION

The City of Washington Terrace, its leaders, and citizens are concerned for the future cost and availability of the water supply. A similar concern has been demonstrated by the state legislature in the Water Conservation Plan Act (House Bill 71) passed and revised (Section 73-10-32 Utah Code Annotated). This Water Conservation Plan is written to address the concerns of leaders and citizens of both the City of Washington Terrace and the State of Utah.

2.0 - DESCRIPTION OF WASHINGTON TERRACE AND ITS WATER SYSTEM

The City of Washington Terrace currently provides culinary water to approximately 9,350 people (City estimate) within the corporate boundaries of the City through 2,886 connections. This water is intended for indoor or sanitary uses. The water system provides water to approximately 2,757 residential and 129 commercial connections at this time. Secondary water is supplied to the City's residents by South Ogden Conservation District (Pineview Water) for the service area roughly north of 5200 South and Weber Basin Water Conservation District for the service area roughly south of 5200 South. This water is intended for outdoor or landscaping needs.

The City of Washington Terrace was founded and developed in 1948 from a war-time housing project and occupies an area of approximately 1.9 square miles. The water system consists of pipes, reservoirs, pressure reducing stations, and wells. Data collected for the *Culinary Water Master Plan & Impact Fee Study* completed October 2010 by Jones and Associates, Consulting Engineers showed that the City has sufficient water supply for its current needs and has the ability to meet existing water demand on the highest day of peak use (peak day demand).

2.1 - Inventory of Water Resources

The City of Washington Terrace receives its potable water supply from Weber Basin Water Conservancy District via two separate metering stations. In order to provide the necessary fire flow and pressure to the upper pressure zone, a higher pressure water connection was needed. South Ogden City provided the needed pressure and fire flow/storage through a wheeling agreement via a third metering station. Currently, Weber Basin provides 1,000 acre-feet per year, a portion of which is wheeled through South Ogden City.

Two wells located in Washington Terrace were used to provide the City's water in the past. They were taken off-line due to excessive costs of running the wells versus purchasing water from Weber Basin. Water quality and quantity in the wells are excellent and the City has negotiated an agreement with Weber Basin for use of the water in their area-wide distribution system.

Culinary water for future City residents will continue to come from the Weber Basin Water Conservancy District. The amount of water contracted from Weber Basin (1,000 acre-feet

annually) is a safe yield and in past years the City has not used all of the allotment.

The following Table 1 shows a summary of the culinary water available to the City.

Table 1

Water Source Summary		
Name of Source	Nature of Use	Acre-Feet per Year
500 West Well	Municipal	1,711.49
Adams Ave. Well	Municipal	2,171.94
Weber Basin	Yearly Contracted	1,000.00
TOTAL		4,883.43

2.2 - Water Budgets

Table 2 shows how much contracted water was put into the culinary water system for years 2000 through 2015. As can be seen, the City has been very successful in reducing overall water usage (a current reduction of 29% from 16% in 2010) while supporting an expanding population. This has been accomplished mainly through public education.

An analysis of the water budget and the efficiency of the water distribution system show some areas of concern. Water-in verses water-out percentages vary from one season to another. Efficiencies range from 76% to 93% on a monthly basis. The City’s goal is 90-95%, is long-term, and will depend on accurately evaluating the system for leaks. Four reasons have been identified for the unaccounted system losses: 1) Minor system leaks and losses inevitable in 34+ miles of water mains with attendant laterals, 2) Fire flows, system flushing, and major breaks, 3) Unmetered irrigation at some City-owned landscaped areas, and 4) Old, worn water meters. The City is working to reduce the first three causes and to eliminate the last cause of unaccounted system losses.

2.3 - Present Water Use and Future Water Needs

With data gathered from the *Culinary Water Master Plan & Impact Fee Study*, the 2010 Census, and current demographic estimates it is calculated that residents living in the City of Washington Terrace in 2015 used approximately 68 gallons of water per capita per day (gpcd), down from 86 gpcd in 2009. This is mainly indoor use since secondary water is available. The amount

Table 2

System Inflow (AF)		
Year	Contracted W.B. Water	Metered Inflow Use
2000	1,000	941
2001	1,000	953
2002	1,000	979
2003	1,000	934
2004	1,000	920
2005	1,000	868
2006	1,000	910
2007	1,000	910
2008	1,000	912
2009	1,000	842
2010	1,000	820
2011	1,000	769
2012	1,000	765
2013	1,000	763
2014	1,000	758
2015	1,000	710

includes losses in transmission lines, etc. Due to a lack of confirmable data from end water users, actual per capita water use cannot be calculated. If a distribution system loss of 8% was assumed, the per capita water use would then be approximately 63 gpcd. This is compared to the statewide average of 240 gpcd and 184 gpcd nationally. The daily water use for Washington Terrace City is well below the state and national averages. Three reasons may account for these discrepancies, even after allowing for unmetered water “uses”. They include:

1) State and National numbers take into account agricultural, industrial, and commercial water use. Although there are significant institutional uses in Washington Terrace City (regional hospital,

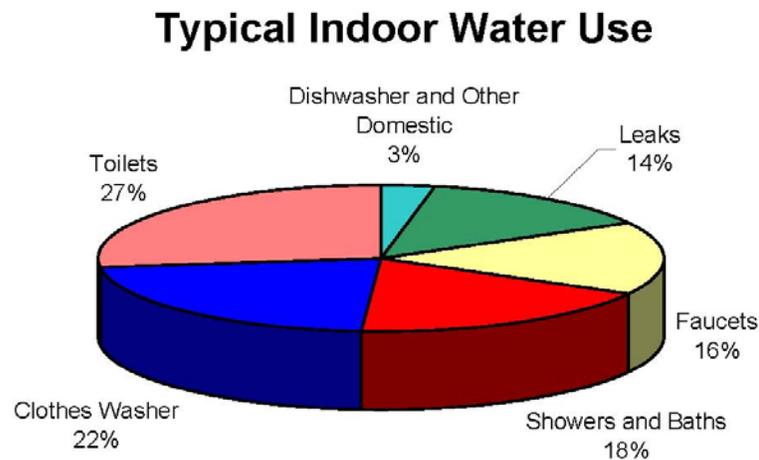
area high school, area junior high school, and two elementary schools) there are few retail and commercial and no industrial facilities in the City,

- 2) Most landscaping irrigation water use is not included in the total use quantities, and
- 3) Agricultural water use is not included in the total use quantities.

The State Rules recommend a source supply of approximately 150 gpcd, excluding landscape irrigation water. This number will be used to be more conservative in making estimates in this report.

Figure 1 shows the breakdown of typical water use inside the home for Utah residents.

Figure 1



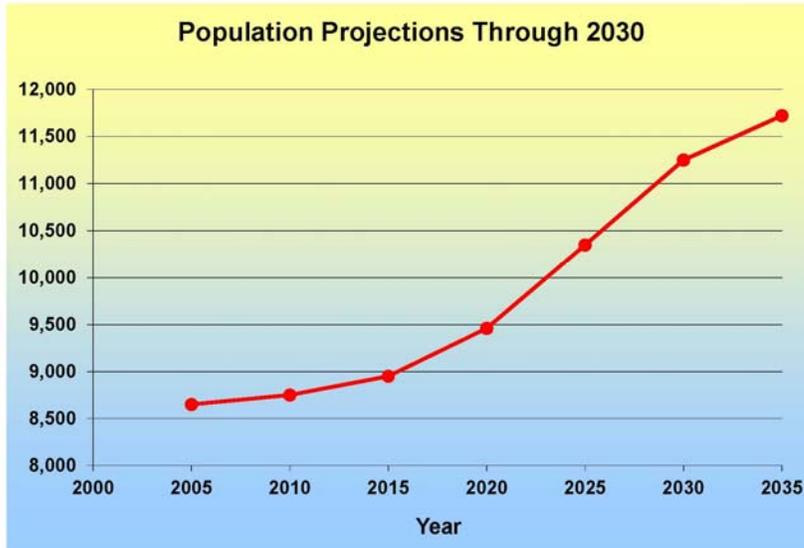
From Mayer, Peter W. et. al., Residential End Uses of Water, [AWWA Research Foundation, 1999], xxvi.)

This breakdown is probably very similar to the actual indoor water use for residents in the City of Washington Terrace. However, it is important to realize a large portion of homes in the City were built prior to 1960. Therefore, adjustments to in-home allocations may be needed due to large volume flush toilets, leaks, and inefficient showers and faucets; changing the typical percentages shown above.

The expected population growth for Washington Terrace City through the year 2030 is shown in Figure 2. With the recent down-turn in the economy it has become more difficult to estimate future populations. Many factors can influence this projection and the estimates shown may vary substantially from the actual population experienced.

Population projections are based on Wasatch Front Regional Council data, modified to reflect actual growth. They show the same future growth estimates listed in the 2010 Water Conservation Plan, estimating the 2030 population of Washington Terrace City will be approximately 11,250 residents.

Figure 2



If population projections are accurate and the conservative (state directed) water consumption rate of 150 gpcd is used for inside-the-home usage, the City of Washington Terrace will need approximately 1,890 acre-feet of water by 2030. Assuming the current contracts and agreements with Weber Basin for 1,000 acre-feet remain the same, the City may not have adequate water supply to meet the future needs. (For a more detailed analysis of the City’s current water supply and future needs refer to *Culinary Water Master Plan & Impact Fee Study* completed October, 2010 by Jones and Associates). Without implementing any water conservation measures the City may be required to develop or purchase additional water supply to serve the City’s culinary water needs.

3.0 - WATER PROBLEMS, CONSERVATION MEASURES, AND GOALS

3.1 - Challenges Identified

The City of Washington Terrace does not have a residents’ committee that specifically addresses water conservation issues. However, in order to identify current water problems, conservation measures, and goals; the Public Works Department and the City Engineer have taken this responsibility and have compiled the listed items in this section. The following is a list of issues currently being addressed in the water system.

1. From 2001-2002, all of the residential manual-read meters were upgraded with new radio-read devices in Washington Terrace City. Those radio-read devices and subsequent upgrades failed and the original water meters now exceed their expected life (1 MG measured or 10 years usage). Installation of new lead-free Badger Water Meters began in 2013. Approximately one-half (1435 residential and several commercial) of the City water meters were replaced by mid-2015. The remaining residential water meters, approximately 35 commercial water meters, and an Advanced Metering Infrastructure (AMI) system are scheduled for installation in 2016—completing the transition from manual reads to real-time office reads. The meters need replacement in order to more accurately account for all water used in the system and identify leaks as they occur.
2. The Adams Avenue water tank in Washington Terrace is a floating tank. Weber Basin's single supply line was connected directly into the distribution system and only filled the reservoir occasionally. A new metering station was constructed for direct feed into the Adams Avenue water tank. A SCADA system was also installed to monitor tank water levels and level control equipment is in place. Tank water levels can now be controlled to meet diurnal water demands, but some system modifications must be installed before the tank can effectively feed the lower pressure zones in the City. The tank no longer wastes water because of overflows.
3. The City does not have the means to accurately determine the amount of water loss in the culinary water system. Not all connections to the system are metered, including water used on some City parks and other property. The City is actively pursuing reducing water losses by repair and replacement of failing infrastructure. Please see the water conservation goals.
4. The current water pricing and updated billing system now have more incentives for residents and businesses to use water more efficiently. Utility rates are generally adjusted annually to cover the cost of operations and maintenance. As the cost of water becomes more expensive and availability more limited, utility rates will need to be adjusted and possibly include reverse-use incentives. The City has a water rate structure that encourages conservation.
5. Information has been distributed to residents through the City News Letter, the City web site, and social media for better understanding of efficient water-use habits and practices. Tips have also been published to encourage self-evaluation of leaks and reduce waste. In addition, the City has initiated a program to evaluate individual water usage and identify water leaks through the radio read system, personal phone calls, and on-site visits—reducing wasteful water use and water loss. Unfortunately, some water users do not take advantage of the information and services provided and chose to not conserve/save water.
6. While secondary water is provided through the summer months, some residents supplement irrigation needs with culinary water for a variety of reasons, including low pressures. Some residents also supplement irrigation needs with culinary water before secondary water is available in the spring and after it is shut off in the fall.

The above issues represent opportunities to make changes and continue conservation measures

3.2 - Water Conservation Goals

The following goals to reduce water usage and water losses have been identified:

GOAL #1 - Continue replacing and up-dating commercial and residential culinary water meters.

By the end of 2016 all commercial and residential water meters will be replaced with new radio-read meters. In addition, an Advanced Metering Infrastructure system will be installed to provide real-time meter readings at City Hall and illuminate canvassing the City to pick up radio-read signals. This will allow the City to obtain automated meter readings whenever needed and monitor water usage more accurately. The City will then need to maintain the new system as required.

GOAL #2 - Convert landscape irrigation from culinary to secondary water.

The City identified three (3) parks that were candidates for conversion from culinary water use to secondary irrigation. Negotiations were completed with Weber Basin Water Conservancy District in 2011 to allow secondary water connections at the three parks. Two of the parks were successfully converted. The conversion certainly added to the reduction the City experienced in culinary water use over the past two years. However, conversion of the remaining park has not taken place. The cost is prohibitive and cannot be justified from the standpoint of treated-to-untreated water-use costs.

GOAL #3 - Leak detection and reduction of leak-prone water mains.

Modeling of the City water system was completed in 2013. The dynamic model was successfully calibrated and revealed significant information about the system. No major leaks were identified when the model was run repeatedly.

Goal #3 was not fully met over the past five years; however, we found some chronic system leaks such as valves, mains, and laterals during that period and repaired them. Further analysis and investigation is still needed. By 2018 the City will finish investigating the feasibility for and implement a system leak detection program. This will include researching technologies/methodologies for detecting system leaks, determining commercial/consultant capabilities, estimating costs, budgeting resources, and contracting for the service where/if feasible. Identified system leaks would be prioritized and repaired as funding allowed.

Additional steps will be taken to reduce water losses as they are formulated.

GOAL #4 - Convert from floating reservoir to in/out set-up.

A construction project was completed in 2013 that routed a Weber Basin supply line directly into the Adams Avenue reservoir. An automated valve is connected to a level sensing device along with a new SCADA system that shuts off the supply before the water level in the reservoir reaches the overflow drain pipe. This has eliminated any water being wasted and will keep, as far as practical, reservoir levels at maximum fire flow reserves. However, the 2013 project identified a water supply line that must be modified before the tank can operate correctly. The water line modification is projected to take place as soon as funding allows.

GOAL #5 – Periodically update water rates as wholesale rates increase over time.

This goal is being met annually as part of the budget process analysis.

GOAL #6 - Public education.

Continue to publish articles in the City News Letter concerning water saving tips, in-home leak detection/elimination, and conservative usage of secondary water. Work with water suppliers in educating the public. Continue to teach individual homeowners about water use and conservation.

A significant amount of culinary water will, and has been, saved by applying these conservation goals. Gross uses are being monitored on a monthly basis via the water meters supplying the City's culinary water. The data is used for flagging potential education needs.

4.0 - CURRENT CONSERVATION PRACTICES

The City of Washington Terrace currently has a Water Conservation Plan adopted in 2010. The City is continuing to implement water conservation measures. Between 2013 and 2016 all of the residential and commercial water meters will be replaced with new radio-read, lead-free water meters. This will allow the City to install an AMI system that will read the meters in real time and obtain an accurate account of water usage. Cost of the meter upgrade is over \$750K. In addition, the City is currently taking an active role in educating residents about efficient water use. Educational newsletters about water conservation are sent out with water bills on a regular basis. This updated Water Conservation Plan will continue to give the City a structured method for the conservation of valuable water.

5.0 - CURRENT WATER RATES

Table 3 outlines the current water rates.

Table 3

Minimum Usage Allowance			
Connection	Base Allotment	\$ Base Rate / Month	\$ Overage Rate /1000 Gallons
3/4"	4,000 gallons	\$20.00	\$5.71
1"	7,500 gallons	\$37.50	\$5.71
1-1/2"	15,000 gallons	\$75.00	\$5.71
2"	22,500 gallons	\$112.50	\$5.71
2-1/2"			
3"	37,500 gallons	\$187.50	\$5.71
4"	75,000 gallons	\$375.00	\$5.71
6"	1,000,000 gallons	\$3,500.00	\$4.01
Single	4,000 gallons	\$17.80	\$5.10
Duplex	8,000 gallons	\$35.60	\$5.10
Triplex	12,000 gallons	\$53.40	\$5.10

6.0 - ADDITIONAL CONSERVATION MEASURES

The current Washington Terrace water conservation program is directed primarily at managing the distribution system, accurately measuring usage, encouraging conservation through the rate structure, and providing educational materials to assist residents to use water more efficiently. Additional conservation measures may be needed during aberrant periods. Several measures are listed below.

Water Conservation Contingency Plan

The City will consider implementing a “Water Conservation Contingency Plan”, which spells out climate and political realities related to water use during drought or other water supply shortages. A sample plan follows:

Level 1 - Normal Years

- Initiate voluntary public conservation measures
- Issue information to all customers on conservation procedures each can accomplish around their homes and properties.
- Eliminate watering on City property from 8 a.m. to 6 p.m. if using culinary water.

Level 2 - 75% of Normal

- Reduce watering of City property.
- Educate the public on the water supply shortages.
- Initiate mandatory public conservation measures.
- Enforce outside watering restrictions; including watering times and non-use of culinary water.

Level 3 - 50% of Normal

- Strictly enforce all conservation policies with significant fines for non-compliance.
- Physically restrict water supplies where possible at non-essential areas such as parks.

Additional non-emergency water conservation measures are listed below.

Water Education Program

The following information on efficient outdoor and indoor water use is available to water users within the City through county libraries, the Weber Basin Water Conservancy District, and dissemination in the City News Letter included with the monthly water bill as appropriate.

Outdoor Water Use:

- Water landscape only as much as required by the type of landscape and the specific weather patterns of your area, including cutting back on watering times in the spring and fall. We encourage our customers to utilize the weekly lawn watering guide located at www.conservewater.utah.gov.
- Group plants in terms of water need, and zone sprinkler systems accordingly.
- Encourage customers to alter parking strips by allowing more water-wise plantings.
- Do not water on hot, sunny, and/or windy days. You may actually end up doing more harm than good to your landscape, as well as wasting a significant amount of water.
- Sweep sidewalks and driveways instead of using the hose to clean them off.
- Wash your car from a bucket of soapy (biodegradable) water and rinse while parked on or near the grass or landscape so that all the water running off goes to beneficial use instead of running down the gutter.

- Check for and repair leaks in all pipes, hoses, faucets, couplings, valves, etc. Verify there are no leaks by turning everything off and checking your water meter to see if it is still running. Some underground leaks may not be visible due to draining off into storm drains, ditches, or traveling outside your property.
- Use mulch around trees and shrubs, as well as in your garden to retain as much moisture as possible. Areas with drip systems will use much less water; particularly during hot, dry, and windy conditions.
- Keep your lawn well-trimmed and all other landscaped areas free of weeds to reduce overall water needs of your yard.

Indoor Water Use:

Over half of the total water use in a household is used in the bathroom, as shown in Figure 1. Concentrate on reducing your bathroom use. The following are water conservation suggestions for indoor areas:

- Do not use your toilet as a wastebasket. Put all tissues, wrappers, diapers, cigarette butts, etc. in the trash can.
- Check the toilet for leaks. Is the water level too high? Put a few drops of food coloring in the tank. If the bowl water becomes colored without flushing, there is a leak.
- If you do not have a low volume flush toilet, put a plastic bottle full of sand and water to reduce the amount of water used per flush. However, be careful not to over conserve to the point of having to flush twice to make the toilet work. Also, be sure the containers used do not interfere with the flushing mechanism.
- Take short showers with the water turned up only as much as necessary. Turn the shower off while soaping up or shampooing. Install low flow showerheads and/or other flow restriction devices.
- Do not let the water run while shaving or brushing your teeth. Fill the sink or a glass instead.
- When doing laundry, make sure you always wash a full load and/or adjust the water level appropriately if your machine has adjustable water levels. Many machines use 40 gallons or more for each load, whether it is two socks or a week's worth of clothes.
- Repair any leak within the household. Even a minor slow drip can waste up to 15 to 20 gallons of water a day.
- Know where your main shutoff valve is and make sure that it works. Shutting the water off yourself when a pipe breaks or a leak occurs will not only save water, but will also eliminate or minimize damage to your personal property.
- Keep a jar of water in the refrigerator for a cold drink instead of running water from the tap until it gets cold. You are putting several glasses of water down the drain for one cold drink.
- Plug the sink when rinsing vegetables, dishes, or anything else. Use a sink full of water instead of continually running water down the drain.

7.0 - COST ANALYSIS

GOAL #1 - Continue replacing and up-dating commercial and residential water meters.

There are approximately 27 commercial and 1435 residential water meters that are scheduled for replacement in 2016, along with the installation of an AMI meter reading/monitoring system. Cost for these improvements is estimated at \$438,000. These upgrades should register several thousand additional gallons of culinary water a month. User fees collected from the more accurate readings could cover 10-20% of the new operating costs each year.

More accurate meter readings and attendant billing accuracy are not projected to offset capital investment significantly.

GOAL #2 - Convert landscape irrigation from culinary to secondary water.

The City goal of converting park areas from culinary to secondary water irrigation has been met from an economically feasible standpoint. However, the possibility of converting one additional area to 2nd water will continue to be evaluated. At this time, accomplishment of this goal will net a negative savings, in that 1,000 acre-feet of culinary water is paid for each year whether or not it is used. Secondary water will be charged on an acreage basis. Savings in culinary water use are projected to be approximately 2.1 acre-feet/year if the one remaining park were converted to 2nd irrigation water.

GOAL #3 - Leak detection and elimination.

There are no projected cost figures for this goal at this time. Implementation steps include cost determination and prioritization.

GOAL #4 - Convert from floating reservoir to in/out set-up.

Cost projections for completion of this goal are estimated to be \$35,000 (CW-51) and include switching three commercial water meter feeds from one main to another—allowing more efficient operation of the Adams Avenue water tank. Cost savings will be minimal for this improvement in that monitoring and manual adjustments have essentially eliminated overflow water wastage from the tank. There will be a savings in overtime pay of approximately \$6,000/year when this goal is accomplished. More importantly, the tank will improve water distribution to the lower two pressure zones in the City.

GOAL #5 - Periodically update water rates as wholesale rates increase over time.

This goal will be cost-neutral. Evaluate and update rates as required for system operations and maintenance. The goal will help conserve water.

GOAL #6 - Public education.

This goal will require minimal funding, in that much of the information will be distributed on the City web site, in the monthly News Letter, and one-on-one with residents. Even so, this goal is projected to have the greatest impact on water conservation—especially on landscape irrigation water usage.

GOAL #7 – Replace leak-prone water main.

This goal will replace a 6” ductile iron pipe with a 8” PVC main to eliminate frequent line breaks along 5150 South, 150 East to 300 East (CW-47) at an estimated cost of \$90,000. The project will include replacement of the pipe, two valves, rebuilding the road. The project will eliminate 1-2 line breaks each year and will save several thousand gallons of water. The largest benefit will be labor savings and more reliable service.

8.0 - IMPLEMENTING AND UPDATING THE WATER CONSERVATION PLAN

To ensure the goals outlined above are reached, appropriate tasks must be determined, responsibility fixed with the logical person or department, and a time line set for completion of each task. In order to do this the Public Works Department and City Engineer will review and update the Water Conservation Plan every five years. The Public Works Department and City Engineer will ensure that the measures listed in this updated plan are addressed.

8.1 - Notification Procedure

The adopted Water Conservation Plan will be on record at the City of Washington Terrace offices and available to anyone who desires to have a copy for the cost of production. All residents will be notified of the newly adopted plan with their water bill and the plan will be posted on the City’s website at: www.washingtonterracecity.com.

8.2 - Implementation

The following are items that will be addressed and a plan established to accomplish the goals stated in Section 3.2.

Goal #1 - Continue replacing and up-dating commercial and residential water meters.

- Identify meters to be replaced - accomplished.
- Estimate costs for replacement - accomplished.
- Identify sources and budget for water meter/AMI system acquisition – accomplished.
- Schedule water meter replacement and AMI installation – 2016.

Goal #2- Convert landscape irrigation from culinary to secondary water.

- Identify park areas to be converted - accomplished.
- Estimate costs for conversion - accomplished.
- Secure secondary water source - accomplished.
- Identify sources of funding and budget for piping, pumps, electrical power, filters, pumps, etc. - accomplished.
- Schedule installation – accomplished, summer 2013.

Goal #3 - Leak detection, reduction, and elimination.

- Research technologies/methodologies for detecting system leaks - accomplished.
- Identify capable firms for project completion - spring 2017.
- Obtain rough cost estimates - spring 2017.
- Identify sources of funding project - 2018 or 2019 budget.
- Budget needed funds for repairing highest priority leak sites - 2018 or 2019.
- Develop RFP, advertise, award contract - 2019 or 2020.
- Identify leaks sites and prioritize repairs. Make repairs – as funding allows.

Goal #4 - Convert from floating reservoir to in/out set-up.

- Estimate costs for project - accomplished.
- Identify sources of funding for facility installation - during budgeting process.
- Budget needed funds for completing project - during budgeting process.
- Design facility and bid project – as funding allows.

Goal #5 - Up-date water billing rates as water suppliers increase rates.

- Determine funds needed to cover all costs associated with water distribution system operations and maintenance - in-process.
- Budget for capital improvements and acquisitions – ongoing budget cycle.

Goal #6 - Public education.

- Continue present program - in-progress.
- Stress secondary water conservation - periodic News Letter articles.
- Coordinate effort for water conservation with water suppliers – continuing process.

Goal #7 – Replace leak-prone water main.

- Determine funds needed for project – accomplished.
- Schedule project on Capital Improvement Plan – accomplished.
- Budget for project – in process.
- Design, bid, build project – as funding allows.

8.3 – Updating

As the implementation of this Water Conservation Plan progresses there will be some measures that will work well and others that may not. The Public Works Department and City Engineer will have the assignment of evaluating the success and effectiveness of the measures taken and documenting the results. When the time comes to again update the Water Conservation Plan the results will be assessed and reported. This will be done every five years and an up-dated Water Conservation Plan will then be created.

APPENDIX A

**WASHINGTON TERRACE CITY
PARK/LANDSCAPE INVENTORY**

Yearly Potable Water Usage* Washington Terrace City Parks

	Park/Property Name	Type	Park Size (Acres)	City Water	Gallons/Year (Million)
1	Rohmer Park	Park	19.15		
2	Van Leeuwen Park	Park	5.33	X	5.21
3	Victory Park (Old City Building)	Park	1.53	X	1.50
4	Recreation Center Park	Park	1.38	X	1.35
5	Lions Park	Park	1.44		
6	Wright Park	Park	0.71	X	0.69
7	Detention Basin Park (5405 S 300 W)	Park	0.77		
8	Johnson Entrance (300 West)	Open Space	0.30		
9	East Entrance (Washington Blvd)	Open Space	1.19	X	1.16
10	5000 South 300 West Detention Basin	Storm Drain	0.44	X	0.43
11	Fire Station Detention Basin	Storm Drain	0.75	X	0.73
12	500 West Water Storage Tank	Water Tank	1.55		
13	Adams Ave. Water Storage Tank	Water Tank	1.26		
14	City Hall	City Building	0.60		
15	5600 South Adams Ave.	Library Lot	0.73		
16	4700 South 150 East Garden Area	Garden	0.01		
	Total		37.14		11.08

* Assumes 36 inches/year application rate estimate.

Note: 11.08 Million gallons = 33.99 acre-feet

APPENDIX B

WATER CONSERVATION PLAN RESOLUTION

**CITY OF WASHINGTON TERRACE
RESOLUTION NO. 16-01**

**A RESOLUTION OF THE CITY OF WASHINGTON TERRACE, UTAH,
ADOPTING THE UPDATED WATER CONSERVATION PLAN DATED
JANUARY 2016 AND AS REQUIRED BY STATE LAW.**

WHEREAS, the City of Washington Terrace (hereafter “City”) is a municipal corporation duly organized and existing under the laws of the State of Utah;

WHEREAS, the City is a retail provider of culinary water as defined by *Utah Code Annotated* §73-10-32

WHEREAS, *Utah Code Annotated* §73-10-32 requires the City, while operating as a retail water provider of culinary water, to adopt a Water Conservation Plan;

WHEREAS, the City adopted its prior Water Conservation Plan (hereafter “Plan”) on January 18, 2011, after advance public notice and a public hearing on the same and now desires to update said Plan;

WHEREAS, after the requisite notice, the City Council held a public hearing on the adoption of this Plan at its meeting on January 19, 2016;

WHEREAS, the City recognizes the critical need to use our limited water resources in an efficient manner to allow for future sustained growth of the community and preserve water as a precious resource;

NOW, THEREFORE, BE IT RESOLVED by the City Council as follows:

- Section 1: Adoption.** The Water Conservation Plan dated January 2016 as identified in the attached Exhibit “A” and incorporated herein by this reference is hereby approved and adopted.
- Section 2: Updates.** The Water Conservation Plan Prepared dated January 2016 adopted herein shall be updated at least every five (5) years or as may otherwise be prescribed by state law.
- Section 3: Compliance.** In order to more fully comply with state law, City staff is hereby delegated administrative authority to update or modify the Plan as necessary to implement the Plan and to conform to state law.

Section 4: Severability. If a court of competent jurisdiction determines that any part of this Resolution is unconstitutional or invalid, then such portion of this Resolution, or specific application of this Resolution, shall be severed from the remainder, which remainder shall continue in full force and effect.

Section 5: Effective Date. This Resolution is effective immediately upon passage and approval.

PASSED AND APPROVED by the City Council on this 19th day of January 2016.

MARK ALLEN, Mayor
City of Washington Terrace

ATTEST:

AMY RODRIGUEZ, City Recorder

ROLL CALL VOTE	Aye	Nay
Council Member Barker	—	—
Council Member Monsen	—	—
Council Member Jensen	—	—
Council Member Brown	—	—
Council Member Shupe	—	—