

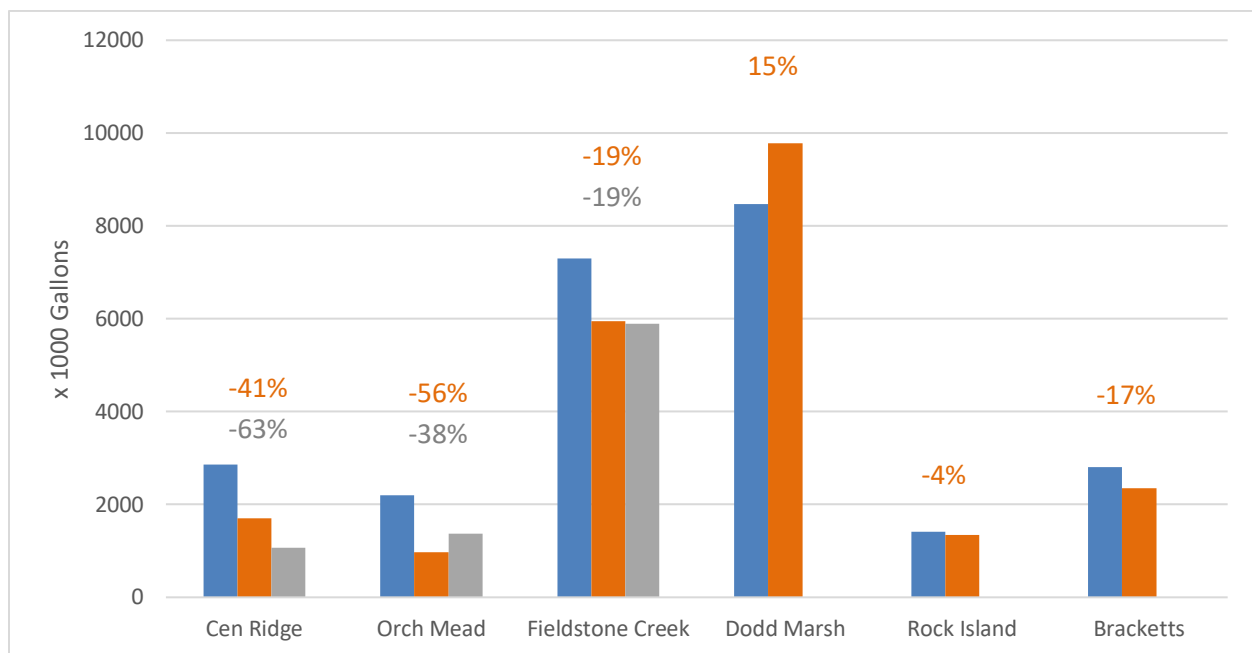


Irrigation Audit and Improvement Program Analysis

Water Use Pre/Post Audit

VRWJPO staff evaluated the irrigation water use reduction at HOAs after irrigation system audits (orange bars and percentages) and irrigation system improvements (gray bars and percentages) compared to average historical water use (blue bars). With the exception of Dodd Marsh, the data in the graph below indicates that water use after audits and/or improvements is less than historical water use.

Staff are continuing to investigate why the Dodd Marsh HOA saw a percent increase in water use post-audit compared to all other associations evaluated. A recent conversation with the property management company representing Dodd Marsh HOA indicated that the HOA fired their landscape maintenance contractor in late 2021 due to perpetual issues regarding lack of maintenance and cost increases. While there's no certainty the performance of the landscape maintenance contractor resulted in the increased water use, staff will evaluate water use after the 2022 growing season to determine if options exist for the HOA to reduce overall water use.



Water Use and Return on Investment

Based on the results of the percent water use reductions for the HOAs shown above, and assuming the Lakeville rate of \$5.64/1,000 gallons of water, the “return on investment” (ROI) is 1,102%. Another way to consider this is for every \$1 of public (VRWJPO and City) investment in audits and/or improvements, the HOAs are able to save approximately \$11 in water costs, assuming a life expectancy for audits/improvements of ten years.

Water Conservation and Water Use Targets

The VRWJPO and its partners want to assist water users in applying the precise amount of water needed for healthy turfgrass. Turfgrass requires approximately one inch of water per week during the growing season. If the turfgrass need is the target for water use (green line), we can evaluate how much precipitation fell (orange bars) plus the amount of irrigation water applied (gray bars) to determine if the water use is above, at, or below the target turfgrass need.

Only two HOAs have two or more growing seasons of water use post-audits/improvements, so those HOAs were chosen to be the best representation of “long-term” water use to meet the turfgrass need. The tables below show that following the improvements to the Century Ridge HOA, the irrigation system used the target or below-target amount of water in order to meet the turfgrass need. More evident is the Orchard Meadows HOA where post-audit/improvement data indicate the amount of irrigation water used to supplement precipitation was very precise in 2020 and 2021.

