



# 2016 Conservation Plan

11/29/2016

## INTRODUCTION

In response to the anticipated growth occurring throughout the state of Utah, the White City Water Improvement District (hereafter "WCWID"), its members and elected Board of Trustees are concerned about the future cost and availability of a steady and reliable water supply. Similar concerns have been expressed by the state legislature by passage of the Water Conservation Plan Act (hereafter the "Act."). Utah Code Ann. §73-10-32 (2016). Based upon that concern, and in conformity to the Act, WCWID has periodically adopted water conservation plans and implemented their recommendations. The Act provides that periodically water conservation plans should be reviewed to determine if modifications are called for. WCWID has undertaken such a review and hereby adopts the following revised 2016 Water Conservation Plan.

## DESCRIPTION OF WCWID AND ITS WATER SYSTEM

In 1995 WCWID acquired the existing water system from the White City Water Company, Inc. (hereafter "Company"), a privately owned company, which had been providing water to the service area from approximately 1955. The service area encompasses roughly the area from approximately 2000 East on the east, 700 East on the west, 9400 South on the north and 10600 South on the south, in Salt Lake County. The Company is now wholly owned by WCWID, and the Board of Directors of the Company consists of the elected Board of Trustees of WCWID. Because of the legal relationship by and between WCWID and the Company, the two entities work cooperatively together to conserve water and to meet the needs of WCWID's members. Whenever this plan references WCWID, it should be understood the reference encompasses both WCWID and the Company to the extent applicable to meet the requirements of the Act.

The distribution system for delivery of water to WCWID's members consists of water lines of various sizes having a total length of approximately 56 miles. The age of the distribution system varies from 1 year to 60 years. The distribution system provides water service to approximately 4,145 connections, 4,087 of which are residential and 58 of which are commercial. There are no major water users of the System. The largest water user of the system, for example, uses approximately 1.36% of total water usage for a calendar year. The system is divided into three pressure zones and receives their service from water pumped from WCWID's wells. In addition, WCWID has contracts with the Jordan Valley Water Conservancy District ("JVWCD") and Sandy City ("Sandy") to receive water in case of emergency. The residents of WCWID, through its elected Board of Trustees, have expressed the view that they prefer to receive all of their water service from WCWID's deep underground wells. WCWID has ample storage capacity, in the form of water storage tanks, to meet all of its residents' needs for the foreseeable future and is functionally separate from any other water system.

Unlike many areas of the State, WCWID is not presently receiving a significant portion of the county's residential, commercial and industrial growth. Therefore, the challenges facing WCWID are not the same as other areas. Nonetheless, WCWID is committed to conserving water wherever possible in order to maintain the underground aquifers that provide WCWID's needs. Further, because WCWID is on the forefront of efforts to ensure a viable and abundant water supply for the entire Salt Lake Valley in the case of emergency, it is desirous to take all reasonable and rational steps necessary to not waste this most precious commodity - water.

## WATER SUPPLY & SOURCES

Under current water rights WCWID has water rights to meet the needs of its residents and is continually evaluating its use of those rights to ensure future availability of water to those residents. Water is needed not only for normal uses, but sufficient water rights are also required to meet future build out and/or changes in building makeup in the service area as well as to meet fire flow requirements as set, from time to time, by the State of Utah and WCWID policy makers. WCWID is evaluating all of its wells, some of which are over 50 years old, to ensure that water is obtained from the underground aquifer through modern and efficient wells that will minimize waste. In that regard, WCWID presently utilizes seven active wells to draw water from the aquifer. Those wells are designated as Wells Nos. 1, 3A, 4, 5A, 8, 9 and 10. The capacities of the wells vary greatly and each serves an important function in the overall operations of WCWID.

## WATER CONNECTIONS

Through much of WCWID's history the number of water connections within the service area has remained fairly stable, with most build out taking place east of 1300 East. In that regard, in 1995 when WCWID first took over the Company's service area, there were 3,870 water connections and in 2015 water connections numbered 4,145. In 2003, WCWID and Sandy City legally adjusted the boundaries of their respective water service areas, which opened up some additional land that is being developed within WCWID, but it is not anticipated the number of water connections will dramatically increase.

## WATER TREATMENT

WCWID is not presently required to treat its existing water sources and much of the water is classified as being pristine. WCWID believes the protection of its water sources from environmental contamination is an essential part of any conservation plan and was instrumental in getting the Utah Legislature to adopt Utah Code Ann. Section 19-4-113 requiring "source protection" ordinances to be adopted within counties of the first and second class, including Salt Lake County. In addition, WCWID was the primary agency in Salt Lake County sponsoring the following study: Utah Geological Survey for Geologic Studies to Prepare Maps and Petition to the Utah Water Quality Board to Classify Ground-water Quality in the Principal Basin-fill Aquifer in Salt Lake Valley, Salt Lake County, Utah. It is not enough to simply conserve water; WCWID is committed to ensuring those water supplies remain pristine for future generations.

## PRESENT WATER USE AND FUTURE WATER NEEDS

Water use varies from year to year based on weather and changing demographics of the population served. In that regard, some areas within the WCWID service area is seeing a change in resident make up from senior citizens to younger families. In addition, WCWID has encouraged its customers to be "water wise" in their use of water in order to avoid waste and unnecessary costs. In that regard, although WCWID has the ability to impose a property tax to meet some of its expenses, the Board of Trustees have voted through the years to have no property tax, but to rely solely upon cost-based rates. This rate structure encourages water conservation as residents monthly pay the full cost of water used.

When all uses of culinary grade water were compared with the number of people living in WCWID in 2000, residents used approximately 207 gallons of water per capita per day (gpcd), which

was considerably less than the then statewide average of 268 gpcd for treated water and 241 gpcd nationally. When that comparison was updated to 2009, WCWID residents used 199 gpcd, and in 2015 they used 192 gpcd. Again, WCWID's water use is less than other water systems. See, for example, Jordan Valley Water Conservation District's overall system average of 214 gpcd.

## WATER ISSUES, CONSERVATION MEASURES AND GOALS

WCWID's original Water Conservation Plan incorporated suggestions made by residents involved in a water conservation committee. Since then, WCWID continues to work with its residents and other agencies in determining ways to conserve water without risking water rights under the Utah Code. For example, although WCWID is a functionally separate water system, as defined in the Utah Code, it remains a member of the Jordan Valley Water Conservation District ("JVWCD") and supports the "Slow the Flow" campaign sponsored by JVWCD.

Based upon its experience its Water Conservation Plans, WCWID has identified and prioritized the following issues that address immediate conservation goals and plans:

1. WCWID's water pricing and billing system was modified to provide additional information to its customers to allow them to judge how their water usage varies from year-to-year and month-to-month.
2. An educational program is being pursued to increase water wise use of landscaping. In additions, WCWID is part of the Slow The Flow education program.
3. WCWID has replaced water meters to allow more accurate water use reads and to give alerts to leaks that not only increase customer bills but also ultimately waste water. When a leak is detected, customers are notified of the leak and WCWID provides assistance to help the customers identify the source of the leak and encourages them to repair the leak, whether in an irrigation/sprinkler line or a leaking faucet.
4. Infrastructures within the system, such as water pipes, which are old, are being replaced, as funds are available. WCWID annually compares its water production reports to use reports to determine if water is being lost through leaking pipes or other causes and is committed to keep such loses to under 10% as recommended by various water organizations, such as the AWWA. (It should be noted that water loss in the WCWID system is not truly loss as it returns to the aquifer from which it was originally pumped.)
5. WCWID's elected Board of Trustees has raised water rates where necessary to meet expenses of the District and is committed to assess no property tax, so every water user pays for what he or she uses, therefore encouraging wise use of water resources.

## EVALUATION OF WATER CONSERVATION MEASURES

WCWID's water conservation program is directed primarily at effectively managing its water supplies and ensuring the efficient use of water by its residents. In that regard, WCWID has adopted a Capital Facilities Plan to guide it in pursuit of a pipeline replacement program to avoid water loss and disruption of water delivery to the customers. WCWID customers are viewed as the owners of the water system as each monthly bill includes \$10.00 per month base charge toward payment of the bonds issued by WCWID to purchase the Company

WCWID is providing useful material to assist members in using water more efficiently, including adoption of the a water conservancy plan, an active water education program for outdoor and indoor water use and a conservation oriented water rate structure that charges a different rate for use of water above a monthly minimum charge.

## WATER CONSERVATION CONTINGENCY PLAN

The WCWID "Water Conservation Contingency Plan" addresses conservation measures that may be implemented during times of emergency and drought. They are as follows:

Eliminate watering on WCWID property from 10 a.m. to 7 p.m. during summer.

Educate the public on the water supply situation.

Encourage voluntary public conservation measures, including outdoor water restrictions such as that used on WCWID property

Issue information to all customers on conservation procedures that each can accomplish around their own property and within their own homes.

Instigate mandatory public conservation measure in case of severe shortage. Enforce outside watering restrictions including watering times and quantities. Encourage use of non-emergency water conservation measures as listed in other sections of this 2016

Water Conservation Plan.

## WATER EDUCATION PROGRAM

The following information on efficient outdoor and indoor water use is available to the customers of WCWID through the main office located at 999 East Galena Drive, Sandy, Utah, and on its website: [WCWID.org](http://WCWID.org). In addition, the information is occasionally disseminated with the water bill and as part of WCWID's monthly newsletter.

### Outside Water Use:

Water landscape only as much as required by the type of landscape, and the specific weather patterns of your area. Water audits may be obtained by calling JVVCD with whom WCWID has a contract.

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.

A single lawn sprinkler spraying five gallons of water per minute uses 50 percent more water in just one hour than the combination of 10 toilet flushes, two five-minute showers, two dishwasher loads, and one full load of laundry.

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 to waste.

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 but longer and all other landscaped areas free of weeds to reduce overall water needs of your yard.

### Indoor Water Use:

About two-thirds of the total water used in a household is used in the bathroom. Concentrate on reducing your bathroom use. Following are suggestions for this specific area:

Do not use your toilet as a wastebasket. Put all tissues, wrappers, diapers, etc., in the trashcan.

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.

Opportunities to conserve water also exist in other areas of the home:

When doing laundry, make sure you always wash a full load or adjust the water level appropriately if your machine will do that. Most 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- 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 also eliminate or minimize damage to your personal property.

Keep a glass 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.

Stopper the sink when rinsing vegetables, dishes, or anything else; use only a sink full of water instead of continually running water down the drain.

## WATER RATES

Designing an appropriate rate schedule is a complex task. Rate design is a process of matching the costs of operating the water system to the unique economic, political and social environments in which WCWID provides its service. The cost of delivering the service must be evaluated and understood. Each water system has unique assets and constraints. Based on the characteristics of the system, and past capital and operating costs, revenue requirements can be estimated.

WCWID staff annually budget for the cost of providing water service and proposes a rate schedule designed to cover such costs. No property tax is assessed. Cost based rates encourage wise use of water. At the same time a base rate, paid regardless of amount of water used, is used to meet bond and other WCWID costs. In addition, WCWID imposes an overage rate for use of water above 7,500 gallons per month, and has a tiered rate (block) system for small lots within the service area. Because of WCWID's overage rate, and its commitment to not impose a property tax, the WCWID Board of Trustees has determined that WCWID is in compliance with the intent of Utah Code Section 73-10-32.5, adopted by the Utah Legislature in 2016.

WCWID is constantly evaluating how its bills may be better formulated to encourage conservation. In that regard, WCWID bills show number of gallons used, instead of amount of cubic feet, provides information on individual customer water usage and a comparison on how that water use compares to prior monthly use, including the same month from the year before.

## ADDITIONAL FUTURE CONSERVATION MEASURES:

In order to effectively meet WCWID's future water needs and address issues that may hinder water conservation, WCWID sets goals to continue to evaluate its operational and educational system to identify specific water conservation measures which may be required. These include more stringent water rates, continued meter replacement and leak repair, improved efficiency of irrigation of **open** spaces within WCWID, continuing education, and plumbing fixture replacement. Without limiting measures pursued, WCWID will continue to o pursue the following during the coming years:

### **Meter Replacement and Leak Detection Program**

Over time, all meters become less accurate in recording actual flows. This leads to lost revenue to the district **and** inaccurate data to members. WCWID converted almost all of its old meters to newer radio read Neptune meters with the ability detect leaks and measure water use in a detailed fashion that can be communicated to the customer. WCWID continues to change out all remaining older meters in the next few years. While meter replacement did not immediately result in lower water use, the program has allowed WCWID to pursue a Leak Detection Program which will become available to all customers upon completion of the meter change out process. Also, since residents will have a more accurate record of water used, they can better understand how to use that water more wisely.

### **Education**

WCWID believes education is the best means available to encourage conservation. Educating residents and businesses that irrigate landscapes to use water more efficiently will enhance the likelihood of efficient water conservation. Benefits and costs of a strong education program are difficult to enumerate but will be tracked and accounted for as it unfolds.

### **Plumbing Fixture Replacement**

Incentives to exchange old high water-use toilets and showerheads for new more efficient ones were studied by WCWID. While members should be educated on the advantage of using efficient fixtures, **WCWID** does not feel, at this time, that it should pay incentives to encourage a change over.

## WATER CONSERVATION GOALS

The following water conservation goals were identified in the previous Water Conservation Plan. After due consideration, WCWID believes the goals remain viable and should be continued. The goals are as follows:

### **Maintain a Financially Viable Water System.**

WCWID is a unique water system as it reflects a conscious decision on the part of water users to purchase their own water system from a private company. Consequently, the members are very mindful of the system and are committed to do whatever is necessary to ensure its continuing viability. In that regard, although water rates may be **used** to encourage water conservation, too much conservation can result in a loss of revenue needed to run the system. Consequently, any water rate system adopted by WCWID must ensure that no revenue shortfall will occur. At the same time, WCWID and its residents are committed to not waste water and to use it wisely.



### **Water Conservation Must Be Balanced With Need to Maintain Water Rights.**

WCWID and other water agencies are concerned with the relationship of water conservation and the Utah legal doctrine, which states that unless water rights are used, they will be forfeited, ("use or lose") water rights. WCWID will work with other agencies and the State Engineer's office to ensure that water conservation is treated as a "beneficial use" of water rights. Further, WCWID is concerned with artificial barriers restricting the ability of WCWID and other agencies to lease water to other entities that may have need of such water. Those barriers need to be modified so that any extra water, from year to year, might be put to beneficial use. The sell or lease of water saved through conservation would generate income that could, in turn, finance other conservation measures, such as repair and replacement of aging infrastructure and meters.

### **Continue an Active Educational Program to Encourage the Wise Use of Water.**

Improved irrigation practices and water efficient landscapes can save WCWID member's water and enhance the beauty of the yards and neighborhoods. In addition to the educational program already being pursued by WCWID, we will continue working with other entities, such as schools and community groups, to teach conservation. In that regard, WCWID is supporting legislation recognizing the importance of water and designation of a Water Week where schools can focus some attention on this most valuable resource.