

# Building Water Efficiency into Community Development

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# Agenda

- New Tap Fees
  - History
  - Reactions
  - Z-zone option
  - Process
  - Potential savings
  - Residential tap fees & credits



# Acronyms/Terms

- HWU – High water use (bluegrass)
- LWU – Low water use (xeric plants)
- Z-zone – No water use plants
- WC – Water Conservation



# Tap Fee History

## Pre-2014 Tap Fees for Irrigation Meters

High-Water Use (HWU)	\$0.71/sf
Low-Water Use (LWU)	\$0.36/sf



- Study
- Fees not indicative of true cost



- \$57.45/gallon/day
- =
- \$.157/gallon/year



## Watering Needs

HWU	17.44 gallons/sf/year
LWU	9.34 gallons/sf/year



$$\text{HWU/LWU} \times .157$$



## 2014 Tap Fees for Irrigation Meters

High-Water Use	\$2.75/sf
Low-Water Use	\$1.47/sf



# Reaction and Solutions

- Up-front cost increased (could be 4x)
- Water worked with Joint Task Force (JTF)
- Created Z-zone option:

Revised 2014 Tap Fees	
High-Water Use (HWU)	\$2.75/sf
Low-Water Use (LWU)	\$1.47/sf
No Water Use (Z-Zone)	\$0.00/sf



~~Temporary Tap~~



# Z-Zone Requirements

- Irrigation Meters only
- Fees for Z-Zone: ~~\$250 admin fee + \$20K deposit~~ \$0.00
- Variance Request submitted with plans
- Plans must indicate use of Z-zone option
- Hydrozone map included with plans



# Z-Zone Use – Expectations

- Properties will be given a water allocation based on plant needs not tap size
- ~~Temporary tap installed~~
- 3 year evaluation – Water Conservation
- ~~Tap pulled~~ Allocation adjusted after 3<sup>rd</sup> year
  - No water should be needed
  - ~~Deposit released~~



# Z-Zone Use – Internal Process

- Site plans submitted
  - Variance Request
  - Hydrozone included
  - Tables included
    - Square footages of zone types (HWU, LWU, Z-Zone)
    - Tree count by size within Z-Zone areas
- Planning sends plans to WC
  - Review and water allocation determined
- WC sends approval to planning and allocation to Billing and Permitting





# Z-Zone Use – External Process

- WC contacts owner/contractor/developer upon site plan approval
  - Review process and expectations
- Irrigation Inspection and approval (WC)
- Annual review of establishment and report (WC)
- ~~Tap pulled~~ Allocation changed upon establishment after 3 years
  - If not successful, 1x waiver or capital recovery fee assessed



# Variance Request

City of Aurora



Water Department  
Water Conservation Division  
Phone: 303-730-7195  
Fax: 720-859-4386



## Water Allocation Variance Request

Request Date: \_\_\_\_\_

Property Requesting Variance: \_\_\_\_\_

By signing below you are requesting a variance to the Allocation Structure Methodology as stated in the Aurora Water: Water Management Plan section 3.015.010 which assigns an Annual Water Block Allocation based on meter size. You are requesting an allocation to be calculated by Aurora Water based on the above named property's irrigable area.

Responsible Party: \_\_\_\_\_

Print Name

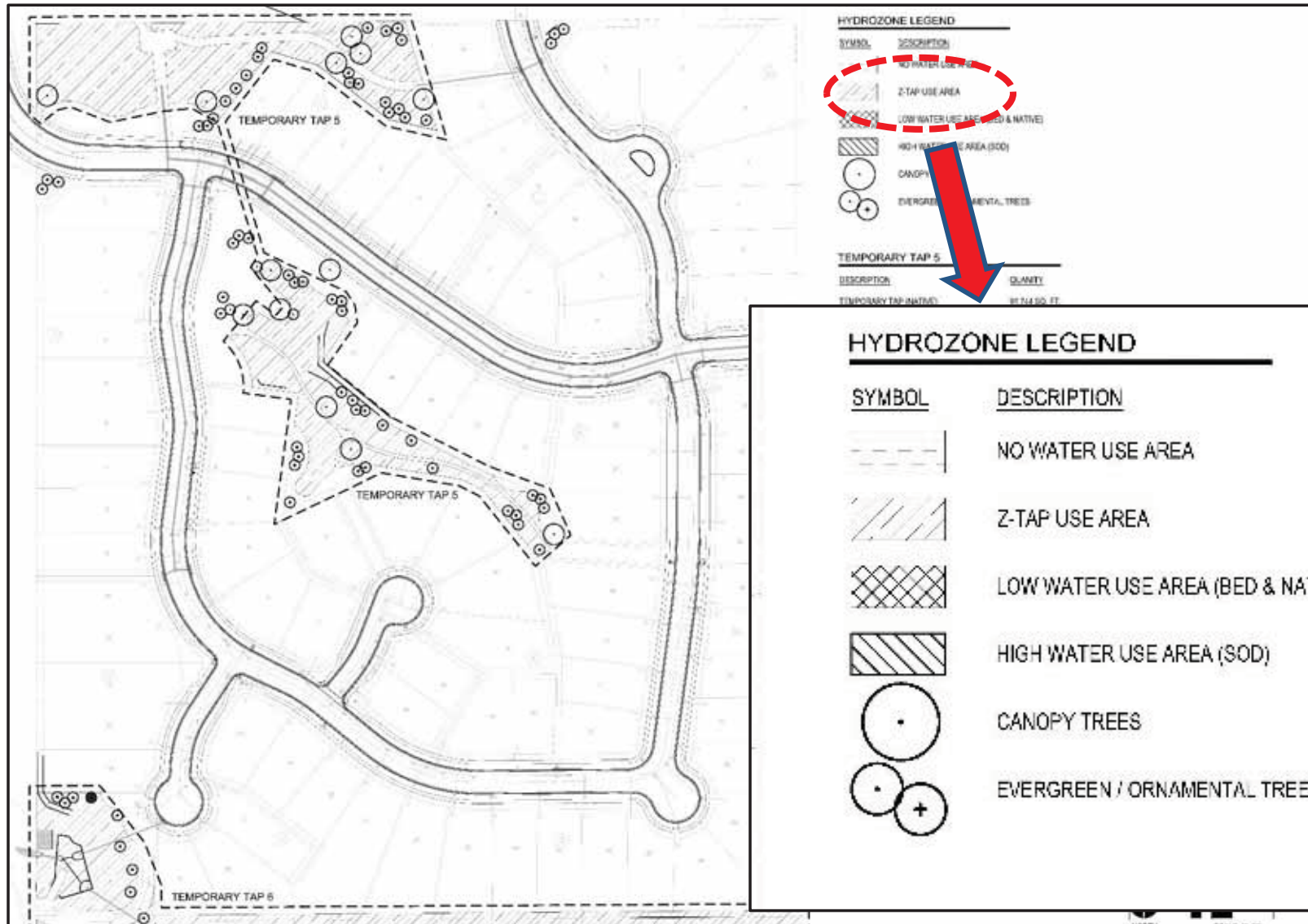
Signature

Request Phone Number: \_\_\_\_\_ Contact Email: \_\_\_\_\_

OFFICE USE ONLY			
	CID	LID	Annual Allocation (gallons)
Meter 1			
Meter 2			
Meter 3			
Meter 4			
Meter 5			
Total Property Allocation:			(gallons per year)
Approved:			Date:
Title:			
Notes:			



# Hydrozone Map



# Tables

## PERMANENT TAP 1

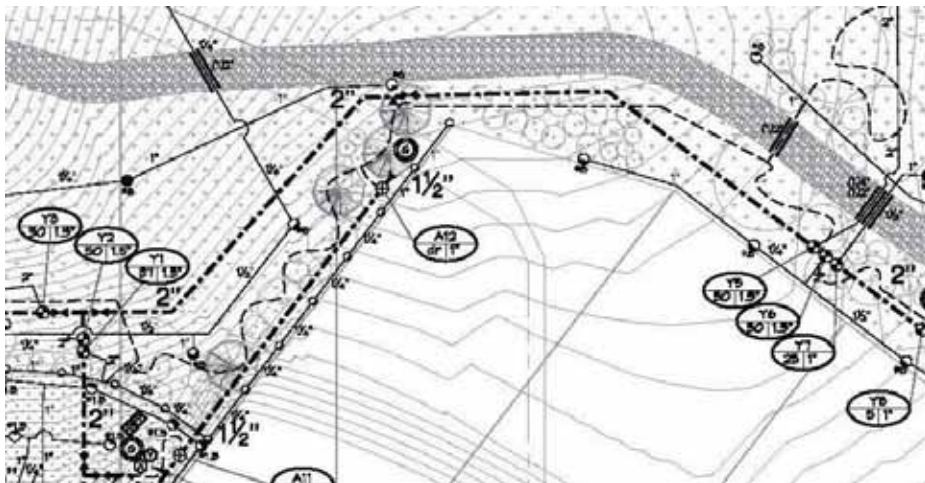
<u>DESCRIPTION</u>	<u>QUANTITY</u>
HIGH WATER USE AREA (SOD)	1,986 SQ. FT.
LOW WATER USE AREA (BED & NATIVE)	57,160 SQ. FT.
LOW WATER USE (CANOPY TREES IN TEMPORARY TAP) - 9 TREES	6,354 SQ. FT.
LOW WATER USE (EVERGREEN TREES IN TEMPORARY TAP) - 36 TREES	6,372 SQ. FT.
LOW WATER USE (ORNAMENTAL TREES IN TEMPORARY TAP) - 1 TREE	177 SQ. FT.

## PERMANENT TAP 4

<u>DESCRIPTION</u>	<u>QUANTITY</u>
HIGH WATER USE AREA (SOD)	331 SQ. FT.
LOW WATER USE AREA (BED & NATIVE)	2,215 SQ. FT.
LOW WATER USE (EVERGREENS IN TEMPORARY TAP) - 9 TREES	1,593 SQ. FT.

### NOTES:

- 1) TREE SQ. FT. DETERMINED ASSUMING 30 FT. DIAMETER CANOPY TREES (706 SQ. FT.) AND 15 FT. DIAMETER EVERGREEN AND ORNAMENTAL TREES (177 SQ. FT.)
- 2) TREES IN TEMPORARY TAP AREAS WILL BE COUNTED AS LOW WATER USE FOR CALCULATING TAP FEES.



# Water Savings Potential

Zone	Pre-Z-Zone Option	Post-Z-Zone Option	Post-Z-Zone SF
High Water	47%	21%	638,855
Low Water	47%	38%	1,182,775
No Water	6%	41%	1,283,155

Potential Savings (establishment) = 6,644,370 gallons/year  
Potential Savings (post-establishment) = 16,894,601 gallons/year

11 out of 50 developments have opted for Z-zone





# Single Family Connection Fees

- 2013 study: bathrooms = water usage

- Indoor Use Fee:

Number of Bathrooms	Fee
1-2	\$5,509
3-4	\$8,901
5+	\$15,425

- Outdoor Use Fee: \$0.941/sf of lot size
- Promotes smaller development
  - 5,000 SF lot w/ 2 bathrooms = \$10,214
  - 15,000 SF lot w/ 5 bathrooms = \$29,540
- \$1,000 credit for xeric front yard

**Old Fee: Flat rate of \$24,460**



# Large Lot Variance

- Any lot  $> 35,737$  sf (3/4 acre) is eligible
- Adjusted tap fee based on “developed” area
  - Minimum 35,737 sf
  - Reduced tap fee
  - Capital recovery fee tied to water allocation

	Recovery Fee for Excessive Usage	
Time Period	Jan 1 – Jun 30 per 1,000 gallons	Jul 1 – Dec 30 per 1,000 gallons
Fee	\$11,98	\$5.99



# Single Family Residential Charges

Previous Uniform Fee: \$24,460

Lot Size (Sq. Ft.)	Proposed Fees		
	1-2 Bath Use	3-4 Bath Use	5+ Bath Use
-	\$5,509	\$8,901	\$15,426
5,000	\$10,213	\$13,605	\$20,130
6,000	\$11,154	\$14,546	\$21,071
7,000	\$12,095	\$15,487	\$22,011
8,000	\$13,036	\$16,428	\$22,952
9,000	\$13,977	\$17,369	\$23,893
10,000	\$14,917	\$18,309	\$24,834
15,000	\$19,621	\$23,014	\$29,538
20,000	\$24,326	\$27,718	\$34,242
50,000	\$52,550	\$55,942	\$62,467
100,000	\$99,591	\$102,983	\$109,507

**+ \$1,000  
Credit if the  
front yard  
uses  
xeriscape!**

Median lot size is 7,500 sq ft.  
~90% under 11,000 sq ft.





# Questions?

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