



From Audit to Upgrade:

# Certified Irrigation Professional Harvests Gold From Water-Saving Products

## Project Summary

The residential community of Harvest Gold Village improved the appearance of its landscape and reduced outdoor water waste using a grant from Northern Colorado Water Conservancy District. By implementing the recommendations of an irrigation professional certified by a WaterSense® labeled program and incorporating WaterSense labeled irrigation products, Harvest Gold saved more than \$22,500 in water bills in the first year of the project.

## Background

Harvest Gold Village, located in Loveland, Colorado, struggled with irrigation issues such as dry spots and streaks that resulted from inconsistent watering patterns across the turfgrass in their common space. The village's water use and costs were also on the rise. In spring 2019, the homeowners' association (HOA) began to address these issues by arranging for a landscape consultation through the Colorado State University Extension's onsite Lawncheck program. Next, Harvest Gold received an irrigation audit from the City of Loveland, conducted by the local nonprofit Resource Central, which recommended correcting sprinkler head orientation and replacing or repairing broken sprinkler heads. To address these findings, the HOA applied for and received assistance from the Northern Colorado Water Conservancy District's Collaborative Water-Efficient Landscape Grant Program, which provides consultation and funding for new or redeveloped water-efficient landscapes that use plants, designs, and equipment suited to the local climate. Grant recipients must provide an equal match for the funding.

## Professionals and Products

Harvest Gold needed a professional to help guide their project, so they turned to Aaron Sall from the landscape company Ideal Irrigation, which specializes in upgrading irrigation systems to make them more efficient. Sall is a Certified Landscape Irrigation Auditor (CLIA) through the Irrigation Association's WaterSense labeled program. The U.S. Environmental Protection Agency's WaterSense program labels professional certification programs for irrigation auditors, designers, and installation/maintenance professionals.



## Case Study Highlights

- **Property:** Harvest Gold Village
- **Location:** Loveland, Colorado
- **Vegetated area:** 16.4 acres
- **Number of homes:** 194 homes and two apartment complexes
- **Preliminary cost savings:** Over \$22,500 in the first year of the project
- **WaterSense labeled products:** Spray sprinkler bodies and weather-based irrigation controllers
- **Professional certified by a WaterSense labeled irrigation program:** Aaron Sall, CLIA

## Certified Irrigation Professional Harvests Gold From Water-Saving Products

Based on his review of Resource Central's audit, an onsite inspection, and knowledge of WaterSense labeled irrigation products, Sall recommended replacing specific irrigation system components with WaterSense labeled models, which are independently certified for efficiency and performance. He also reviewed Harvest Gold's water use records and suspected that there was a leak in the system, which he subsequently confirmed with a leak detection service.

In summer 2020, Sall installed nearly 600 WaterSense labeled spray sprinkler bodies throughout the property to address the fact that the water pressure to the sprinkler nozzles was higher than recommended for the irrigation system. WaterSense labeled spray sprinkler bodies regulate system pressure, ensuring a more constant flow to the nozzles and reducing overspray, misting, and fogging. The contractor attached high-efficiency nozzles to the labeled sprinkler bodies to maximize efficiency. High-efficiency nozzles distribute water at a slower flow rate than conventional nozzles, creating larger droplets that more effectively reach the plants. Sall also added 10 WaterSense labeled weather-based irrigation controllers, which automatically align watering schedules with local weather data and landscape conditions.



Aaron Sall, Ideal Irrigation, CLIA

In addition to upgrading Harvest Gold's irrigation system components, the contractor changed the irrigation schedule from a single irrigation event per cycle to a cycle-and-soak pattern that reduces water runoff and better suits the clay soil in the Village. He adjusted the sprinklers to ensure that water did not land on pavement, which causes runoff, and he located and fixed the leak in the mainline.

After completing the project, Harvest Gold hired Sall as the community's irrigation maintenance contractor to ensure the water efficiency improvements continue.

### Results

Harvest Gold saved nearly 4.4 million gallons of water in the first year of the project, most of which was related to repairing the leak. With these improvements, the HOA was able to keep its existing landscape features while saving water and money.



Before upgrades: Dry patches in turfgrass



After upgrades: Healthier turfgrass with reduced water use

## Lessons Learned

The Harvest Gold Village HOA learned a lot and realized savings by hiring a certified irrigation professional. Following are some of the lessons they learned:

- **Seek multiple sources of funding and support.** Explore all funding opportunities as part of the planning process. Many local organizations like Northern Water may offer resources to support a project focused on water efficiency and conservation.
- **Audit first, action second.** Conduct an audit as the first step toward improving water efficiency. Carefully review the audit results with your contractor and identify ways to address them.
- **Go with a pro.** Hiring an irrigation professional certified by a WaterSense labeled program ensures that water efficiency is top of mind. These professionals have demonstrated knowledge of water-efficient technologies and techniques, and they can recommend WaterSense labeled products suitable for your irrigation system, soil type, and landscape.
- **Maintain savings.** Irrigation systems need to be maintained or upgraded over time to stay efficient. A certified irrigation maintenance professional can provide long-term service.
- **Don't sacrifice aesthetics.** With the proper changes, the landscape can look as good or better than before. It's possible to implement water efficiency improvements that maintain the desired landscape features while also saving water.

## Acknowledgements

The U.S. Environmental Protection Agency's WaterSense program would like to thank Frank Kinder and Chad Kuhnel of the Northern Colorado Water Conservancy District and Tom Culbertson of the Harvest Gold HOA for providing information and images for this case study.

## Learn More

Visit <https://www.epa.gov/watersense/watersense-labeled-controllers> to learn more about WaterSense labeled irrigation controllers or <https://www.epa.gov/watersense/spray-sprinkler-bodies> to learn more about WaterSense labeled spray sprinkler bodies. For information on irrigation professionals certified by a WaterSense labeled program, visit <https://www.epa.gov/watersense/irrigation-pro>.

