



STAFF REPORT

TO: Chairman and Board Members
FROM: Laine Christman
DATE: January 12, 2016
SUBJECT: **Report on review of Reno, Sparks and Washoe County landscape and water conservation ordinances and discussion, action and direction to staff on recommendations to local governments for landscape and water conservation ordinance amendments**

Discussion: In August 2004, Truckee Meadows Water Authority's ("TMWA") staff examined the landscape ordinances of local governments and provided recommendations regarding changes to those ordinances to increase water conservation. In July of 2005, a staff report was produced on the findings and recommendations of that analysis. See the Appendix for details of this report.

As directed by TMWA's Board, in April of 2015 municipal landscaping ordinances were reexamined by staff to determine what changes had been made concerning landscaping in new and existing developments. Overall, municipal landscaping ordinances remained unchanged since 2005.

Through September, a series of meetings were held with TMWA staff, municipal planners, staff from the Washoe County District Health Department, and representatives from the building industry to address the following issues raised by TMWA staff:

1. Increasing customer inquiries regarding discrepancies between TMWA's conservation goals and municipal ordinances for drought-tolerant landscaping.
2. Deviations in water conservation and landscape ordinances between municipalities.

As a result of those discussions, staff has identified new recommendations for the TMWA's Board's consideration regarding possible recommendations for revisions to the existing municipal ordinances. This report presents those findings and recommendations for potential government action (see pages 3 and 4).

Special thanks goes to the following staff members and consultants who provided valuable input during the course of these meetings:

Claudia Hanson, City of Reno

Armando Ornelas, City of Sparks

Roger Rundle, City of Sparks

William Whitney, Washoe County

Roger Pelham, Washoe County

Bob Webb, Washoe County Community Services Department

Jeff Jeppson, Washoe County Health District

Jim Smitherman, Northern Nevada Water Planning Commission

Angela Fuss, CFA

Jess Traver, BANN

Ryan Hansen, Hansen Landscape Architects

Municipal Ordinances - Findings and Recommendations

Row	Category	CITY OF RENO		WASHOE COUNTY		CITY OF SPARKS		Recommendations*
		Description	Code	Description	Code	Description	Code	
I. Landscaping Ordinances - Findings								
1	A. Turf Standards							
2	Width Requirements	5ft minimum	Section 18.12.1210	5ft minimum	Section 110.412.60	8ft minimum	Section 20.32.090	To reduce potential for overspray and runoff onto streets/storm drains, the minimum width of narrow turf strips within all municipalities should be expanded to 8ft plus a 2ft setback from impervious surfaces which drain to the street. Any landscaping strips that cannot meet this requirement should contain drip irrigation only.
3	Total Area Requirements	50% maximum in multi-fam, industrial, model homes.	Section 18.12.1210	50% minimum in multi-family	Section 110.412.60	80% maximum of landscaped area	Section 20.32.090	Industrial - 0% max allowable turf Commerical - 25% max allowable turf Multi-family - 50% max allowable turf Single Family - 50% max allowable turf
4	Slope Ratio Requirements	3:1	Section 18.12.1210	4:1	Section 110.412.60	4:1	Section 20.32.090	None
5	B. Water Conservation Standards							
6	Water Efficient Plants Requirements	Promoted	Section 18.12.1201	Encouraged	Section 110.412.20 Section 110.412.35	Requires use of resource-efficient guidelines and principles. Resource-efficient materials are any living material that is drought-tolerant or low-water use.	Section 20.32.010	Modify ordinances to require a percentage of water efficient planting within new developments. Collaborate with Cooperative Extension/Nevada Landscape Association to identify a list of acceptable drought-tolerant vegetation.
7	Hydro-zoning (grouping vegetation by water requirements)	Not specified	N/A	Required	Section 110.412.65	Encouraged	Section 20.32.010	Require use of hydro-zoning practices whenever applicable.
8	C. Non-living material Standards							
9	Area	25% maximum	Section 18.12.1209	50% maximum	Section 110.412.60	10% maximum	Section 20.32.090	None
10	D. Tree Standards							
11	Minimum spacing between trees	One tree and six shrubs per 300sqft	Section 18.12.1209	One tree every 50 feet	Section 110.412.35 Section 110.412.40 Section 110.412.45	One tree every 300ft (residential) and one tree evrey 500 ft (other zones)	Section 20.32.090	None
12	Width of planting area	10ft minimum	Section 18.12.1205	8ft minimum	Section 110.412.60	10ft minimum	Section 20.32.090	None

* Recommendations only apply to new developments. No recommendations for existing developments are advocated that this time

Municipal Ordinances - Findings and Recommendations

Row	Category	CITY OF RENO		WASHOE COUNTY		CITY OF SPARKS		Recommendations*
		Description	Code	Description	Code	Description	Code	
13	E. Total Landscape Standards							
14	Residential	20%	Section 18.12.1205	20%	Section 110.412.35	20%	Section 20.32.080TBL	None
15	Commerical	15-20%	Section 18.12.1205	20%	Section 110.412.40	10-25%	Section 20.32.080TBL	None
16	Industrial/Agriculture	Industrial - minimum of the front area	Section 18.12.1205	10%	Section 110.412.45	6%	Section 20.32.080TBL	None
17	F. Soil Standards							
18	Soil analysis	Not specified	N/A	Encouraged	Section 110.412.15	Not specified	N/A	Require a soil analysis during development planning phase to determine potential for runoff and necessary mulch/irrigation
19	Soil depth	Loosened 8 inch minimum with 2 inch organic soil on top	Section 18.12.1210	Not specified		Loosened 8 inch minimum with 2 inch organic soil on top	Section 20.32.090	None
20	Mulch	4 inch minimum in all landscape areas with there is no ground cover	Section 18.12.1209	3 inch minimum in all landscape areas with there is no ground cover	Section 110.412.60	4 inch minimum in all landscape areas with there is no ground cover	Section 20.32.090	None
21	II. Irrigation Ordinances - Findings							
22	A. Watering schedules							
23	Prohibited days for watering lawn	(1) Premises with even addresses - Tuesday, Thursday, and Saturday (2) Premises with odd addresses - Wednesday, Friday, Sunday	Section 12.14.085	(1) Premises with even addresses - Tuesday, Thursday, and Saturday (2) Premises with odd addresses - Wednesday, Friday, Sunday	Chapter 40.225	1. Residences with even addresses— Wednesday and Saturday or on Monday in lieu of one of these two days; 2. Residences with odd addresses— Thursday and Sunday or on Monday in lieu of one of these two days; and 3. Commercial customers— Tuesday and Friday.	Section 13.50.075	Revise Sparks' ordinance to reflect TMWA's regulations.
24	Water Schedule violation fines	1rst violation -\$0; 2nd violation \$25; 3rd violation \$75	Section 12.14.210	1rst violation -\$0; 2nd violation \$25; 3rd violation \$75	Chapter 40.266	1rst offense: \$25; 2nd offense: \$50; 3rd offense: \$100	Section 13.50.110	Penalty structures should reflect TMWA's water waster penalty structure. More information on TMWA's rules that pertain to water waste (Rule 2) can be found at http://tmwa.com/customer_services/waterrules/ .
25	B. Irrigation System Design							
26	Moisture sensors/rain shutoff equipment	Not specified	N/A	encouraged	Section 110.412.65	Not specified	N/A	None
27	Use of efficient irrigation system	Required	Section 18.12.1210	Not specified	N/A	Not specified	N/A	Require use of efficient irrigation system whenever possible

* Recommendations only apply to new developments. No recommendations for existing developments are advocated that this time

APPENDIX – 2005 Staff Report on Landscape Ordinances

Joint Meeting Agenda Item # _____
Lead Entity (fill in R, S or WC) WC
Staff Report approved by other entities: _____

STAFF REPORT
July 12, 2005

To: Washoe County Commission, Reno City Council and Sparks City Council
Thru: Michelle Poché, Washoe County Assistant Manager
From: Jim Smitherman
Re: **Truckee Meadows Water Authority Landscape Subcommittee Findings and Recommendations**
Date: June 28, 2005

Summary: The Truckee Meadows Water Authority (TMWA) Technical Advisory Committee (TAC) formed a Landscape Subcommittee (LS) in August 2004 to address increasing customer complaints about landscape standards approved by the local governments and the lack of consistent enforcement of the water conservation elements of the ordinances. The LS, led by Andy Gebhardt and Catherine Hansford of TMWA, consisted of three voting members representing Reno, Sparks and Washoe County. The LS met five times between September 21 and December 7, 2004. The LS developed findings and recommendations regarding landscape ordinances (attached), which were presented to the TAC on January 4, 2005. The TAC recommended that the findings be reported to the TMWA Board in addition to the Reno City Council, Sparks City Council and Washoe County Board of Commissioners. The TMWA Board accepted the report at its meeting on May 19, 2005.

Previous Actions at Joint Meetings: None

Background: None

Fiscal Impact: Staff time and resources may be required to revise landscape ordinances. New staff may be required to check plans and conduct field inspections.

Areas of Consensus: Reno, Sparks and Washoe County staff are in agreement regarding the LS findings and recommendations.

Areas to be Resolved: No issues are in need of resolution.

Recommendation: It is recommended that staff be directed to draft amendments to their respective landscape ordinances and initiate the amendment process.

Proposed Motion: I move to direct staff to draft amendments to the landscape ordinances consistent with the Landscape Subcommittee recommendations, and initiate the amendment process.

INTRODUCTION

The following document presents the findings and recommendations for potential local government action concluded by the Truckee Meadows Water Authority (“TMWA”) Technical Advisory Committee (“TAC”) Landscape Subcommittee. This subcommittee was appointed by the TAC at the August 31, 2004 public meeting to address the following issues which were raised by TMWA staff:

1. Increasing customer complaints regarding standards of landscaping approved by the local governments.
2. Lack of consistency in enforcement of the water conservation elements of the ordinances.

The subcommittee first convened September 21, and held an additional 4 meetings with the final meeting taking place December 7, 2004. The subcommittee voting members were:

Jim Smitherman, Washoe County
Fred Turnier, City of Reno
Neil Krutz, City of Sparks

The following staff members and their consultants provided valuable input during the course of these meetings:

Terri Svetich, City of Reno
Donald Naquin, City of Reno
Chris Conway, Kennedy-Jenks
Trevor Lloyd, Washoe County
Gregg Finkler, Washoe County

FINDINGS

- The greatest impact for water efficiency is to concentrate on the landscape/irrigation design plan. Landscape design issues that influence water efficiency such as buffering and drainage (runoff management) are best coordinated with the regional stormwater quality management program.
- Only a cursory review is performed for landscape/irrigation design plans when they are submitted to the local governments. Local governments rely on the professionals in the private sector to accurately design irrigation systems.
- There is no thorough checklist of water-efficient landscape/irrigation design principles followed during irrigation plan review.
- The term ‘encouraged’ in the codes is not enforceable. Many of the water-efficient principles are only ‘encouraged’.
- Local governments trust that the letter of completion certified by the plan preparer satisfies the code requirements.
- Water users will be more favorably inclined to make water efficient changes if there is economic incentive to make changes.
- Facilities that are dedicated to local governments, such as parks, do have to conform to rigorous design standards as set by the agency, typically the parks department.
- Typically, maintenance sections of the codes are enforced when a complaint is filed. Due to resource constraints, these sections are not routinely pursued.
- Ordinances are directed at new development and place few, if any, efficiency or maintenance requirements on existing customers.
- Enforcement is not sufficient to ensure that irrigation equipment is adequate to efficiently irrigate small areas of turf.
- Many existing water users have inefficient irrigation systems. There are limited resources to improve efficiency (such as enforced maintenance requirements or retrofit assistance).

RECOMMENDATIONS and ROLE OF RESPONSIBILITY

- New development requirements to be handled by local government ordinances. Items that require ongoing management to be defined as either handled by local government or the water purveyor in their rules.
- Funding mechanisms needed. For new development new fees can be collected through additional inspection or other plan/permit fees. For water purveyor additional work, the most likely source of new funds would be customer rates.

New Landscaping

- Local governments need dedicated staff for irrigation plan check and water efficiency requirements per code. To conduct job effectively, remove term ‘encouraged’ in current ordinances. Alternatively, hire professional firms to perform work.
- For landscaping with separate irrigation meters, require an annual outdoor water budget by watering zone as part of the submitted Irrigation Plan.
- Require an irrigation efficiency standard that is agreed upon by local experts (such as Cooperative Extension). Addition of an irrigation efficiency requirement and water budget to each of the agency codes would provide consistency of work among landscape architects and across jurisdictions. Calculations for irrigation efficiency and water budget to be submitted by Landscape Architect.
- Require buffer areas at the base of slopes next to impervious materials (for example next to sidewalks, asphalt areas etc.) to allow runoff to drain into the soils.
- Inspection of irrigation system to be performed by a Certified Landscape Irrigation Auditor to ensure that the system is performing as designed with the required irrigation efficiency standard set forth in the code. This certification would be submitted by the Landscape Irrigation Auditor as part of the final checklist along with the documentation submitted by the preparer of the plans that the final landscaping meets landscaping code requirements.
- Small turf areas should be limited to a minimum width of 8 feet; 10 feet is preferred.

Established Landscaping

- Ongoing maintenance should be required for existing customers with regular irrigation audits, education, and a tracking procedure. For new development, follow-up audits should be required periodically (perhaps every 5 years) as accountability for long-term maintenance of irrigation system or landscaping (by property owner) is inconsistently enforced.

- Coordinate rigorous irrigation checks for large water-using sites (commercial sites with separate metered irrigation).
- Information to customers, including new developments, on responsibility of areas to be maintained and bill payment.

Applicable to both new and established landscaping is the need for more professional education in the green industry, including landscape architects. In particular, public outreach must accompany any change in standards with revisions to the landscape ordinances.