

Conservation on the Palouse

Think Regionally, Act Locally



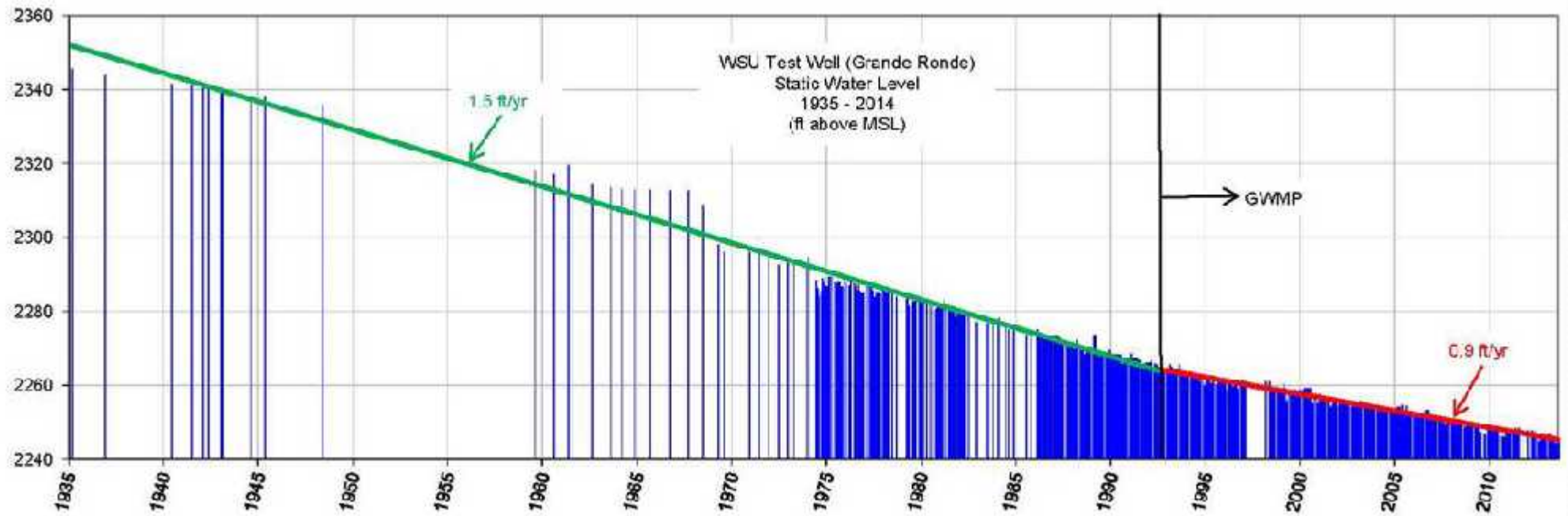
Nichole Baker
Water Conservation
Program Coordinator



Art Garro
Maintenance & Operations
Superintendent

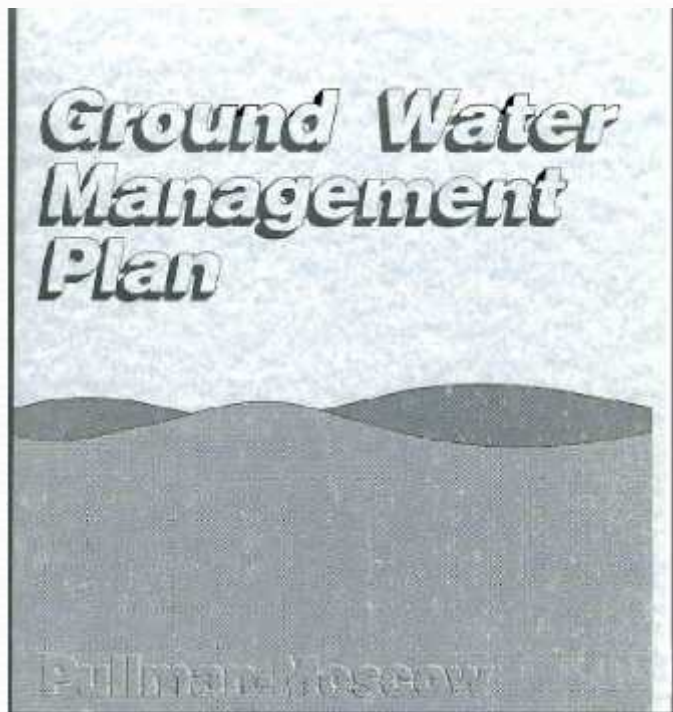
Grande Ronde Aquifer

Grande Ronde Aquifer Declining Water Levels



~ PBAC, 2014

Water Conservation Goals



- PBAC
- 1992 Voluntary Goals

Helping customers save water.

Local Programs:



- Devices
- Classroom Outreach
- Public Outreach
- Regulations
- Conservation Water Rates
- Wisescape
- Rebates
- Water Reuse
- Manage Water Loss

Water Saving Device Program

Hardware to help you save.



- For Moscow and Pullman Water Utility Customers
- Indoor Devices
 - Showerheads, aerators, toilet leak detection dye tablets
- Outdoor Devices
 - Irrigation devices

Classroom Outreach

Moscow, Pullman School Districts

- K-12 Lesson Plans
- 104 Classrooms Visits and Field Trips
- 8 Grade Levels
- 1,722 Total Students



Picture: PCEI Watershed Festival, taken by PCEI

Public Outreach

Mailings, Messages, & More

- Community Update to Pullman Residents
- Quarterly Newsletter to Moscow Residents
- Billing messages
- Presentations to groups, council, and clubs
- Local articles
- Event creation and participation
- Brochures
- Radio
- Press Releases

Regulations

Kick irrigation waste off the curb.

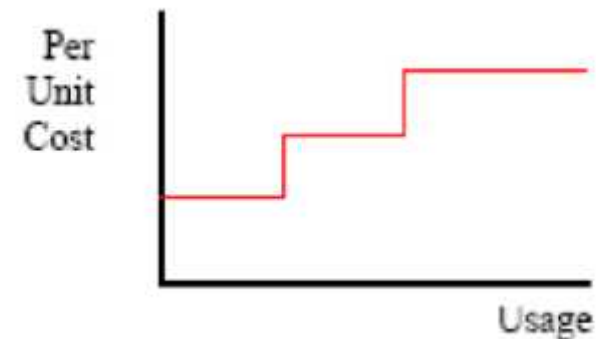


- Voluntary Restrictions (Pullman)
 - Efficient Irrigation
- Required Restrictions (Moscow)
 - Water Waste Resolution
 - Irrigation Ordinance
 - Irrigation Season
 - Variance for new landscapes
 - No watering impervious surfaces

Tiered Billing Rates

Water Savings = Cash Savings

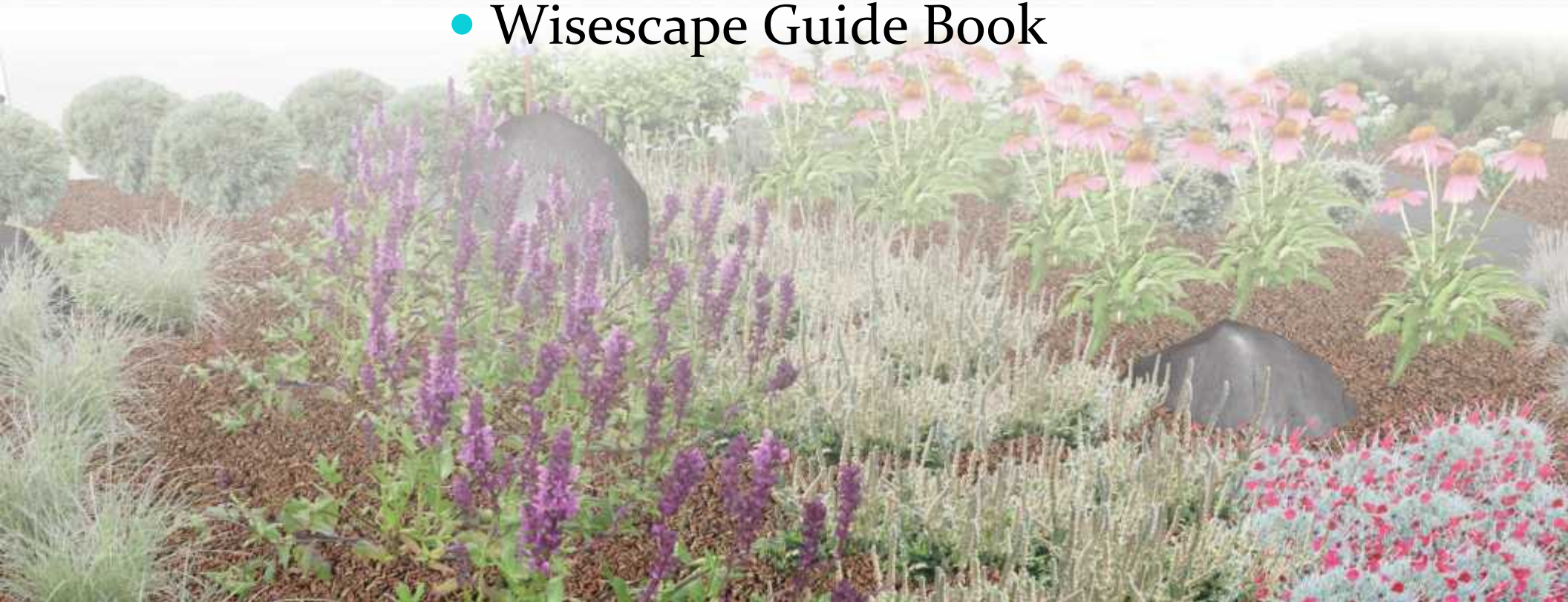
- Tiered Seasonal Rates in Pullman
 - All customer classes are tiered, below are the residential rates.
 - Nov-May | base rate 500 | 501-800 cf \$2.13 | 800+ \$2.23/ccf
 - June-Oct | base rate 500 | 501-800 cf \$2.56 | 801-2000 \$2.76 | 2,000+ cf 3.98/ccf
- 3 Tiers in Moscow for Residential Customers
 - 0-700 cubic feet, \$2.05/ccf
 - 701-2000 cubic feet, \$2.45/ccf
 - 2000+ cubic feet, \$4.15/ccf



Wisescape

Palouse Water Wise Landscapes

- Demonstration Gardens
- Awards Program
- Wisescape Guide Book



Rebates

Get Paid to Save



- Toilets
 - Pullman, adopted in 2008
 - Moscow, adopted in 2016
- Lawn Replacement
 - Pullman, new program in 2015
 - Moscow, adopted in 2016
- Clothes Washer
 - Pullman, new program in 2015

Water Reuse

From Wastewater to Landscapes



- Future Plans (Pullman)
 - Effluent Reuse
- Since the 1970's (Moscow)
 - Supplied to UI (May-Oct)

Managing Water Loss-For Water Savings at the Source



- What is water loss?
 - Water Production minus Authorized Consumption
 - Further divided into Apparent and Real Losses
- Average water loss is in the US is 16%.
- Pullman and Moscow – 4% to 7%.



Success Stories on the Palouse

Local Programs, Regional Savings

- Pullman Toilet Rebate Program
 - Past and Present
- Moscow Wisescape Program
 - Water Efficient Landscaping

Toilet Rebates



- Pullman Rebates established in 2008
- Provided rebates up to \$125 to replace pre-code toilets that exceeded 1.6 gpf.
 - Resulted in the replacement of over 2000 toilets saving an estimated 8.4 million gallons of water per year.
 - In 2014 more than 1000 toilets were replaced.

Toilet Rebates

The Process... It really is easy!

- Submit an Application – One Application
 - Available at the Finance Department Office at City Hall or Online at conserve.pullman-wa.gov.
- Pre- Inspection - On-site inspection to determine eligibility.
- Post-Inspection – On-site inspection to verify type of toilet that was installed.
- Rebate check will be mailed to the applicant.

Wisescape Approach

Established in 2008

\$150 Rebate:
Replace high water-use
irrigated areas



- Design
 - Aesthetics, Practical, Limit traditional turf, Plant Zoning, Efficient Irrigation
- Reduced Resource Use
 - Water, labor, fertilizer, pesticide, yard waste, and mowing savings.
- Soil - Enhancements
- Plant Selection – Site Specific

Wisescape Demo Garden

Wisescape Demo Garden established in 2009.

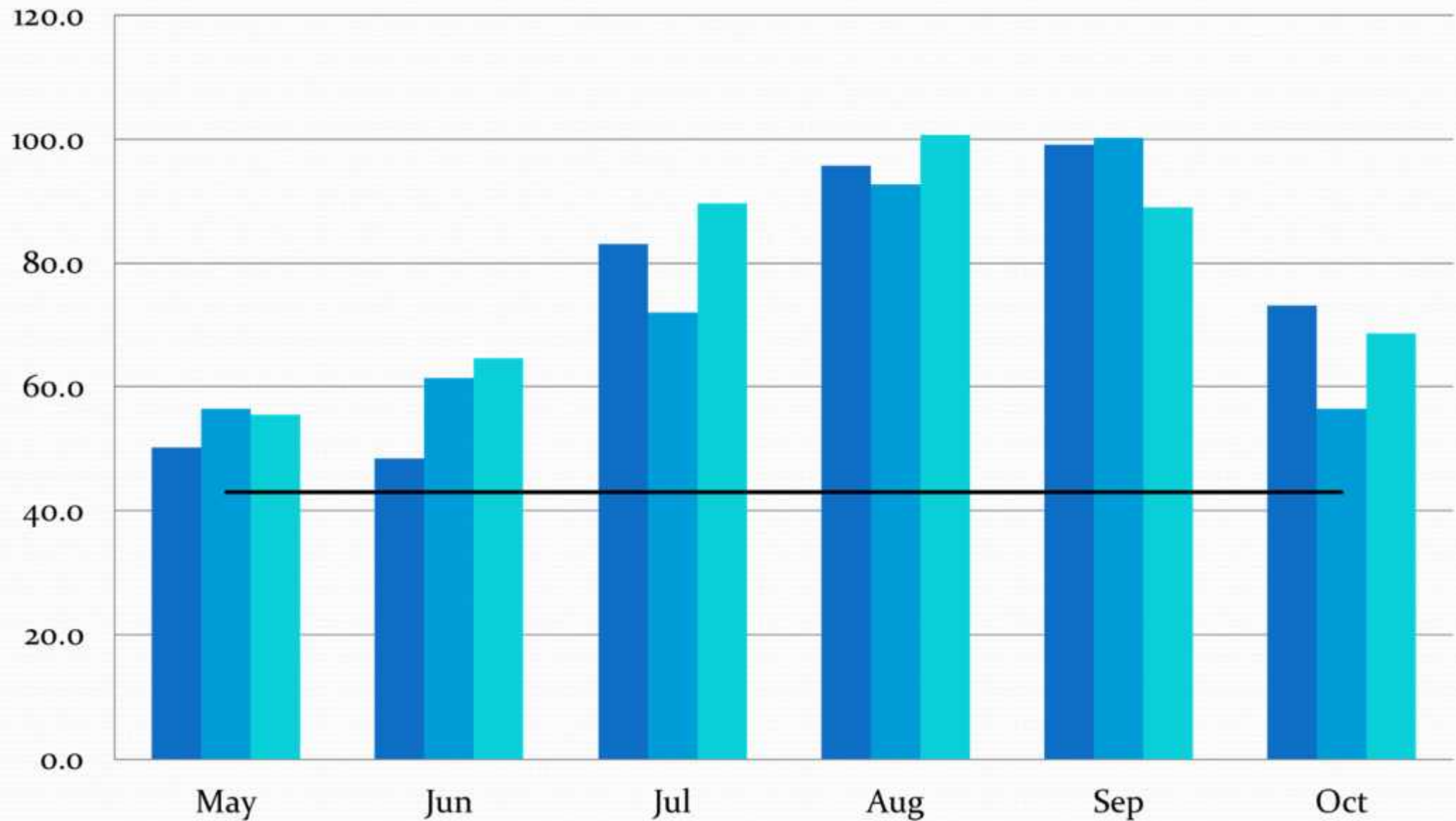
Separate meter for irrigation use.

Plants are labeled and plant list are available to the public.



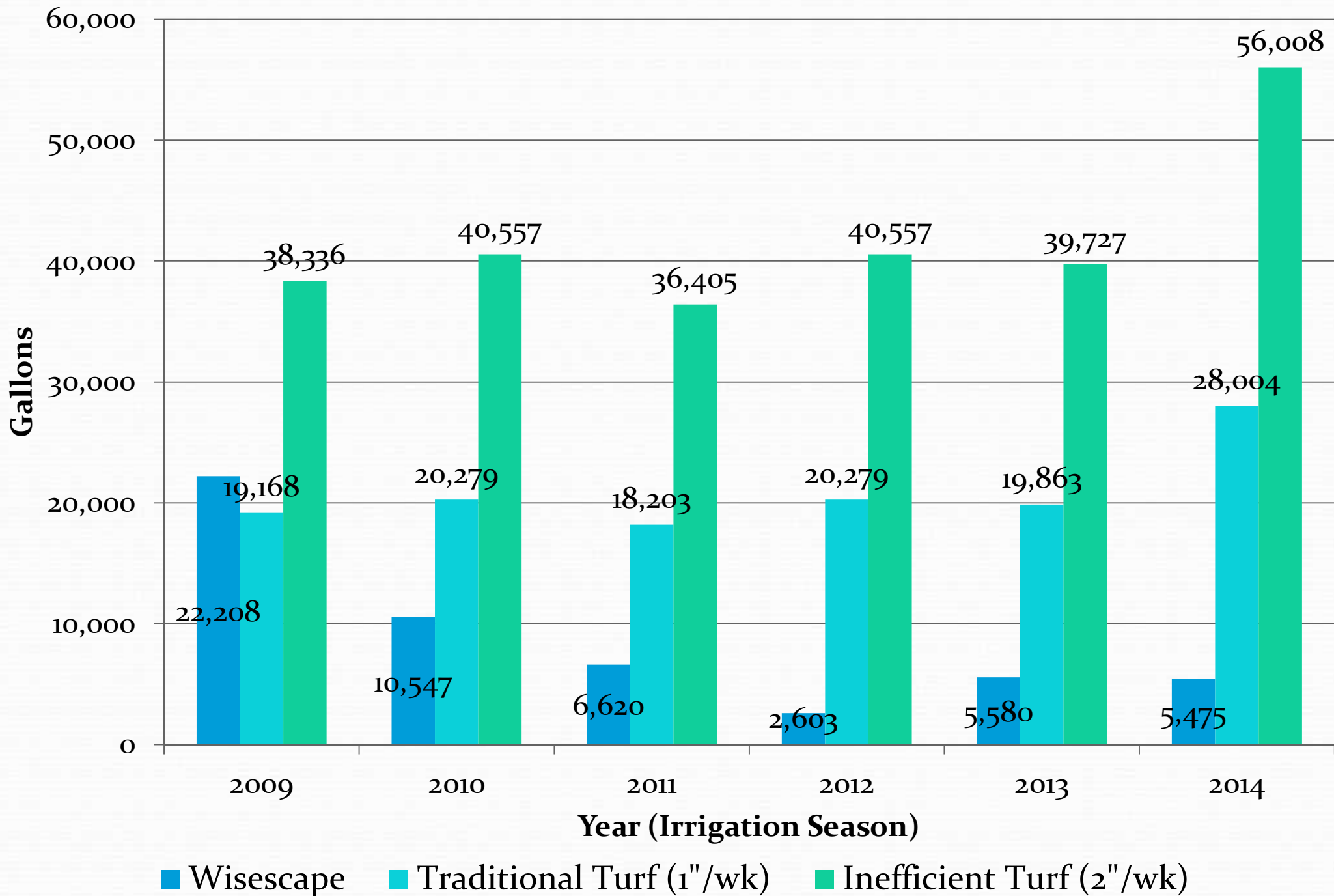
Peak Season Water Use – Billed Only (MG)

■ 2012 ■ 2013 ■ 2014 — Baseline (Average Indoor Water Use, 43 MG)

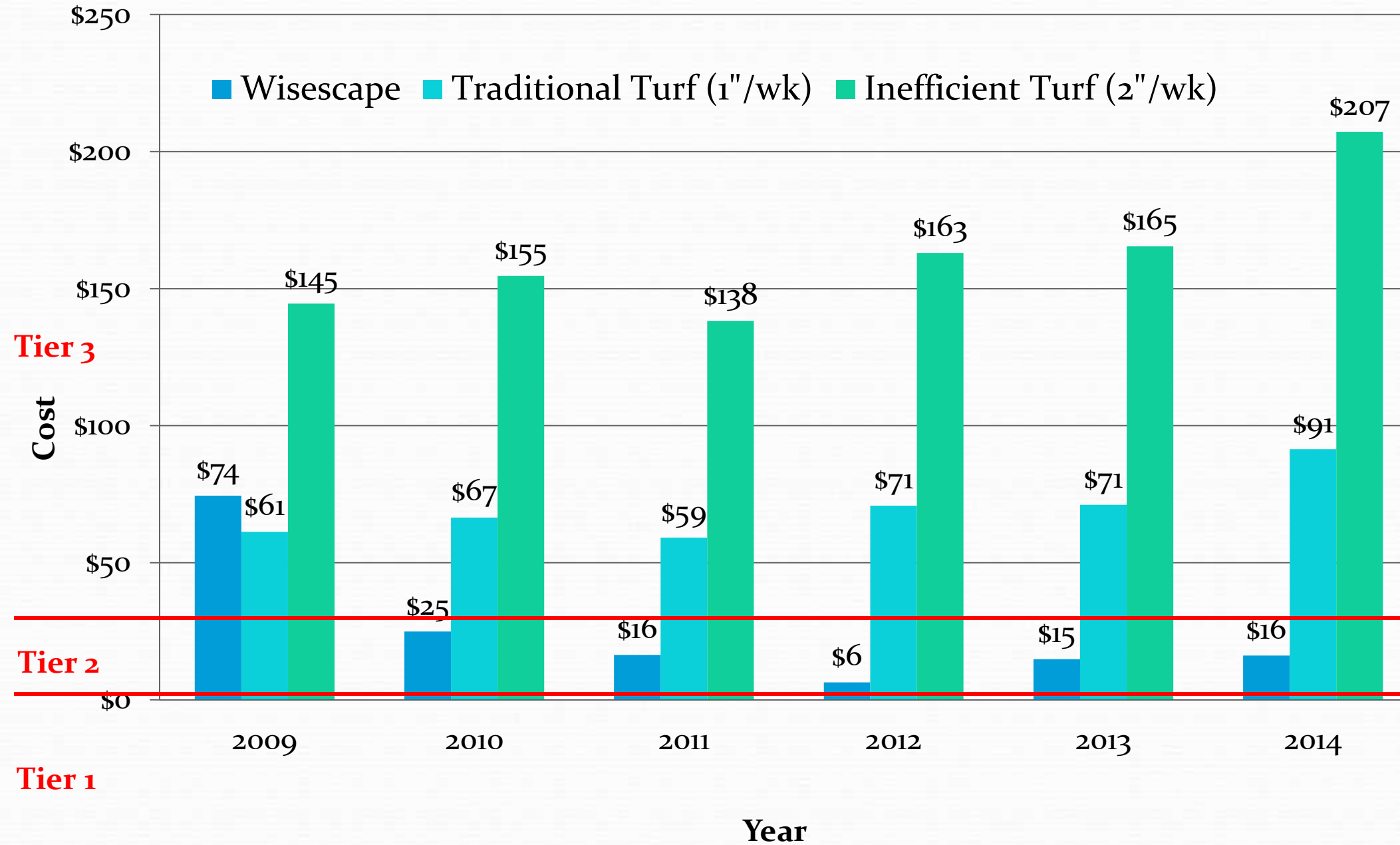


Why Wisescape? Save Water!

Demo Garden Irrigation Comparison for 1550 sq ft (gal)



Irrigation Cost Comparison for 1550 sq ft (cost not including base rate)



Before



After



Regan's Wisescape

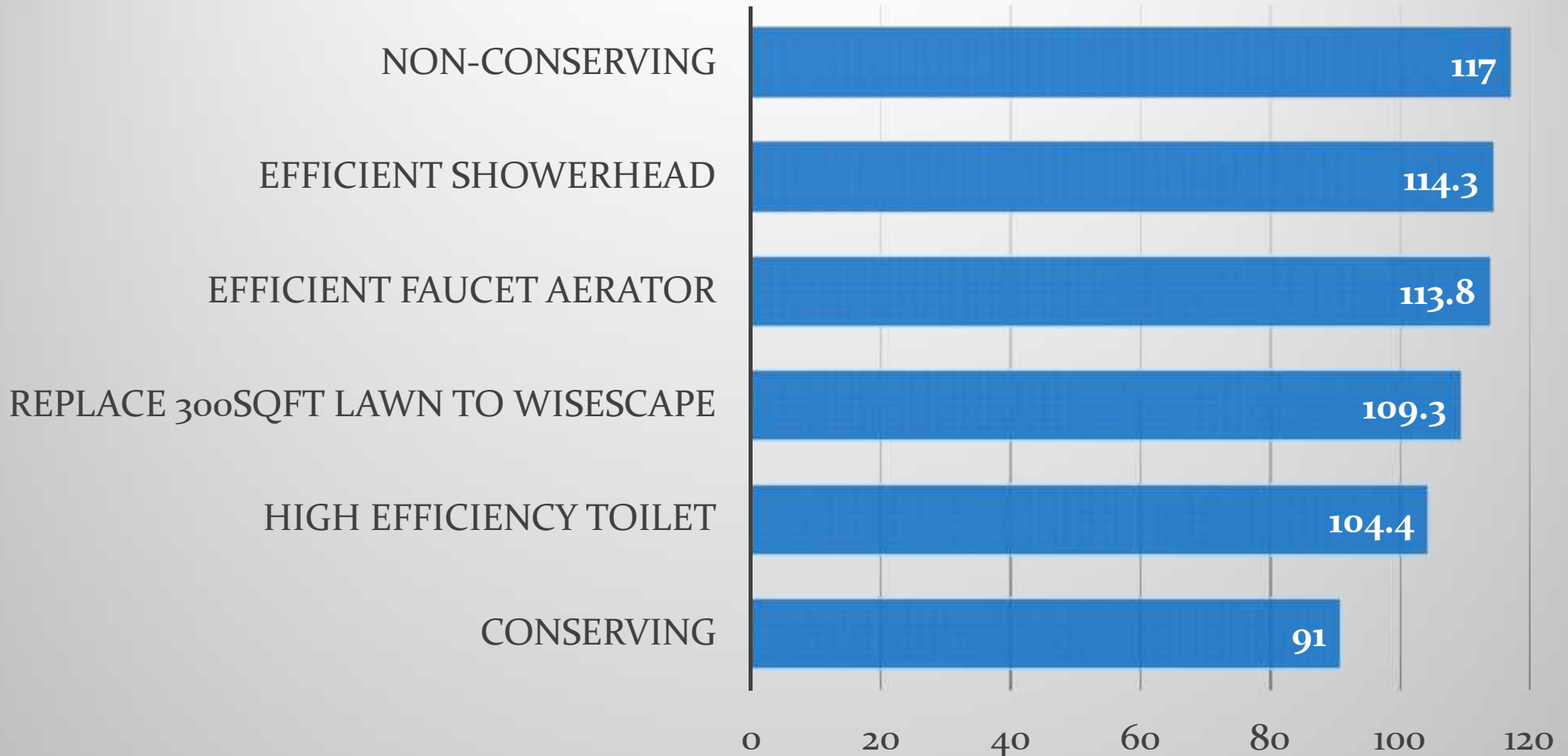
Shared Aquifer, Shared Savings

A look at the Palouse

- Palouse Per Capita Water Use
 - 117 gallons per person per day ~PBAC, 2013
- What can you do to save?
 - Take advantage of your local programs.

Shared Aquifer, Shared Savings

Save Water on the Palouse! Per capita (gal)



More to Come

Looking into the future...

- Moscow - Toilet Rebate & Landscape Rebate adopted in 2016
- Moscow School Evaluations - Pre/Post Quiz
- Moscow Rain Barrels - Wisescape Demo Garden
- Smithsonian Water/Ways Tour - Dec 10 2016 – Jan 22 2017
- Pullman/Moscow Landscape Book – Spring 2016
- Pullman Reuse
- Pullman City Facility Audit

Questions?

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Superintendent

City of Moscow Program Overview	City of Pullman Program Overview
Devices – Showerheads, aerators, dye tablets, shower timers, hose timers, spray nozzles, rain gauges, irrigation rain shutoff	Devices – Showerheads, aerators, dye tablets, hose timers
Classroom Outreach K-12	Classroom Outreach K-12
Public Outreach	Public Outreach
Regulation – Ordinance and Resolution	Regulation – Voluntary Restrictions
Conservation Rates – Base fee+ 3 tiered rates	Conservation Rates – Base fee+ 2 tiered rates
Water Reuse supplied to UI	Water Reuse future plans
Effective Management of System Water Loss	Effective Management of System Water Loss
Rebate future options – Toilet, landscape	Rebates – Toilet, clothes washer, landscape
Wisescape – Demo gardens, awards, plant lists, rebate (future), planting guide (future)	Wisescape – Demo gardens, rebate, planting guide (future)