

APPENDIX C

Landscape Irrigation and Water Budget Standards

1. Purpose and Intent

The purpose of this regulation is to establish landscape irrigation standards that promote sustainable, mountain-appropriate landscaping while ensuring compliance with the HOC's outdoor water use limitations. These standards are intended to balance aesthetic quality with responsible water use consistent with Aldasoro Ranch's high-alpine environment.

2. Applicability

This regulation applies to:

- All new construction landscape plans
- All major landscape renovations requiring DRB approval
- Any installation or expansion of irrigated areas
- Any project requiring irrigation system installation or modification

3. Maximum Outdoor Irrigation Allocation

3.1 Monthly Water Budget

Outdoor irrigation is limited to 4,000 gallons per month per lot. This allocation includes all irrigation water used for sod grass, Trees, Shrubs, Perennials, etc.

All landscape water budget calculations shall use conservative water demand assumptions reflecting high alpine conditions, including wind exposure, solar intensity, and low soil moisture retention. The DRB reserves the right to require increased water use assumptions when evaluating compliance with the 4,000-gallon monthly irrigation limit.

3.2 Compliance Standard

Landscape plans shall be designed such that total estimated monthly irrigation demand does not exceed 4,000 gallons during peak irrigation months (June–August).

4. Landscape Design Requirements

4.1 Plant Selection

Landscape plans shall prioritize Native or Colorado-adapted species that utilize low- to moderate-water-use vegetation. Drought-tolerant plants are encouraged. High-water-demand species shall be limited and may be denied where inconsistent with this policy.

4.2 Sod Grass Limitations

Sod grass is considered a high water-use element and shall be limited as follows:

- Sod areas should be minimized and used only for functional purposes
- As a guideline, 500 sq. ft. of sod may consume approximately 500–1,100 gallons per month during the irrigation season
- Large sod areas may be denied if they compromise compliance with the 4,000-gallon limit

4.3 Irrigation System Requirements

All irrigation systems shall: 1) Utilize drip irrigation for shrubs and trees wherever feasible, 2) Minimize overspray and runoff, 3) Be designed for hydrozoning (grouping plants with similar water needs), 4) Include automatic controllers with seasonal adjustment capability.

4.4 Mulch and Soil Management

- All planting beds shall include mulch to reduce evaporation
- Soil amendments are encouraged to improve water retention
- Exposed soils without mulch may be subject to correction

5. Landscape Water Budget Submittal Requirements

Applicants shall provide a Landscape Water Budget Estimate including the number and type of trees and shrubs. Include the total square footage of proposed sod areas. Include estimated monthly water demand (gallons).

5.1 Planning Water Use Reference Table *Note: Following values are planning estimates. Actual water use varies based on exposure, soils, precipitation, and irrigation efficiency.*

Plant Type	Planting Year (gal/month)	Established (gal/month)	Notes
Native shrubs (low water)	40–70	20–35	Wind and shallow soils significantly increase demand
Native shrubs (moderate water)	60–100	30–50	Use selectively; sensitive to exposure
6' Aspen tree	80–120	100–140	Aspen requires consistent moisture; high risk in dry sites
6' Spruce tree	70–110	80–120	Deep watering required; wind

			exposure increases need
Sod grass (500 sq. ft.)	900–1,500	900–1,500	High evapotranspiration; irrigation efficiency critical

5.2 Compliance Review

If the submitted plan appears likely to exceed the water budget, the DRB reserves the right to: 1) Require revisions to planting plans, 2) Reduce sod areas, 3) Require substitution of plant species, 4) Require additional efficiency measures.

6. Establishment Period Considerations

6.1 Temporary Increased Demand

New plantings require additional water during the establishment period (typically 1–2 growing seasons). To address this:

- Temporary exceedance of 4,000 gallons may be considered only if:
 - Justified in the submittal
 - May not exceed 2 growing seasons.
 - May not exceed double the 4,000 gallon maximum allowance

7. Temporary Revegetation and Irrigation Allowance

Temporary revegetation is intended to stabilize disturbed soils, reduce erosion, and re-establish vegetative cover following construction or land disturbance. This section allows for a limited, short-term increase in total outdoor water use to support successful establishment.

7.1 Maximum Allowable Use (Total Outdoor Use Cap)

During an approved temporary revegetation period total outdoor water use per lot, including all irrigation for revegetation, landscaping, sod, trees, and shrubs, shall not exceed 8,000 gallons per month.

This represents the maximum allowable use and is equal to two (2) times the standard 4,000-gallon monthly irrigation limit.

7.2 Duration of Allowance

- Limited to one (1) to two (2) growing seasons, unless otherwise approved
- The DRB may assign a specific expiration date
- Upon expiration, total outdoor irrigation must return to the standard 4,000 gallons per month limit

8. Precipitation Consideration

Landscape design shall account for natural precipitation, but rainfall shall not be relied upon as the sole water

source. Irrigation systems shall be designed to meet plant needs during dry periods. Overplanting based on assumed rainfall is discouraged.

9. Prohibited Practices

The following are prohibited:

- Irrigation systems that produce excessive runoff or overspray
- Sod installation beyond reasonable functional use
- Planting plans that clearly exceed water budget limits
- Use of invasive or non-adapted species requiring excessive irrigation

10. Monitoring and Enforcement

10.1 Compliance Monitoring

The HOC may monitor outdoor water use through 1) Water meter data, 2) SCADA or metering systems, 3) Visual inspection of irrigation practices.

10.2 Enforcement

Failure to comply with this regulation may result in a notice of violation and requirement to modify landscaping or irrigation systems. Fines in accordance with HOC enforcement policies may be implemented or a suspension of irrigation privileges if necessary.

11. Effective Date

This regulation shall become effective upon approval by the HOC Board and shall apply to all applicable applications submitted thereafter.