The background of the entire page is a light blue gradient. The top half features several water droplets of various sizes, some with highlights, scattered across the space. A solid, medium-blue horizontal band spans the width of the page, containing the title text. The bottom half of the page is dominated by a large, dynamic splash of water, with multiple droplets and flowing streams, creating a sense of movement and freshness. The overall aesthetic is clean, modern, and focused on the theme of water.

WATER CONSERVATION IN PAYSON, UTAH

Implementation Guide

GENERAL INFORMATION

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INFORMATION

14-Week Trial period
May 16–August 20

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PROTOCOL ONE: INDIVIDUALIZED WATER CONSULTATIONS

The household consultations will be led by six BYU students or other volunteers. The consultants will be trained in a 5-hour training session directed by Mark Highland during the first week of May. Each consultant will learn how to advise water users on reducing secondary water usage while still maintaining the beauty of their yard.

We will randomly select 300 houses with no more than one house per block, to participate in this trial. Consultants will help the 300 random households create a customized plan detailing days of the week to water, what time of day to water, and how long to water.

The specifics of the plan will depend on the type of watering system that each house has. The consultants will use the individualized consultation plan (on page 3) to indicate which days to water, whether to water in the morning, evening, or both, and how long to water. After the consultation, the consultant will keep one copy of the form, and the participants will be given a copy.

After the plan has been completed, participants will be allowed to compete in a monthly competition for a Beautiful Yard Award. Beautiful Yard Award winners will be determined by the consultants, who will reward households that have made special efforts to follow their customized water conservation plan. 5 awards will be given out each month (20 awards total), and each winner will be

given a sign to place in their yard indicating that they have won an award.

There will be two forms of measurement throughout the 14-week trial period to see if this intervention is effective. The first form of measurement is self-reported through text messaging, while the second form of measurement will be a random check conducted by the consultants.

Self-reporting will be done via the city's text messaging system. Participants of the program will sign-up for the text messages during the water consultation. Texts will ask if the participant has followed their prescribed water conservation plan. Participants will respond with a "yes" or a "no." Participants who do not have text messaging will be called or emailed by a Payson city employee.

To help ensure that household self-reporting is accurate, random checks will be conducted by the consultants on a nightly basis, checking to see if yards have been watered recently. Participants in this trial will be notified in advance that random checks will be conducted throughout the entire summer.

Consultants will use a Dr. Meter Moisture Sensor Meter to measure water content in the soil of each yard. Each house will be checked by the consultants once a month.

CITY OF PAYSON



*Beautiful Low-Water
Yard Award*



PERSONAL WATER CONSERVATION PLAN FOR:

Enio Pinto

WHEN

TIME

LENGTH

Monday

AM

Tuesday

PM

Wednesday

Thursday

Friday

Saturday

Sunday

30 min

PERSONAL WATER CONSERVATION PLAN FOR:

Jenny Ostraff

WHEN

TIME

LENGTH

Monday

AM

Tuesday

PM

Wednesday

Thursday

Friday

Saturday

Sunday

10 min

15 min

PROTOCOL TWO: WATERMOMETER

The City of Payson will inform its citizens of the total amount of water the city can use during the summer, and will update them on its usage on a monthly basis. The intention of this program is to put citizens in control of water usage, encourage a sense of ownership, emphasize losses to discourage water waste, and provide immediate and ongoing feedback.

We will randomly select 300 houses to receive monthly postcards describing the city's level of water consumption. The visual description will be printed on the postcard as the city's "water-meter." The postcard will be mailed to these households containing tips on how citizens can conserve water. It will also include a message on

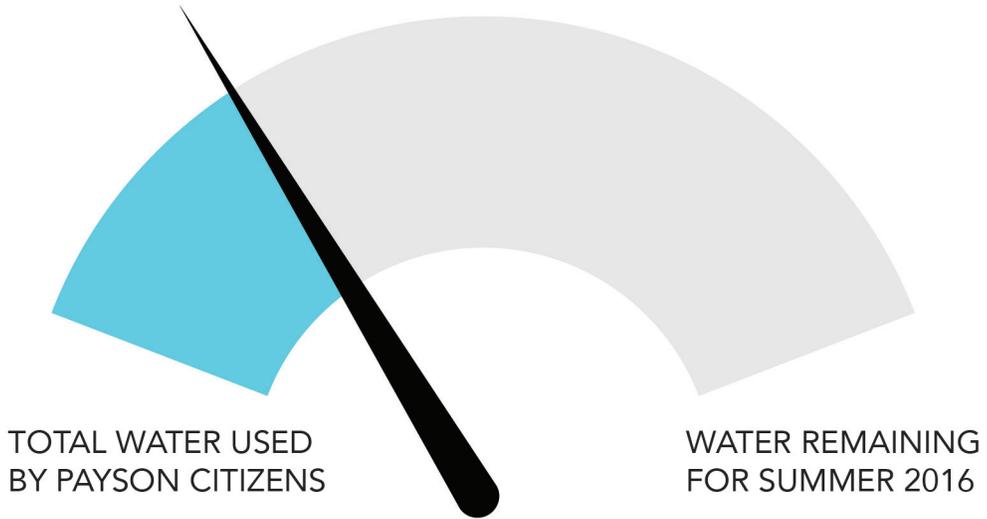
the rate of consumption, identifying when the city expects to achieve warning levels with the current rate of consumption.

The water usage for these 300 houses will be measured by the BYU students at the same time that they are measuring water usage of the other trial participants. Measurements will be collected at random, just as the measurements are collected for the other houses. There will be no self-reported water usage for this group.

Additionally, we will look at culinary water usage for these houses, under the assumption that culinary and secondary water usage correlate with each other.

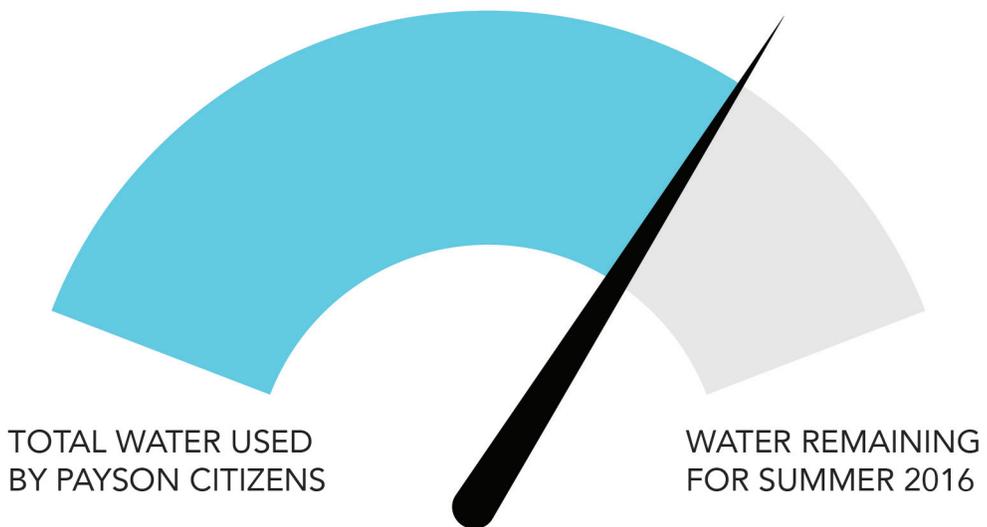
PAYSON CITY WATERMOMETER

JUNE 2016



PAYSON CITY WATERMOMETER

AUGUST 2016



CONTROL GROUP

We will randomly select 300 houses as our control group. These 300 houses will not participate in any of the trials, but we will measure their water use throughout the summer.

The water usage for these 300 houses will be measured by the BYU students at the same time that they are measuring water usage of the trial participants. Measurements will be collected at random, just as the measurements are collected for the other houses. There will be no self-reported water usage for the control group.

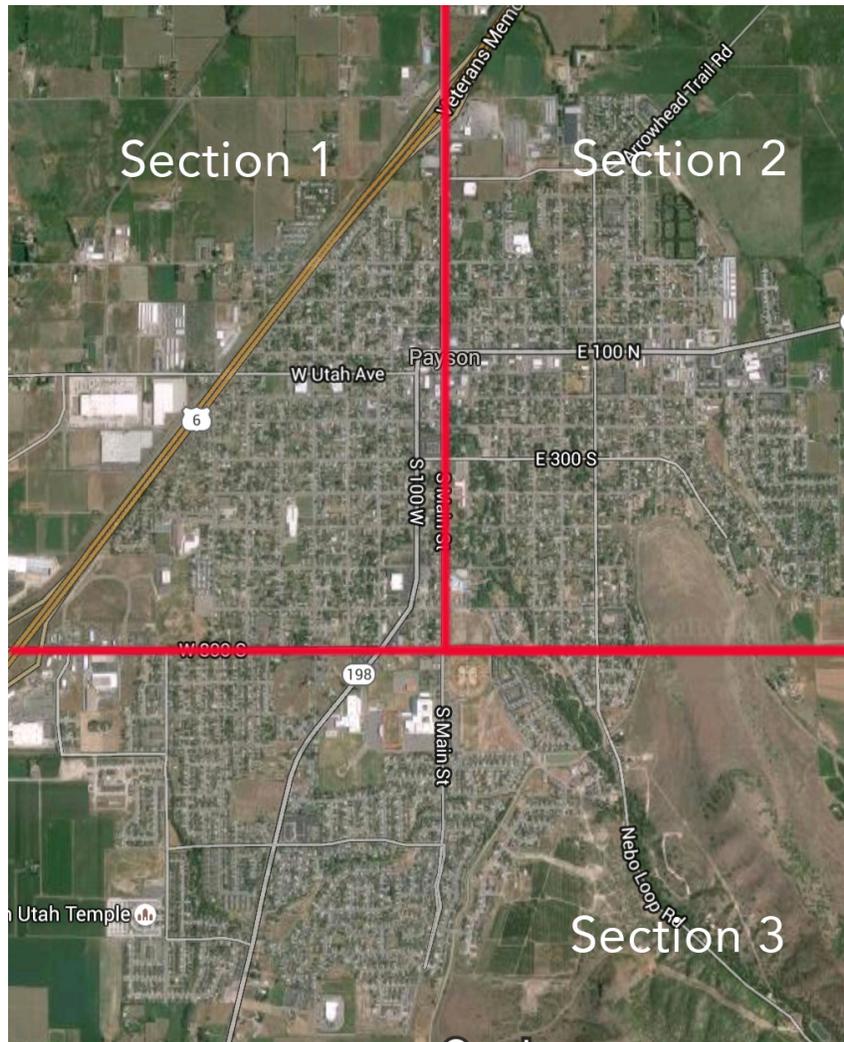
Additionally, we will look at culinary water usage for these houses, under the assumption that culinary and secondary water usage correlate with each other.

SCHEDULE: RANDOM HOUSEHOLD CHECKS

	M	T	W	TH	F	S
STUDENT 1	1 hr.					
STUDENT 2		1 hr.				
STUDENT 3			1 hr.			
STUDENT 4				1 hr.		
STUDENT 5					1 hr.	
STUDENT 6						1 hr.

Each student consultant will spend roughly one hour, one night per week, checking to see if lawns have been recently watered. No measurements will be collected on rain days, or the day immediately following a rain day. Students who did not conduct house checks on their assigned day because of rain or other conflicts, will need to conduct their house checks on another night of the week. All participants in either a trial or the control group will need to be checked at least once per month.

CHOOSING TRIAL PARTICIPANTS



The city will be divided into three sections. Within each section, 100 houses will be randomly selected to participate in the water consultation trial, 100 houses will be randomly selected to participate in the watermeter trial, and 100 houses will be randomly selected as our control group. Data will be gathered from a total of 900 houses during the 14-week trial period.

PAYSON'S RESPONSIBILITIES

COSTS:

1. 20 Beautiful Yard Award yard signs.
\$100 total from imprint.com
2. Dr. Meter Moisture Sensor Meter
\$25 from amazon.com
3. Printing 900 postcards (300 each month)
\$189 from vistaprint.com
4. Mailing 900 postcards (300 each month)
\$300 for postcard stamps

OTHER RESPONSIBILITIES:

1. Provide a 5-hour training, taught by Mark Highland, during the first week of May.
2. Oversee the collection of text message responses. Communicate responses to the BYU students.
3. Collaborate with the BYU students to award both the Beautiful Yard Awards and the weekly lottery prizes.
4. Collaborate with BYU students to print and mail 900 postcards.
5. Provide information about culinary water usage for the watermometer group and the control group.

Designed by Jenny Ostraff and Enio Pinto, BYU MPA 2016
some images used in this guide were adapted from freepik.com images