Our Water. Our Future. Our Choice.

The purposes of the District include planning for and facilitating the long-term conservation, development, protection, distribution, management, and stabilization of water rights and water supplies for domestic, irrigation, power, manufacturing, municipal, recreational and other beneficial uses, including the natural stream environment, in a cost-effective way to meet the needs of the residents and growing population of Cache County.
www.cachewaterdistrict.com

CACHE WATER DISTRICT BOARD OF TRUSTEES
MEETING MINUTES
October 4, 2021

The Cache Water District Board of Trustees convened for a regular meeting on Oct. 4, 2021, at 5:30 p.m. in the Cache County Historic Courthouse Council Chambers,199 North Main Street, Logan, Utah.

MEMBERS OF THE BOARD IN ATTENDANCE:

Scott Clark - Logan #2 Council District
Jared Clawson – At-Large Position
Jonathan Hardman – South Council District
Kirt Lindley – At-Large Position
Max Pierce – North Council District
Bret Randall – Northeast Council District
Brett Roper – At Large Position
Jeannie Simmonds – Logan #1 Council District

MEMBERS OF THE BOARD ABSENT:

Don Baldwin – Agricultural Representative
Shaun Dustin – Southeast Council District
Herm Olsen – Logan #3 Council District

OTHERS IN ATTENDANCE:

Nathan Daugs (Manager), Mike Wilson (CRS Engineers), Chris Slater (JUB Engineers), Wayne Wurtsbaugh (Bridgerland Audubon Society)

CALL TO ORDER

The meeting was called to order by Chairman Hardman at 5:30 p.m.
Consideration for minutes from September 13, 2021, and agenda for October 4, 2021.

ACTION: Motion by Mr. Lindley to approve the agenda and the minutes as submitted. Seconded by Mr. Clark. The motion was approved unanimously.

PUBLIC COMMENT

None

FINANCIAL REPORT

This month's bank statement has not been received. Annual Fraud Risk Assessment will be discussed at the next meeting.

CALENDAR EVENTS

- Oct. 6 – Cache Water Users @ Cache County Events Center @ 6:00 p.m.
- Oct. 8 – Ag. Water Optimization @ 10:00 a.m. (will send out an electronic link).
- Oct. 12 – Utah Water Users Summit in Provo 8-4.
- Oct. 13 – Utah Water Task Force @ 1:30 p.m. (will send out an electronic link).
- Nov. 3 – Special District Training - Utah Valley Convention Center 1-5 p.m.
- Nov. 10 – Great Salt Lake Advisory in Farmington @ 10:00 a.m.

MANAGER'S REPORT

PL-566 Projects Update

Logan River Watershed – the costs for the alternatives are being finalized. One of the issues discussed at the last meeting was the increasing costs of construction. If the alternatives are over $25 million, it may require an EIS. An alternative matrix has been developed and will be sent out to the Board members for review. The next public comment period will be for the draft EA, which will list all of the alternatives. Mr. Daugs confirmed for Mr. Roper that the five project sponsors (Cache Water District, Crocket Avenue Irrigation, and the cities of Logan, North Logan, and Hyde Park) will determine the preferred alternative. The matrix and options will be reviewed and discussed at the November meeting. (Action Item).

Wellsville/Mendon Watershed – this project is essentially at the same point; the timeline has been quicker because the project is simpler. This will also be discussed in more detail at the next meeting (Action Item).

Water Banking Update

Mr. Clawson advised that there should be a final draft in the next few weeks.

Taxation

The Executive group has met and decided not to increase taxes for the current year. The Board's budget meeting will be held next month (November 1). Ms. Simmonds said it is critically important to plan if an increase will be necessary. Chairman Hardman said there is a surplus this year (partly due to Covid) going into next year. The assignment of the APO subcommittees is to identify projects that should be considered. Mr. Roper asked if the no tax increase is no increase on the percentage or a "real no increase". Mr. Randall explained that the mill levy "tax rate" is accessed on the value of a property. Ms. Simmonds said the rate stays the same, but the values may be different. Mr. Randall said the legislature has it fixed so that a city can only earn so much annual income. If there is an influx of new homes, the mill levy drops to a commensurate amount.

Mr. Daugs will have Dianna Shaeffer, the County Chief Deputy Auditor, come to the next meeting to discuss this issue (Action Item). Mr. Randall said there is a need to ensure

Mike Wilson from CRS Engineers said special districts fall under the same rules as city government. From his experience, it is a combination of what has been discussed. The revenue amount is fixed so if the mill levy drops and property values increased, the same amount of taxes are collected. Any changes will have to go through the truth in taxation process.

APO REPORTS

No reports for this meeting. The next APO meetings will be held Monday, October 18 at 5:30 & 6:00 p.m.

WATER CHECK REPORT

See **-Attachment 1-**

The Board discussed the summary. Kelly Kopp will provide a final report as soon as she has all the numbers. A good way to reach out next year could be to have the City Mayors and/or City Managers get a water check. This past season, County Executive David Zook received one and was very positive. The Localscapes program (depending on Covid) is another good avenue for getting the word out.

OTHER

Mr. Daugs advised that he does not have all the collected data for the Bear River Development back yet, he will share the information when he receives it.

ADJOURN

The meeting adjourned at 6:16 p.m. for an Executive Session.

Next meeting: November 1, 2021 (Budget Hearing @ 6:00 p.m.)

-ATTACHMENT 1-

2021 Water Check Report

Prepared for the Cache Water District
Kelly L. KIopp, Ph.D., Program Administrator
Center for Water Efficient Landscaping
Utah State University Cooperative Extension

WATER CHECK PROGRAM HISTORY

Water Check programs have been conducted in the state of Utah since 1999 and began in Salt Lake City. Today, there are several Water Check programs in the state including the Cache Water District program, as well as programs in the Metropolitan Water District of Salt Lake and Sandy, the Washington County Water Conservancy District, the Weber Basin Water Conservancy District, the Iron County Water Conservancy District, and San Juan County.

In Cache County, there have been USU Extension-based Water Check programs over the past several years, but not consistently until 2020 and 2021. Last year, the program was directed out of the Cache County Extension Office. This year, the program has been directed by Utah State University's (USU) Center for Water Efficient Landscaping (CWEL).

Water Checks were conducted from July* through August of 2021, a time frame which corresponds to the availability of typical Water Check employees, who are often university students. Residential, as well as commercial/industrial and institutional (CII) Water Checks were conducted throughout the county.

**The first employee that we hired for the program this year resigned abruptly at the end of May to take another position. As a result, we had to undertake the search process again and the program started one month later than anticipated.*

THE WATER CHECK PROCEDURE

The Water Check process consists of five steps:

- Conducting a site walk-through;
- Conducting catch cup, pressure, soil/root depth tests;
- Analyzing site information and test data using a tablet-based application;
- Preparing a customized watering schedule, and;
- Explaining and summarizing Water Check results with the participant.

In order to complete the assigned tasks in the allotted time period, and as a matter of safety precaution, employees are generally assigned to work in teams of two. A full work schedule may include four residential Water Checks per workday or may include several days at an institutional or commercial site, depending on the size of the property.

WATER CHECK PROGRAM DATA

Analysis of Water Check data consists of descriptive statistics to describe the data collected and the development of statistical relationships and models for use in participant water budget development.

Data collected in the program includes, but is not limited to:

- Participant demographic information (i.e. own vs. rent, number of individuals in household);
- Landscape and parcel data (i.e. square footage of parcel, turf, hardscape);
- Irrigation system data (i.e. existing irrigation schedule, location of broken heads), and;
- Program marketing data (i.e. how did participants learn about the program).

PARTICIPATION DATA

During the 2021 season, 47 residential and 3 commercial/institutional Water Checks were conducted in the Cache Water District service area. The majority of these occurred in Logan City (40%), followed by North Logan (20%), Providence and Smithfield (each 10%), Nibley (8%), and Hyde Park, Hyrum, and Wellsville (4% each) (Figure 1).

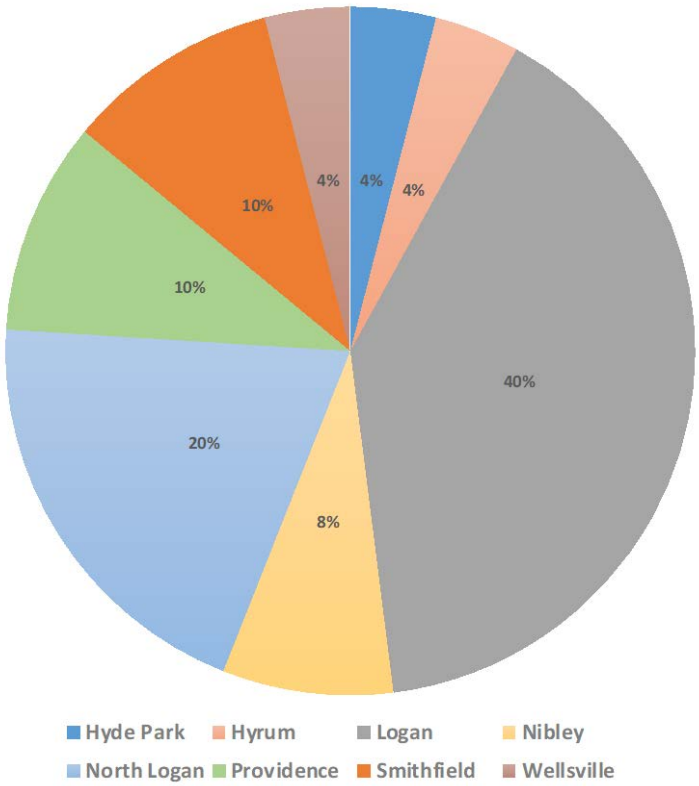

Figure 1. Participation in the Water Check program by city across Cache County in 2021.

LANDSCAPE AND PARCEL DATA

Parcel size data as it relates to landscaped and irrigated area are essential for detailed analyses of water use on a per-parcel basis. Among the 47 residential participants in Cache County, average parcel size was 20,819 ft^2 (Table 1, Figure 2), and irrigated landscape area as a percent of lot size was 62% (Table 2). Turfgrass areas ranged from 30 – 73% of total parcel size and total irrigated areas (turfgrass + other irrigated areas) ranged from 8 – 40% depending on city (Table 2).

Table 1. Average square footage of turfgrass, other irrigated, permeable non-irrigated, hardscape, total irrigated and parcel size areas by city.

	Turfgrass	Other Irrigated	Permeable/Non-Irrigated	Hardscape	Total Irrigated	Parcel Size
City (# of Checks)	***Square Feet***					
Hyde Park (2)	9331	9679	788	5656	19010	25454
Hyrum (2)	7660	1103	2169	4580	8763	15512
Logan (20)	5491	2637	2753	7164	8128	18045
Nibley (4)	6882	5323	1071	5639	12205	18914
North Logan (10)	6927	4829	1229	5375	11756	18360
Providence (5)	4729	1350	862	2631	6079	9571
Smithfield (5)*	21599	1924	339	5622	23524	29485
Wellsville (2)	13193	834	14696	2487	14026	31209
Average	9476	3460	2988	4894	12936	20819

*One property that was evaluated in Smithfield was very large (89,790 ft^2) and skewed the results for the city.

Table 2. Percentage of total parcel size of turfgrass, other irrigated, permeable non-irrigated, hardscape, total irrigated areas by city.

	Turfgrass	Other Irrigated	Permeable/Non-Irrigated	Hardscape	Total Irrigated
City (# of Checks)	***Percentage of Total Parcel Size***				
Hyde Park (2)	37%	38%	3%	22%	75%
Hyrum (2)	49%	7%	14%	30%	56%
Logan (20)	30%	15%	15%	40%	45%
Nibley (4)	36%	28%	6%	30%	65%
North Logan (10)	38%	26%	7%	29%	64%
Providence (5)	49%	14%	9%	27%	64%
Smithfield (5)*	73%	7%	1%	19%	80%
Wellsville (2)	42%	3%	47%	8%	45%
Average	44%	17%	13%	26%	62%

*One property that was evaluated in Smithfield was very large (89,790 ft^2) and skewed the results for the city.

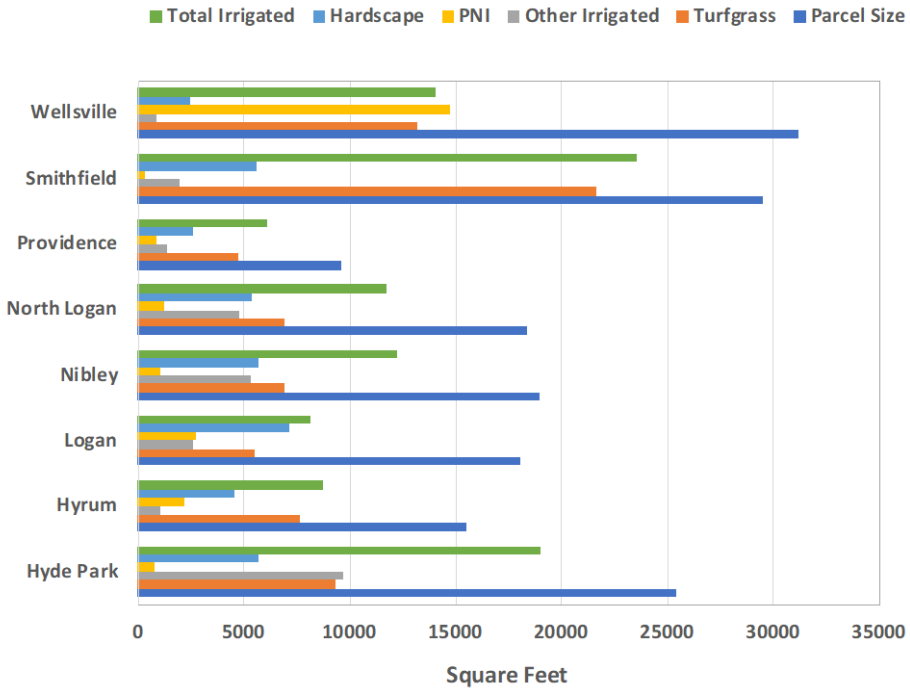

Figure 2. Square footage of total irrigated area, hardscape, permeable non-irrigated area (PNI), turfgrass, and parcel size areas by city.

In addition to residential properties, 3 commercial/institutional landscapes were also evaluated including the Whittier Center, Logan Regional Hospital, and iFit.

Table 3. Average square footage of turfgrass, other irrigated, permeable non-irrigated, hardscape, total irrigated and parcel size areas by property.

	Turfgrass	Other Irrigated	Permeable/Non-Irrigated	Hardscape	Total Irrigated	Parcel Size
Property	***Square Feet (Acres)***					
Whittier Center	28,268	6282	10,661	44,764	34,550	89,975 (1.9 A)
Logan Regional Hospital	3,732,003	13,410	*	973,538	3,745,413	4,718,951 (97 A)
iFit	437,652	*	733,812	1,407,289	1,171,464	2,578,752 (53 A)

*Area not measured.

Table 4. Percentage of total parcel size of turfgrass, other irrigated, permeable non-irrigated, hardscape, total irrigated areas by property.

	Turfgrass	Other Irrigated	Permeable/Non-Irrigated	Hardscape	Total Irrigated
Property	***Percentage of Total Parcel Size***				
Whittier Center	31%	7%	12%	50%	38%
Logan Regional Hospital	79%	.003%	*	21%	79%
iFit	17%	*	28%	55%	17%

*Area not measured.

IRRIGATION SYSTEM DATA

Water Check program employees tested the precipitation rates and distribution uniformities of testable zones for each irrigation system evaluated. Precipitation rate is the rate at which irrigation water is applied per unit of time measured in inches per hour (in/hr). Distribution uniformity (DU) refers to how evenly the irrigation system applies water to a given area and is expressed as a percentage or a decimal.

Overhead spray irrigation heads are designed to apply a continuous stream of water and are fitted with nozzles. These heads are generally designed to cover relatively small areas with spray radii between 3 and 15 feet, and a specified operating pressure between 15 and 30 psi. Spray head precipitation rates generally vary from 1 to 2.5 inches per hour.

Rotor heads provide single or multiple streams of water to the landscape and distribute water in an arc pattern, typically ranging from 40 to 360 degrees. The spray radius for most rotor heads is 20 to 150 feet with a precipitation rate between 1 to 1.5 inches per hour. Additionally, rotor heads operate under a wide range of dynamic pressures, ranging from 20 and 100 psi.

Figure 2. Examples of a rotor sprinkler head (L) and an overhead spray sprinkler head (R).

In 2021, 98 irrigation zones were tested in the Cache Water District service area. Average sprinkler precipitation rates varied by city and ranged from 0.56 to 1.24 inches. Average distribution uniformities of zones tested varied by city and ranged from 23 to 54% and were less than what is achievable according to irrigation manufacturer's specifications, regardless of head type (65% and 75% DU are considered achievable for spray and rotor heads, respectively).

PROGRAM MARKETING DATA

We asked program participants why they participated and how they learned about the service. In 2021, most participants (39%) stated that they were interested in saving water (Figure 3). A desire to gain knowledge and education about landscaping was second (32%), followed by landscape problems (12%), purchase of a new home (9%), and saving money (8%).

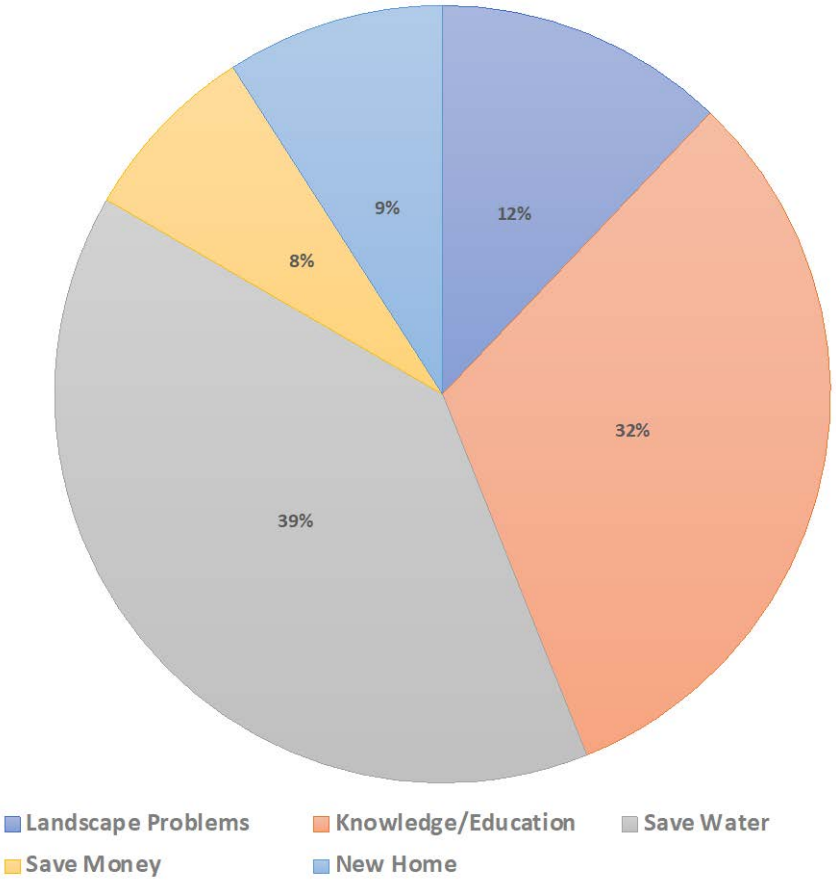

Figure 3. Reasons for participation in the Water Check Program (2021).

In 2021, most participants learned about the program through television, radio, or newspaper advertisement (33%) followed by USU Extension (23%). Others learned about the program through websites or Facebook (16%), word of mouth (12%), garden fairs or other public events (10%), or their water provider (6%) (Figure 4).

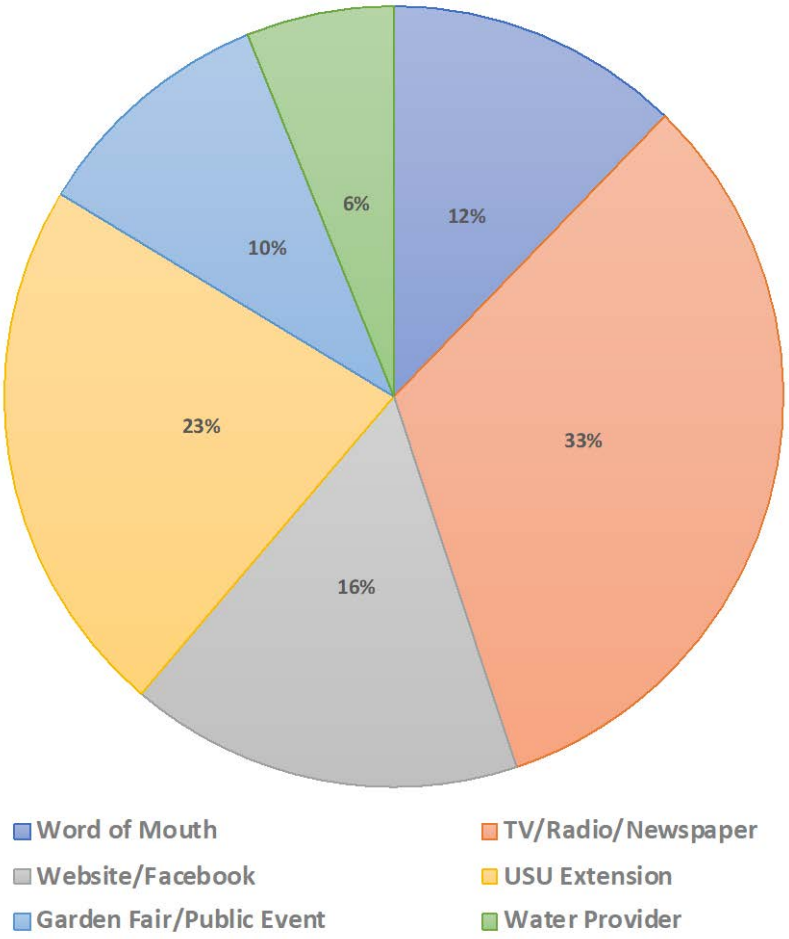

Figure 4. How participants learned about the program (2021).

Summary

The Water Check season was abbreviated this year due to personnel issues. However, we were still able to conduct 47 residential and 3 large commercial/institutional Water Checks, evaluating a total of 98 irrigation zones. We have also maintained a contact list of those requests that we were not able to complete by the end of the season.

The Checks conducted at the Whittier Center, Logan Regional Hospital, and iFit indicate that landscape managers for these larger properties are in need of, and appreciate the support, provided by the program. In the cases of Logan Regional Hospital and iFit, the landscape managers appreciated the data provided by the program, as well as the recommendations for improvements to their landscapes, irrigation systems, and irrigation controller options, and they will be using the information provided to make requests to their administrators.

Lastly, we were able to conduct the program this year using the funds left over from 2020. Therefore, we still have the funds provided by the district for 2021 available, should the District decide to continue the program in 2022.