



July 19, 2023

TO: Utilities Advisory Committee
FROM: Ron Munds, General Manager
SUBJECT: **Agenda Item 4 – 07/19/2023 UAC Meeting**
SLO County Water Offset Study Review

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DESCRIPTION

The San Luis Obispo County (County) Planning and Building Department commissioned a study to evaluate the Water Offset Program (retrofit-to-build) for the community of Los Osos. The program requires that new development offset twice its estimate water demand (2:1) to avoid increasing groundwater pumping. This report summarizes the results of the study.

STAFF RECOMMENDATION

Provide comments and direction to staff.

DISCUSSION

Background

The County's Planning and Building Department (Department) commissioned a study in 2022 to evaluate the Water Offset Program, also known as the Retrofit-to-Build Program, for the community of Los Osos. The purpose of the study was to inform the Department's land use and water resource planning efforts in Los Osos. The primary objective was to identify the remaining retrofit opportunities in the community, evaluate and quantify the water savings potential of these retrofits and look at any improvements that could be made to the program to enhance its overall effectiveness.

Currently, the program is limited to project applications outside the sewer prohibition zone. This means offsets (retrofits) must come from existing developments outside of this area. The County's consultant, Maddaus Water Management (Maddaus), used fixture tracking data from various County water conservation programs dating back to 2008 to estimate the saturation level of higher efficiency plumbing fixtures basin-wide. Five years of water consumption data was provided by the three water purveyors in order to calculate a baseline for the different customer types, i.e. single family, multi-family, commercial, etc.

The study concludes that there is a 118 acre-feet per year (AFY) of water saving potential remaining in the community. Indoor accounts for 84 AFY and outdoor 34 AFY.

Historical Water Conservation Measures Evaluation

A saturation analysis for plumbing fixture retrofits was completed by Maddaus for residences with the Los Osos groundwater basin. The analysis was to help determine the effectiveness of past retrofit efforts and provide information to

assess the remaining water savings potential from future plumbing retrofits. The Section 3 report summarizes the results of the analysis and is summarized in the report as follows:

Most toilets were documented to have a flow rate of 1.6 gpf (69% of total toilets for single-family and 75% for multi-family). Approximately 879 toilets remain outside of the sewer service area with a flow rate of 3.5 gpf or higher. Most showerheads have a flow rate of 2.0 gpm (73% of total showerheads for single-family and 80% for multi-family), with only approximately 479 remaining at a flow rate of 2.5 gpm or higher located outside of the sewer service area. Most clothes washers appear to have been retrofitted to an Energy Star Integrated Water Factor less than 4.0 (62% of total clothes washers for single-family and 86% for multi-family). Approximately 2,150 washers remaining at 4.0 or higher; these are found mostly within the sewer service area.

Average Annual Residential Water Use Estimates

Estimates for indoor and outdoor water use were established from the data with a unit of gallons per day per single and multi-family households. The self-source category refers to property served by private wells. Appendix C explains in detail how the estimates were derived. The following table from the study summarizes the results of the analysis:

Residence Type ¹	Water Source	Indoor ²	Outdoor ³	Total
SF	Water Purveyor	92	36	128
	Self-Source		298	390
MF	Water Purveyor	58	43	100
	Self-Source		54	112

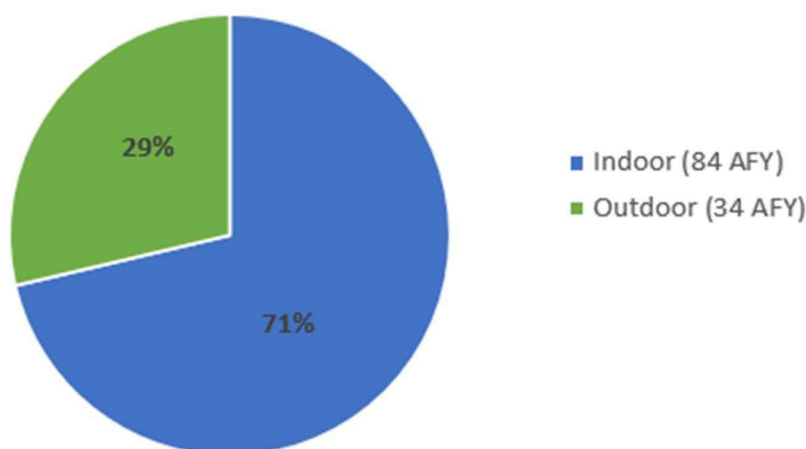
Notes:

1. SF = Single Family. MF = Multi-family. Mobile homes are considered MF units.
2. Indoor use is considered to be water use for lowest winter month based on billing consumption data analysis.
3. Reference Appendix C for basis of outdoor self-supplied water use estimates.

Water Savings Potential

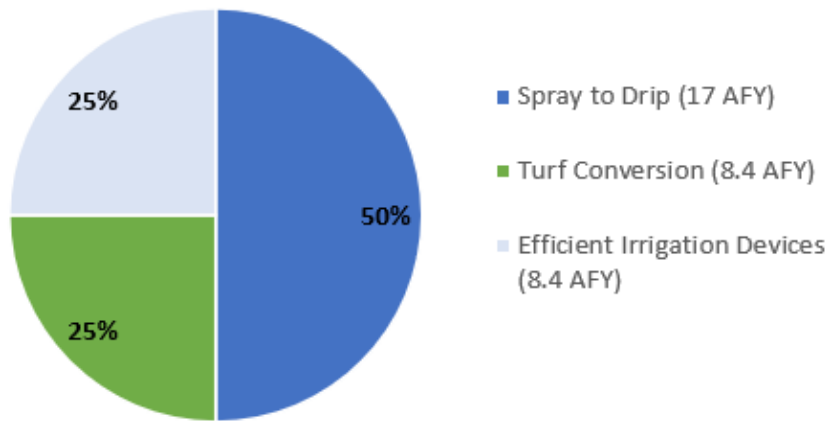
Section 5 of the report provides a detailed explanation of the methodology used to calculate the potential water savings for both indoor and outdoor water use. A summary of the results of the analysis is as follows:

Overall Water Saving Potential

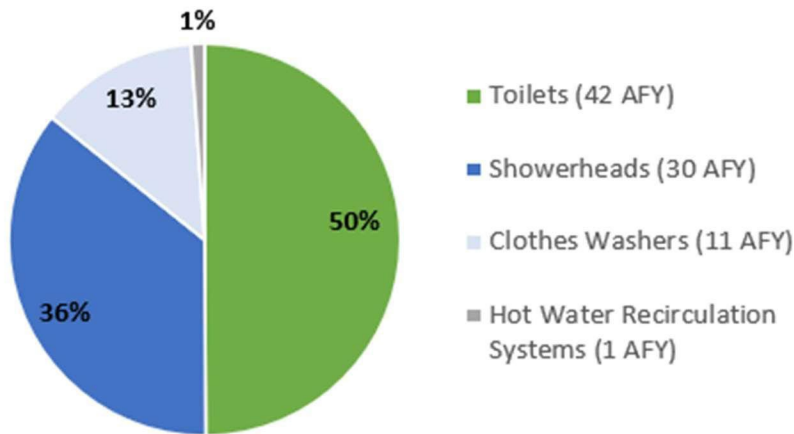


The report breaks down the estimated outdoor and indoor water savings as follows:

Estimated Outdoor Residential Water Savings Potential

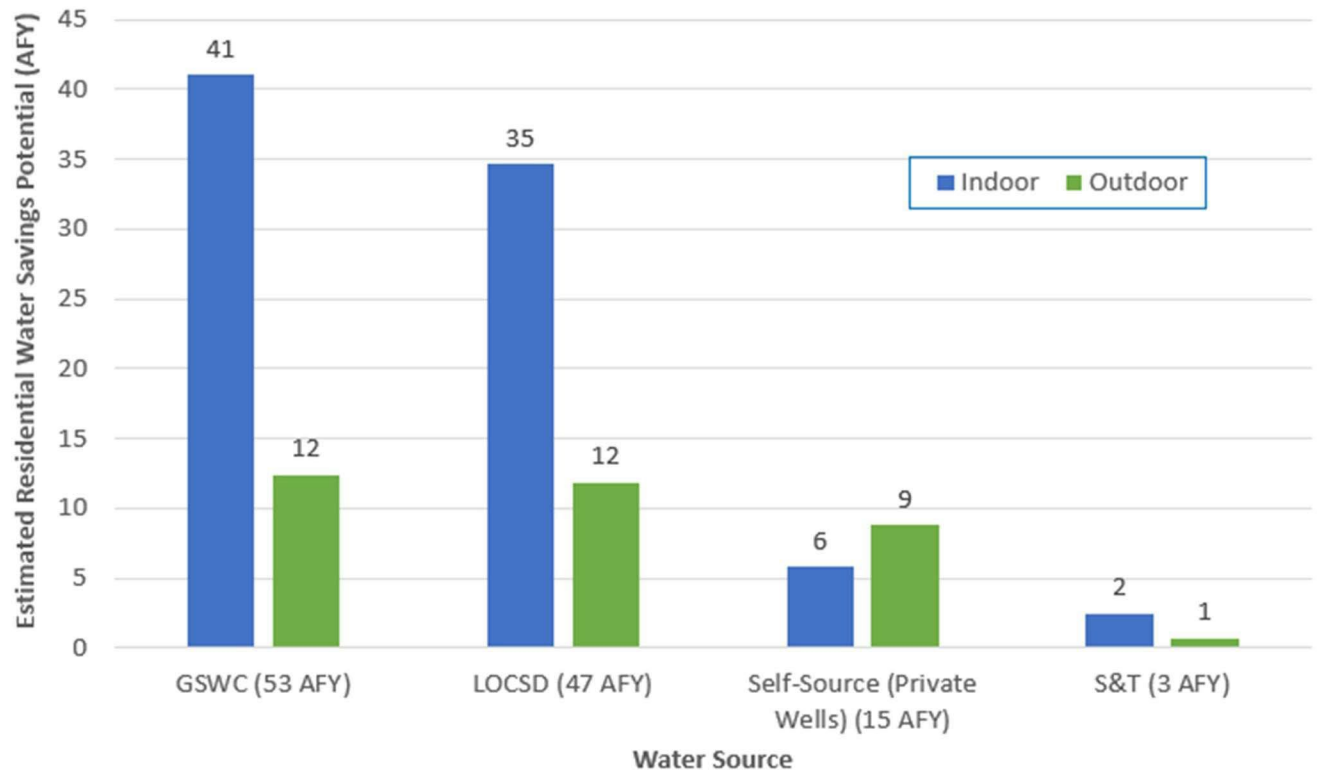


Estimated Indoor Residential Water Savings Potential



For comparison purposes, the report does provide water saving estimates for inside and outside the prohibition zone with the largest saving in the prohibition zone.

Finally, the report breaks out the estimated water savings by purveyor for indoor and outdoor uses. The following table summarizes the data:



Offset Program Recommendations

In Section 6, Conclusions and Next Steps, Maddaus makes several recommendations to improve or enhance the program. They include:

- Update required water offset for new residences;
- Update estimated plumbing fixture daily use rates;
- Allow additional indoor toilet and showerhead retrofits within the PZ;
- Include outdoor water conservation measures with sufficient verification of continued water savings; and
- Monitor water use trends.

Also in Section 6, there are recommendations for verification of the water savings from the program. This has been a major point of discussion through the whole process and key to the program's future success.

Attachment

Final Los Osos Water Offset Study