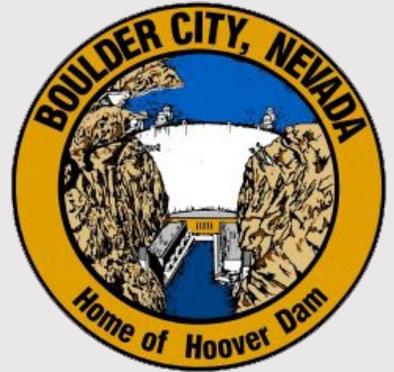


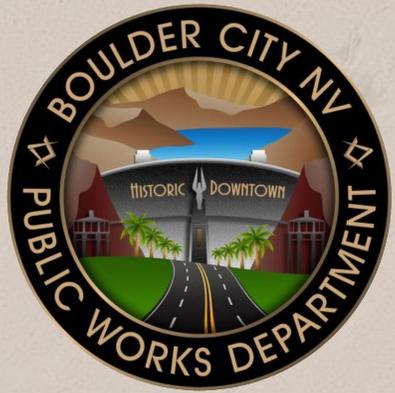
Boulder City Municipal Golf Course Turf Reduction & Irrigation Design



LAGE
design

LANDSCAPE
ARCHITECTURE
PLANNING

August 27, 2024





PROJECT OVERVIEW

- Turf Reduction
- Replacement of Irrigation System
- Dying Tree Removal in Turf Removal Area
- SNWA Rebate and Incentive Program

EXISTING CONDITIONS



7/15/24 OPEN HOUSE PLAN



Turf to be Removed: 39.0 Acres

Turf Remaining: 94.0 Acres

2025 SNWA Water Budget: 532 AC-FT (4 AC-FT/AC)

Estimated Water Consumption: 162M Gallons (499 AC-FT)

Estimated Savings: 40%



10' PERIMETER and DRIVING RANGE ONLY



OPTION COMPARISON MATRIX



MUNICIPAL GOLF COURSE IRRIGATION REPLACEMENT AND TURF REDUCTION

B.C. Project No. 22-1154-LS

Options with 15% Irrigation Efficiency Increase

8/13/2024

Option Description	Acres of Turf Remaining	Estimated Annual Water Usage in Gallons (ac-ft)	Potential Fine for Water Use Over 4 ac-ft/ac (532 ac-ft)	*Potential Cost of Fine Per Round of Golf (2023 Rounds)	Pros	Cons
Existing Condition (Based on 2023 Water Use)	133	270,576,895 (830.37)	\$524,145.62	\$8.82	No change to existing conditions. No turf reduction. No existing tree removal and replacement.	No water savings. Outdated and inefficient irrigation system remains. Potentially increased water use as system continues to age and deteriorate. Overspray onto private property. Uses significantly more than 4.0 ac-ft-acre to water turf resulting in fines. If 4.0 ac-ft-ac water budget is enforced course condition will suffer. SNWA rebate may not be available if turf is required to be removed in the future.
Irrigation System Replacement Only (based on 2023 Water Use)	133	229,990,361 (706.23)	\$191,299.68	\$3.32	Estimated 15%-20% increase in irrigation system efficiency, water savings. No existing tree removal and replacement. New irrigation heads will help reduce overspray onto private property.	Irrigation still adjacent to private property (potential for overspray). Uses significantly more than 4.0 ac-ft-acre to water turf resulting in fines. If 4.0 ac-ft-ac water budget is enforced course condition will suffer. Adds cost for future project should turf need to be removed. SNWA rebate may not be available if more turf is required to be removed in the future.
Irrigation System Replacement, Remove +/- 10' adjacent to property lines, and the Driving Range replaced with artificial turf (Based on New Irrigation System Water Use Estimate)	121	209,362,801 (642.51)	\$90,779.04	\$1.53	Significantly reduces overspray onto private property. Reduces potential water damage to private property (walls, pool deck, etc.). Reduces existing tree removal and replacement.	Uses more than 4.0 ac-ft-acre to water turf resulting in fines. If 4.0 ac-ft-ac water budget is enforced course condition may suffer. Possibility of mature trees dying in turf removal areas due to shock. Adds cost for future project should turf need to be removed. SNWA rebate may not be available if more turf is required to be removed in the future.
Open House Plan, Irrigation System Replacement and Turf Reduction (Based on New Irrigation System Water Use Estimates)	94	162,645,482 (499.14)	\$0.00	\$0.00	Meets SNWA Water Budget. Opportunity to save the most water. Provides the best golf course condition. Up to 32.86 ac-ft of additional water available annually for turf but still meets the SNWA water budget.	Tree removal and replacement in turf reduction areas. Possibility of mature trees dying in turf removal areas due to shock.





NEXT STEPS

- Council Direction on which Option to Proceed to Final Design
- Final Design and Construction Documents
- Advertise for Bid by 1st quarter of 2025
- Begin Construction in 2nd quarter of 2025