

Update on Section 6 - Landscape and Irrigation Criteria

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Why a landscape and irrigation criteria?



**Colorado River water shortages
highlight the urgency of reducing
water waste**

**How low can the Colorado River go?
Drought forces states to face tough
choices about water**

Interior Secretary: Drought Demands
Investment, Conservation

**Water conservation
is a cornerstone of
long-range supply
planning.**



Why a landscape and irrigation criteria?

Sec. 6 Design Criteria follows:

- **CRS 1973 § 31- 23-207, revised 1977**
- **City Ordinance 40, 2015 - Landscape Policy Plan for Water Efficiency**
- **2015 Water Conservation Plan (and 2022 Draft Water Use Efficiency Plan)**
- **2018 Greeley Comprehensive Plan**
- **Supports current Greeley Municipal Code Chapter 8 - Landscape Standards**



Section 6

Landscape and Irrigation

New Criteria:

- **Supports existing City Plans**
- **Promotes water conservation**
- **Guides non-residential landscape design**
- **Supports attractive and sustainable landscapes**

Applicable to:

- **Common areas**
- **Right-of-ways**
- **Municipal buildings**
- **Non-residential (commercial/industrial)**
- **Multi-family residential**



Section 6-Landscape and Irrigation

Hydrozones


- An area within a landscape where the plant materials require a similar amount of water.
- Four different hydrozones:
 - Very Low, Low, Moderate and High
- Hydrozone breakdowns are the same as the irrigation water dedication requirements outlined in code
- Grouping plantings by hydrozone reduces overwatering



Section 6-Landscape and Irrigation

Water Budget Chart

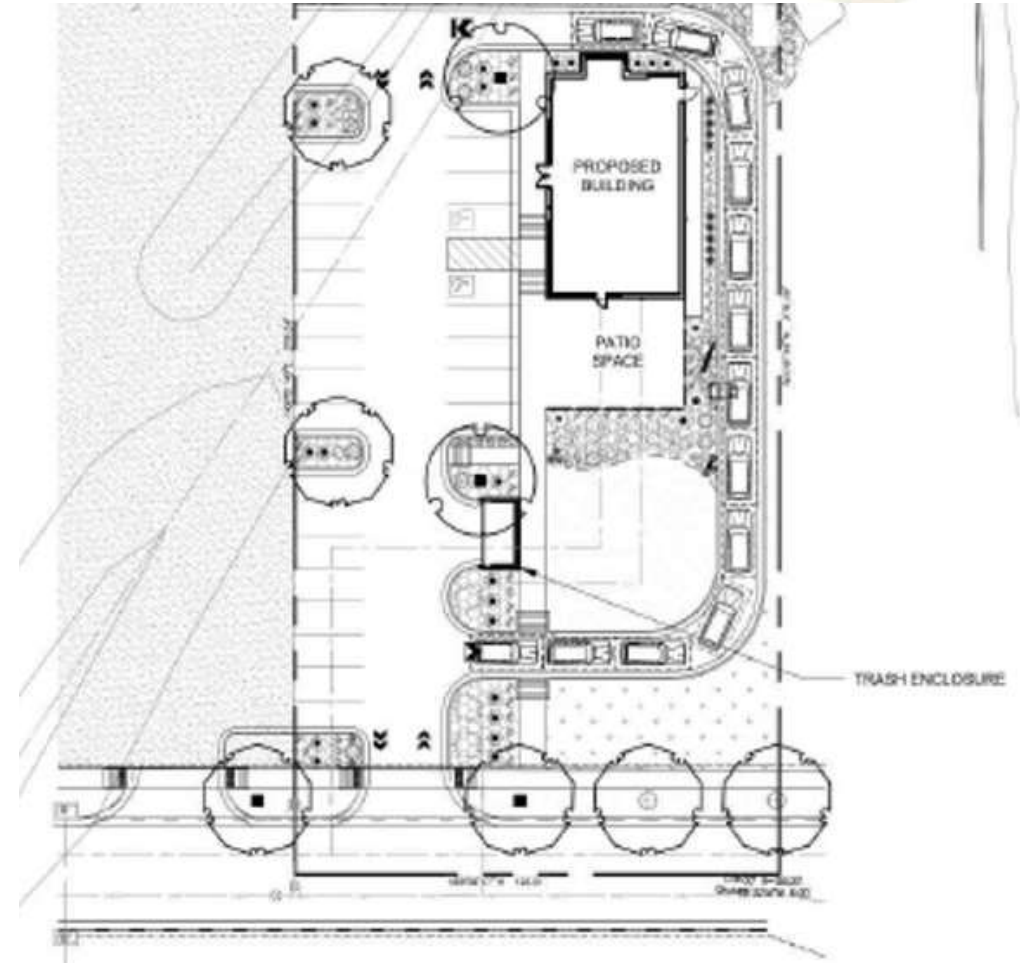
- Upfront knowledge of average water demand for landscape.
- Equal the water dedication required for irrigation taps.
- Limits average irrigation to 15 gallons per square foot per year.

|  | Water Budget Chart | | | | |
|---|--------------------------------|-------------------------|------------------------|-------------------------|----------------------------|
| ZONE ID for Tap | Irrigated Area Calculated (SF) | Percentage of each zone | Hydrozone (select one) | Water Need (gallons/SF) | Annual Water Use (gallons) |
| | 10,000 | 25% | High | 18 | 180,000 |
| | 10,000 | 25% | Moderate | 14 | 140,000 |
| | 10,000 | 25% | Low | 7 | 70,000 |
| | 10,000 | 25% | Very Low | 0 | - |
| | | | High | 18 | - |
| | | | Moderate | 14 | - |
| | | | Low | 7 | - |
| | | | Very Low | 0 | - |
| | | | High | 18 | - |
| | | | Moderate | 14 | - |
| | | | Low | 7 | - |
| | | | Very Low | 0 | - |
| | | | High | 18 | - |
| | | | Moderate | 14 | - |
| | | | Low | 7 | - |
| | | | Very Low | 0 | - |
| | | | High | 18 | - |
| | | | Moderate | 14 | - |
| | | | Low | 7 | - |
| | | | Very Low | 0 | - |
| | | | High | 18 | - |
| | | | Moderate | 14 | - |
| | | | Low | 7 | - |
| Subtotal | 40,000 | | | | 390,000 |
| Average (Gallons/SqFt) | | | | 9.8 | |

Section 6-Landscape and Irrigation

Landscape & Irrigation Design and Plans

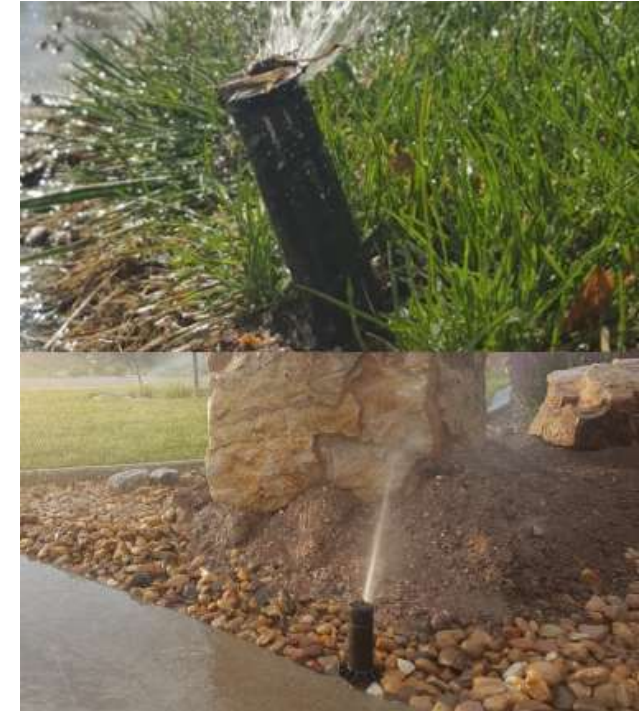
- **Site Plan – General Landscape Plan**
- **Construction Drawings – Detailed Landscape Plan**
- **Must be stamped by Colorado registered landscape architect**
- **Methods and configurations are guided by landscape plan's hydrozones**
- **Heads and nozzles in a single zone must have matched precipitation rates**



Section 6-Landscape and Irrigation

Irrigation System Installation and Performance Audit

- Required prior to final approvals and release of landscaping bonding or surety where applicable
- Can be performed by Water & Sewer Conservation staff or private auditor
 - Certified Landscape Irrigation Auditor (CLIA)
 - Qualified Water Efficient Landscaper (QWEL)
 - City staff cheaper but limited availability



Section 6-Landscape and Irrigation

Maintenance

- **Landscape maintenance following:**
 - Chapter 8- Landscape Requirements
 - Mow policy from Natural Areas and Trails
- **Irrigation Maintenance**
 - Leak repair
 - Replacement of damage systems
 - Head adjustments
 - Seasonal adjustments to irrigation controllers



Engagement & Review

- **Introduced to Builders, Realtors, Developers - July 19, 2021**
- **Reviewed and Coordinated with other City Departments throughout process**
- **Reviewed by Engineering Development Review & Civil Inspections Staff**
- **Presented to Planning Commission to get Input and Feedback - March 8, 2022 and November 8, 2022**
- **Meetings & Review Comments from Engineers, Developers, Landscape designers, & Community members - March to June, 2022**
 - **155 comments and questions tracked and addressed**



Section 6:Landscape and Irrigation

Highlighted Changes:

- **Soil amendments**
- **Mulch**
- **Removed minor details from these criteria to checklists used during pre-planning sessions and engineering development reviews**
 - **Plan scale, PDF requirements, etc.**
- **Added specification on irrigation equipment**
 - **Valve box branding, isolation or ball valves, equipment for >1" taps, irrigation specific for non-potable versus potable systems, etc.**
- **Minor clarifications and reference materials updated**
 - **Definition of a smart controller, 2-wire versus multi wire systems removed typos, formatting changed etc.**



Design Criteria: Sections 1- 6

Next steps:

- **Co-creation of standard operating procedures with Planning and Zoning and Engineering Development Review**
- **December 13, 2022- City Council work session**
- **January 3, 2023- First reading with City Council**
- **January 17, 2023- Second reading with City Council**



Questions?

