

Project Status Report: CEEEn-2018CPST-004

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Project Title: Spanish Fork Irrigation-Water Conservation Study

1) Summary of technical/non-technical challenges encountered

- We encountered problems with knowing what data we wanted to use for comparison between water usage before the sprinkler controllers were installed and the water usage after. We know that the data that the city had collected in past years was not as accurate as it is now, so we were not sure how helpful it would be. In addition, because all the Rachio sprinkler controllers were installed during this summer, we have limited data to analyze that is “post-installation.” Finally, we are not sure how certain environmental factors (e.g. hot weather, rain) would affect the comparison between pre- and post-Rachio.

2) Team approaches & resolutions to overcome challenges

- We discussed and decided the best data comparison would be to compare June 1-3, 2018 to August 27-29, 2018 because this is accurate data from this year representing before and after the sprinkler controllers were installed. In comparing to previous years, we decided we would obtain data from those days (6/1-6/3 and 8/27-8/29) from the past 5 to 10 years to create a robust comparison between how water usage per capita has existed in past years, and how that compares to this year’s data which includes the integration of the smart irrigation controllers.
- We have scheduled a meeting with John Waters, the water department division manager, in order to get the SCADA data from these previous years. Although the data of last year won’t be as accurate as the data from this year, we are not comparing 2017 data directly to 2018 data. Because we are comparing June 2017 to August 2017, both will have the same level of error and we can obtain a percent difference between them that will be comparable to 2018.

3) Status of challenge resolutions & potential project impact

- Our meeting with John is scheduled for October 2, 2018. In collecting this data, we will be able find a percent difference between how people were using water in June versus August. This difference will help us to create a percent correction factor that we can apply to one of the graph and more directly compare the demand curve shape. Through comparison, we can see to what extent peak reduction has been achieved, which peak reduction is very important to Spanish Fork City.

4) Project status & summary

- We are in the data collection stage in which we are determining how we want the data organized and gathering previous year’s data. Then we can compare it to this year’s data which we already have.