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# Water Advisory Group

January 7, 2026 • 11 a.m.–12:30 p.m.

Hybrid Meeting • MS Teams or Public Works Headquarters Building Roundabout Room

Lori Faha, P.E., Environmental Resources Manager

Dan Denning, Water Conservation Program Manager

Elisabeth O'Keefe, Stormwater Program Manager

Anne Aurand, Public Works Communications Manager

Aubrie Koenig, Facilitator

# Purpose & Agenda

*Share an overview of water conservation program metrics and discuss water source 100-year anniversary campaign.*

1. Welcome & Introductions
2. Water Conservation Program Update
3. Water Source 100-year Anniversary Campaign
4. Summary & Closing



# December meeting reflections

- Reviewed how WAG input from 2025 meetings is being used:
  - Stormwater Master Plan development
  - Water Conservation Program planning and rate research
  - Drainage and density policy considerations
- Took an armchair tour of new Public Works campus water conservation and stormwater management design features
- Collected WAG feedback on 2026 topics of greatest interest



# WAG interest area feedback...



- Interest in water conservation and greywater
- Better understanding of water rights
- Continued conversation around climate change planning/considerations
- Meeting multiple objectives – how efforts come together
- Interest in standards and COSM updates
- Drainage and density challenges – practical maximum density, WaterWise/FireWise practices and potential conflicts in implementation
- Urban forestry update – selection/management of tree/vegetation types
- Considerations for groundwater protection through stormwater management
- Data resources to better understand microclimate information



# Water Conservation Program

## Overview



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# Conservation measures (Prog. C) WMCP 2020

- Package of 11 selected from 16 to implement.
- Phased rollout out 2021-2024
- 10 measures implemented
- 2 measure reprioritized

**Exhibit 9. Conservation Measures Comprising Conservation Programs and Type of Conservation**

Conservation Measure	Existing (E) or New (N)	Outdoor or Indoor	Program		
			A	B	C
Clothes washer rebates - commercial	N	Indoor		X	
Retrofit on resale or account change ordinance	N	Indoor		X	X
High-efficiency toilet rebate	N	Indoor		X	X
Free faucet aerators and showerheads	E	Indoor		X	X
Indoor plumbing fixture ordinance	N	Indoor		X	X
Landscape and irrigation ordinance	N	Outdoor	X		X
Outdoor water surveys	E	Outdoor	X		X
Weather-based irrigation controller rebate	N	Outdoor	X		X
Pressure regulation rebate	N	Indoor/ Outdoor	X		X
Free drip irrigation kits	N	Outdoor	X		X
Rotating sprinkler nozzles rebate	N	Outdoor	X		X
Pressure regulating sprinkler bodies rebate	N	Outdoor	X		X



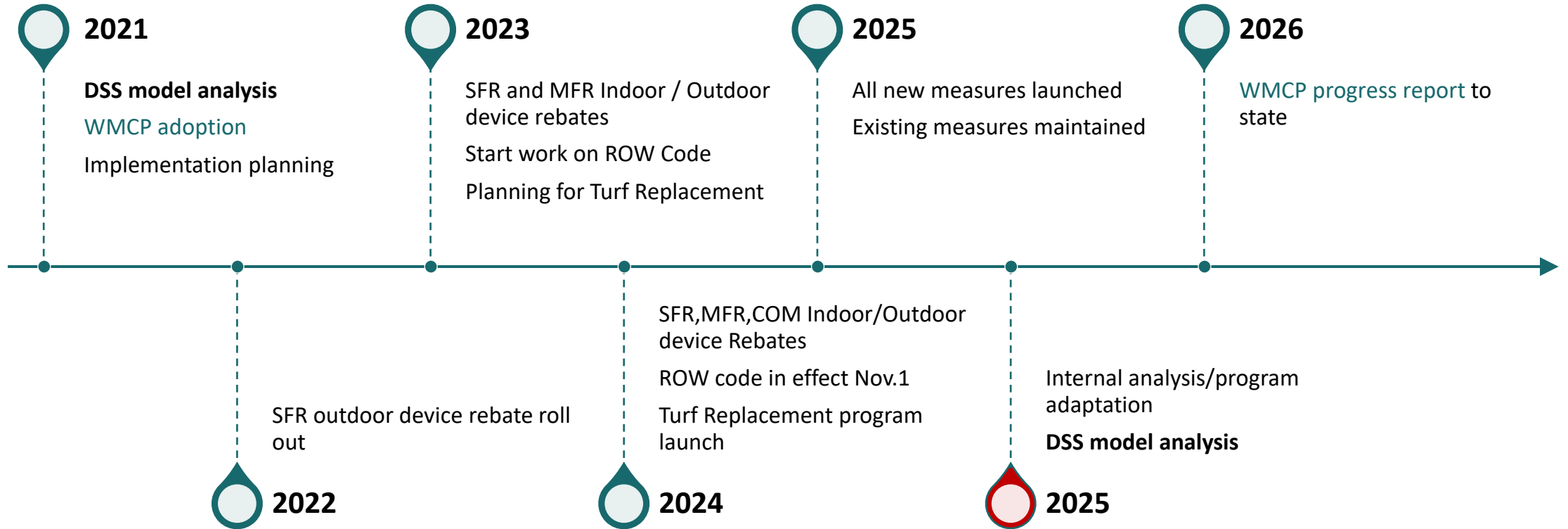


# Modifications to Program C

- Retrofit on Resale – perceived lack of community interest. Similar timing to “Energy Score” initiative.
- Outdoor ordinance – shifted focus from private property to Right of Way.
- Turf Replacement Program called up in 2023. Driven by customer interest, lesser degree addressed private property.
- Rolled out measures by customer class and in conjunction with existing program efforts



# Timeline





# ROW Landscape Code



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# Right of Way Code and Standards update

Nov. 1st 2024 - St. Tree and ROW landscaping code and standards in effect.



## New requirements:

Plan review and inspection required	Templates available for expedited review	No turfgrass/living or synthetic	Separate zones for Street trees	Irrigation system dependent on ROW widths	Smart controller requirements
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# New Processes



**Water Conservation**  
staff coordinating with  
planning department  
in plan review



**Developed a guide for**  
applicants/designers  
to boil down  
requirements and  
implementation of  
code



**New processes for**  
working through  
review, applicability,  
approval, and failure  
of :



**Building permit-**  
Site plan- for tree species  
and placement  
Landscape plan- irrigation  
detail, plant palette/density



**Site Plan review-**  
Review and adding  
corrections to:  
Land Divisions  
Tentative plans  
Lands use



**Infrastructure**  
Review and comment to tree  
placement, landscape and  
irrigation requirements



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# Support Provided

- Direct support from Water Conservation team on all reviews and inspections.
- No permit or re-inspection charges for first year of implementation.
- Outreach to designers, builders, landscapers to minimize delays.

## Pre-approved Design Templates

**Water Efficient Landscape Permit**  
Design Templates  
for  
Right-of-Ways  
March 07, 2024

Name: Nicolas Yopp  
By signing this plan, I agree to meet each requirement of BDC 3.2.4 and Chp 12 Standards and Specs for Street Trees, Landscape and Irrigation. I understand that irrigation requirements change based on the dimensions of my right of way and I have submitted the appropriate template based on my lot. I understand that the City may request my project, and that failure to install adequate measures may result in re-inspection fees, fines, or other enforcement actions including a delay in issuance of Certificate of Occupancy.

Int'l landscape chosen:  
☒ with ROW Width  
☐ with ROW Width  
 Planting palette chosen:  
☐ Very Low water use  
☒ Low water use  
☐ Moderate water use  
 Tax Lot ID: 171126A-04500 Site Address: 62590 NW MT HOOD DR, BEND, OR 97703  
 Signature: NICOLAS YOPP Date: 04/15/2025

Prepared for:  
City of Bend

Prepared by:  
**SZABO LANDSCAPE ARCHITECTURE**  
1000 NW Wall St., Suite 205 | Bend, OR 97703 | www.szabo-la.com

**TYPICAL PLANT LAYOUT FOR NARROW STRIPS**  
SCALE: 1" = 10'-0"

**NOTES:**

- ALL PLANT MATERIAL IN CLEAR VISION AREA MUST STAY UNDER 24' HEIGHT
- SOIL SHALL BE AMENDED PER C.O.B. STANDARD SPECIFICATIONS PART 6, CHAPTER 12.2.4.2
- TREE SPACING VARIES, REFER TO STANDARDS AND SPECIFICATIONS CHAPTER 12.2.5.5
- ALL PLANTING & IRRIGATION SHALL BE INSTALLED PER C.O.B. STANDARDS & SPECIFICATIONS PART 6, CHAPTER 12
- PLANT QUANTITY DEPENDENT ON PARAWAY WIDTH AND DESIGN VARIATIONS. MINIMUM 50% COVERAGE AT MATURITY. APPROX. 10 PLANTS/100 SQFT.
- ANY PLANT SUBSTITUTIONS SHALL BE SUBMITTED TO THE CITY OF BEND FOR APPROVAL. APPROVED PLANTS ARE AVAILABLE ON THE CITY OF BEND APPROVED PLANT LIST.
- PLANT SPECIES MAY NOT EXCEED MORE THAN 25% ORNAMENTAL / BUNCH GRASS.
- LAWN IS PROHIBITED WITHIN THE PUBLIC RIGHT-OF-WAY
- PLANTING AREA SHALL BE TOP DRESSED WITH MINIMUM 3" THICK LAYER OF SPREEDDED BARK OR ROCK MULCH

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WATER CONSERVATION

## Development Guide

Updated June 2025

**City of Bend Right-of-Way (ROW) Development Guide** CITY OF BEND

This guide provides information for understanding street tree, landscaping, and irrigation standards and code requirements for the public right-of-way (ROW). The requirements outlined in this guide are in reference to BDC 3.2.400 and City of Bend Standard and Specifications Part II Chapter 12. This guide is complementary to these resources and intended to supplement them.

For more information:  
Water Services - Water Conservation Program  
Email: [conservation@bendoregon.gov](mailto:conservation@bendoregon.gov)  
Phone: 541-317-3000 ext. 2

**What are the City of Bend's Street tree and Landscaping requirements?**

On June 20th, 2024, the City of Bend adopted updated standards and code language pertaining to street trees, landscaping, and irrigation in the public right-of-way (ROW). The resulting ordinance, MS-2503, aims to promote healthy street-trees, low-water use landscapes and high-efficiency irrigation systems.

**Street Trees**

- Standards and Specifications Part II Ch. 12 Landscape and Irrigation Systems – outlines tree spacing, setbacks, quantity requirement, etc...

**How many trees are required?**

$$\text{Number of Street Trees} = \frac{\text{ROW Length} - (\text{Hardscape} + \text{Clearance Area})}{\text{Tree Spacing}}$$

$$\text{Number of Street Trees} = \frac{120 - (20 + (5' + 10' + 25'))}{30'}$$

Number of Street Trees = 2

Standards and Specifications Part II Ch. 12.2.5.5

**Show the Street Trees on the Site Plan**

Diagram illustrating the placement of street trees on a site plan, showing the 6' Planter Strip Width, 25' Clear Vision Area Clearance, and 30' Tree Spacing. The diagram also shows the 100' Planter Strip Length and 5' Utility Clearance (both sides). The diagram includes a red dashed line indicating the "Clear Vision Area" and a red dashed line indicating the "Clear Vision Area" clearance.

# Plan Review and Inspection Metrics

Water Conservation Plan Review				
Activity Entered	Approved	Failed	Pending	Total
Feb 2025	14			14
Mar 2025	14	1		15
Apr 2025	15	3		18
May 2025	24	9		33
Jun 2025	21	6		27
Jul 2025	14	2		16
Aug 2025	30	29		59
Sep 2025	40	10		50
Oct 2025	48	16		64
Nov 2025	37	18		55
Dec 2025	28	18	2	48
<b>Total</b>	<b>285</b>	<b>112</b>	<b>2</b>	<b>399</b>

Water Conservation Activities by Month Entered				
Activity Entered	Failed	Not Ready	Passed	Total
⊕ Jan 2025	6		9	15
⊕ Feb 2025	4		13	17
⊕ Mar 2025	3	1	14	18
⊕ Apr 2025	4		18	22
⊕ May 2025	2		12	14
⊕ Jun 2025	3		11	14
⊕ Jul 2025	1	1	6	8
⊕ Aug 2025	1		9	10
⊕ Sep 2025			1	1
⊕ Oct 2025			5	5
⊕ Nov 2025			3	3
⊕ Dec 2025			1	1
<b>Total</b>	<b>24</b>	<b>2</b>	<b>102</b>	<b>128</b>

Collecting feedback from contractors/builders

- Plant density Requirement
- Irrigation for trees
- Additional installation costs: \$575-\$3200



# Success



Proper execution of all required elements



Good plant density/ground cover



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# Success



Adequate plant density



Smart Link installed in new controller



Separate tree zone and RWS



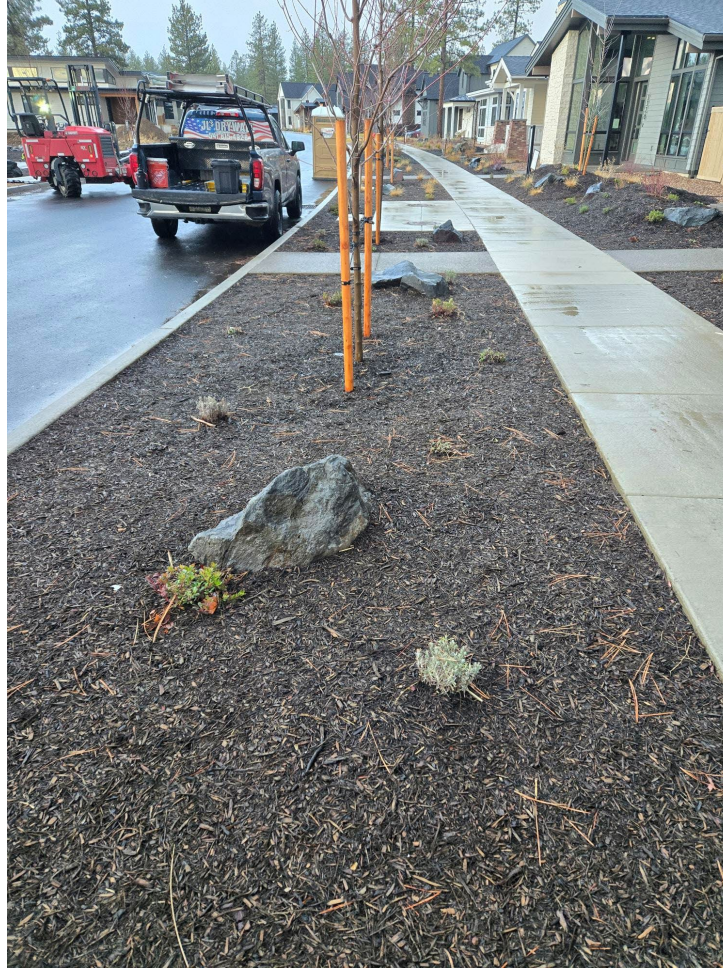
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# Needs Improvement



1/4" drip tied around tree trunk



Sparse plantings, not meeting density requirement



Battery controller on new install



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# Program Improvement

- First year learning process
- Internal processes and external communication needing refinement in 2026



Tree placement and numbers (density/offsets/onsite placement)- *internal coordination*



Meeting plant density requirements- *external communication*



Tracking development of ROW in open space tracts- *internal coordination*



Communication from developer contradicting code = landscape replacements. - *external communication*



Tracking and measurement –*Internal coordination*



# Modeling and Planning



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# Next Steps



## Phase 1

- Run (DSS) Decision Support Service model with true program metrics collected from 3 years of implementation. Compare projections from 2020 assumptions.



## Phase 2

- Refine variables in individual measure profiles (measure life, savings potential, participation growth/program reach)
- Refine existing measures to maximize impact cost benefit.
- Analyze 2-4 additional conservation measures to run in model as program D



## Phase 3

- Update of analysis to council.
- Finalizing WMCP progress report to OWRD.
- Execute changes/new measures.



# Adjustments to model inputs

- Outdoor Ordinance- assumed impact > than development we experienced in service area.
- 2020-SFR population growth was projected to be higher than MFR class.
- Service area population growth estimates higher than actual.  
\*Adjustments made by PSU 2024
- Program participation projections higher than actual.
- 2020 Measure life- permanent. Savings limited to an identified functional life.

**Conservation Measures**  
Clothes Washer Rebate - RES  
City of Bend

Previous Step Conservation RC CC RF HE UR FA IN TU IRR O WI PR DRI NO SOI PRS B/C Next Step

**Edit Measure**

**Clothes Washer Rebate - RES**

Overview			
Name	Clothes Washer Rebate - RES		
Abbr	RCW_REB		
Category	Default		
Measure Type	Standard Measure		

Time Period		Measure Life	
First Year	2026	Permanent	<input type="checkbox"/>
Last Year	2030	Years	12
Measure Length	5	Repeat	<input type="checkbox"/>

Fixture Cost per Device			
	Utility	Customer	Fix/Acct
SF	\$100.00	\$750.00	1
MF	\$100.00	\$750.00	1

Administration Costs	
Method:	Percent
Markup Percentage	37%

Description
Provide a rebate for ENERGY STAR-labeled washing machines to single family homes and apartment complexes that have common laundry rooms. It is assumed that the rebates would remain consistent with relevant state

Customer Classes					
	SF	MF	COM	IRR	HYD
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

End Uses					
	SF	MF	COM	IRR	HYD
Toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urinals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lavatory Faucets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Showers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dishwashers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clothes Washers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitchen Spray Rinse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Leakage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wash Down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Car Washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External Leakage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rry/Kitchen Faucets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

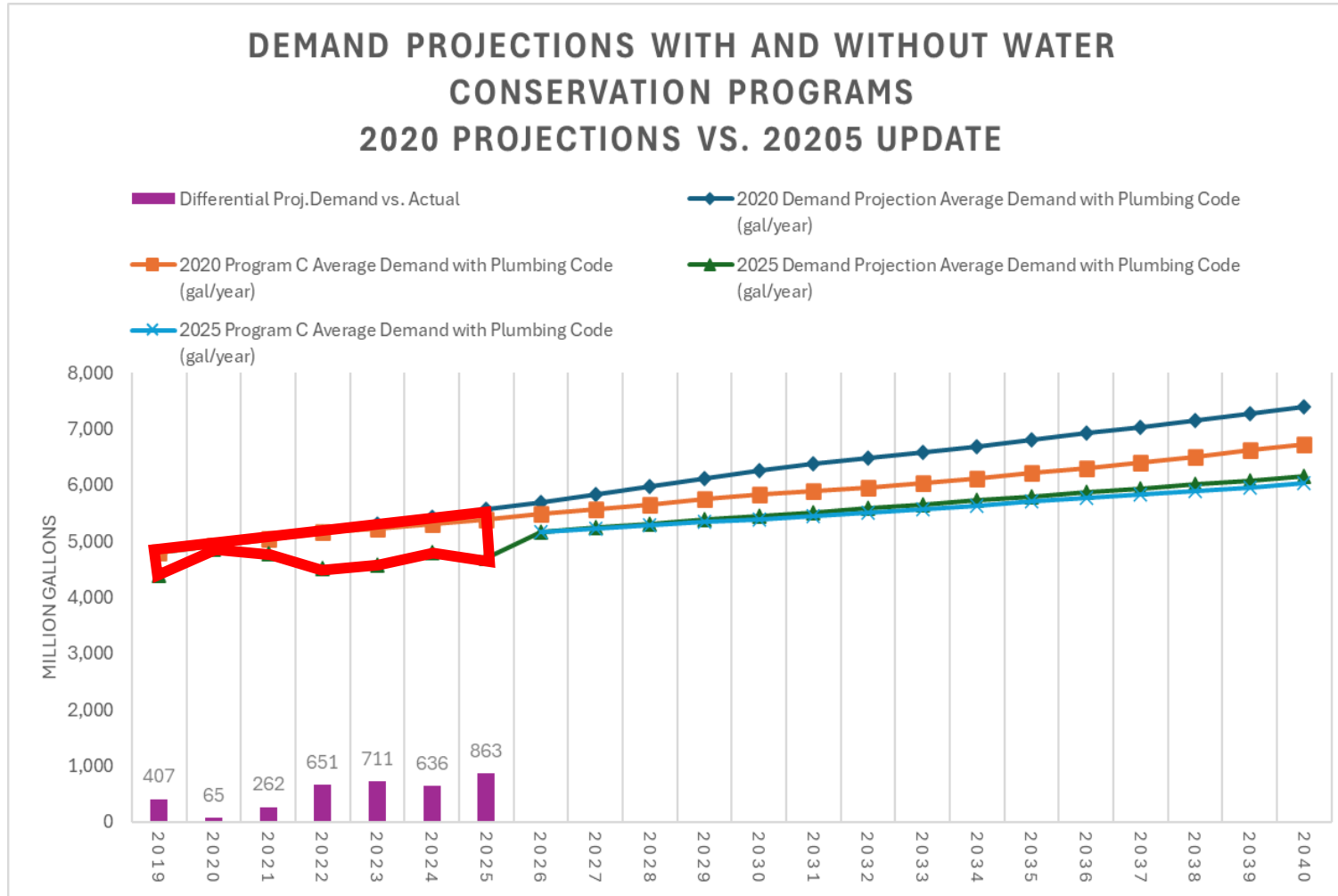
Results	
Units	MG
Average Water Savings (mgd)	0.000854
Lifetime Savings - Present Value (\$)	
Utility	\$6,359
Community	\$62,433
Lifetime Costs - Present Value (\$)	
Utility	\$41,602
Community	\$269,348
Benefit to Cost Ratio	
Utility	0.15
Community	0.23
Cost of Savings per Unit Volume (\$/mg)	
Utility	\$6,666

End Use Savings Per Replacement		
Method:	Percent	
	% Savings/Acct	Avg gpd/acct
Clothes Washer	30.0%	16.0
Clothes Washer	7.5%	75.9

Targets	
Target Method:	Percentage
% of Accts Targeted / yr	0.234%
Only Effects New Accts	<input type="checkbox"/>

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# Conservation Program modeling



- Reanalysis of 10 measures launched
- Forecast demands next 20 years 2025-2045
- Compare actual demands 2019-2025 to projected demands
- Long term projections moving target
- Water demand management efforts/efficiency improvements underestimated



# WAG Discussion Questions



- What questions does this information bring to mind?
- What would you like to know more about?

# Water Services 100-year Anniversary Campaign



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# WAG Discussion Questions



- What do you feel are the most important messages for community members to take away from the campaign?
- Which parts of this campaign are most exciting to you?
- Which activities do you feel would be most effective for the core audiences?
- Are there ways you'd be willing to support this campaign?

# 100-year celebration campaign goals

- Celebrate an important milestone with the community – all year
- Educate the Bend community about their water system
- Increase participation in Water Services programs, reinforcing existing and updated messaging
- Leverage existing materials, events and activities to make best use of resources



# Campaign branding

**100 Years of Water**  
**(SERVICES??)**

**Celebrating a Century of  
Exceptional Water Services!**



100 YEARS  
OF WATER

Logo **Concept** – design not  
yet finalized



Will include the tagline



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# Campaign call to action

I ♥ Bend Water

So \_\_\_\_\_ (or)

Because \_\_\_\_\_



(Fill-in-the-blank with items that encourage engagement and education, depending on use)



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# Audiences

- *What do you think about these targeted groups?*
- *Did we get this right? Is there an audience missing?*



**EXPLORERS:** Young professionals or retired community members who like to get out and explore the city.

**KNOWLEDGE SEEKERS:** Families with school-age kids, college students, or new Bendites who like to participate in educational activities.

**CHANGE MAKERS:** Homeowners and people with control over their appliances and bills.

**ACTIVISTS:** The get-it-done people in Bend who are working toward social and environmental change in all kinds of ways.





# Key messages

**QUALITY** (water quality, testing for safety, pristine water source)

**VALUE** (people, technology, infrastructure)

~~A SPECIAL SYSTEM~~ (**UNIQUE**)  
(dual sources, reliability)

**STEWARDSHIP** (long range planning, conservation, technology, reuse-reclamation)

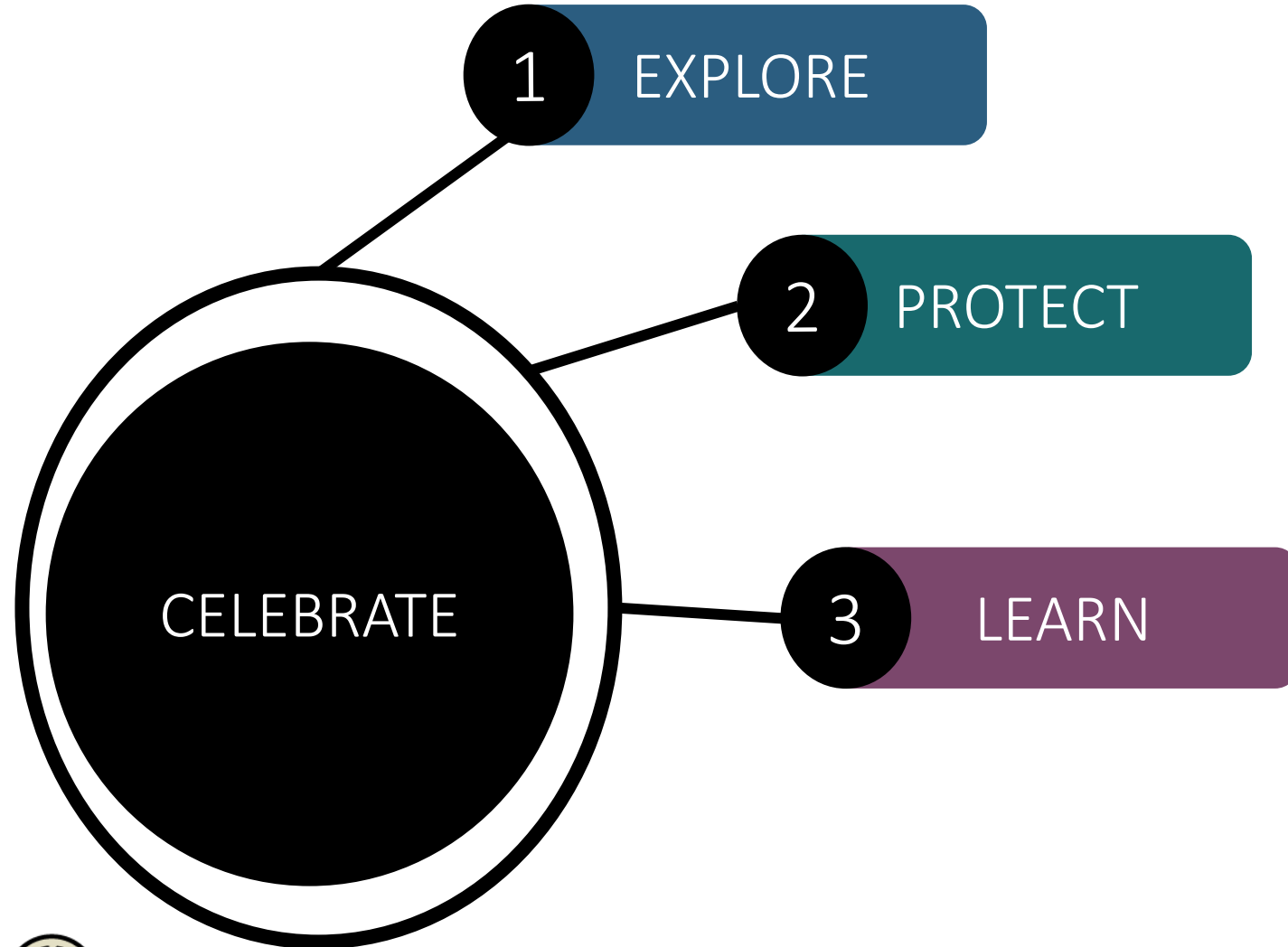


- *Do these key messages resonate with you?*
- *Do you prefer the word “special” or “unique”?*



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# Engagement tracks



Messaging and engagement will have a celebratory tone.

Participants can pick from three tracks. Participation will be tracked with prizes offered.

- *What do you think would encourage participation?*
- *What kind of prizes do you think would be effective?*
- *Do you want to participate/sponsor events/donate prizes?*





# ENGAGEMENT Track 1: Scavenger Hunts (EXPLORE)

Designed to get you out in the community and see firsthand the different places that help us have amazing water.

- **Audience:** Active residents, families, retirees (the Explorers!)
- **Objective:** Guide people through Bend's water system, educate them and share history and recent accomplishments. This track is a step to build water stewards in a fun and active way; the more people know about the area and feel a connection to it, the more they will appreciate it and strive to protect it.



## I ♥ Bend Water

- So I'll go on the stormwater walking tour
- Because Bridge Creek is pristine
- So I'll visit the City booth at Earth Day

# ENGAGEMENT Track 2: Water Steward Challenges (PROTECT)

Focused on where you live, your home and neighborhood, and taking steps to help you and your family use less water and protect the water that goes back into the system.

- **Audience:** Families, businesses, homeowner (Activists, Change makers)
- **Objective:** Encourage people to conserve water and protect the City's stormwater system through several specific actions, such as reviewing their water bill, installing low-flow showerheads or clearing a storm drain.



## I ♥ Bend Water

- So I'll sign up for WaterSmart
- So I irrigate between 5 p.m. and 9 a.m.
- So I keep fertilizers away from stormdrains



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# ENGAGEMENT Tract 3: Educational Programs (LEARN)

An opportunity to learn more about the water system and what makes it great. This track can be completed online, on paper, through video.

- **Audience:** K-12 kids, educational nonprofits, families, adults interested in learning more about the system, new Bendites (Knowledge seekers)
- **Objective:** Educate the public about Bend's water system, its past, present and future, and the connection between water, the environment, and quality of life.

## I ♥ Bend Water

- Because it comes from natural springs in the forest
- Because it's tested for safety
- So I will visit the Historical Society to learn the story behind Bend's water
- So I'll take a virtual tour of our water system

# Publicizing the campaign

- Project website (Feb.)
- Video series (used in many platforms)
- Social media – regular
- Emails – regular updates
- Bend Current newsletter

## Additional Options:

- Podcast
- Utility bill insert at beginning \$
- Billboards \$\$
- Yard signs \$

## In Person:

- Public Works Week Campus Open House (100-year celebration table)
- Tabling in community (such as Earth Day)
  - fact sheets, stickers, swag, t-shirts

- *Can you think of other events or opportunities?*
- *What else do you think would be effective?*
- *Are you open to helping promote the campaign?*



# Video ideas

- **A Special (Unique?) System** - Intro video on 100-year anniversary highlighting key history and system info and letting people know how they can become water stewards.
- **Value** – Bend water is key for success in industries like brewing, kombucha, coffee roasting, landscaping, and health care. Videos with community leaders and industry representatives explaining how key Bend’s exceptional water is to their success.
- **Stewardship and Value** – This video would highlight veteran staff experience and how much things have changed in the last 100 years (especially the last 30 years under their watch). This video will introduce the public to the team behind our exceptional water and help to build a personal connection to the work.
- Short videos on the I ♥ Bend Water action items, such as hiking Bridge Creek, installing conservation devices, drinking a glass, clearing a stormdrain, and more.





# Signs

Yard signs can be created as a cost effective and grassroots alternative to a large format billboard. These would feature an action.

Messages could allow the community members to identify with their love of water:

"I love Bend Water so I planted a low-water landscape and save X gallons of water a year!" or

"I love Bend Water because it makes the beer taste great!"

- *Do you think this would be effective?*
- *What messages would you want to see on yard signs?*
- *Would you be interested in sharing signs?*



AI-generated image



# WAG Discussion Questions



- What do you feel are the most important messages for community members to take away from the campaign?
- Which parts of this campaign are most exciting to you?
- Which activities do you feel would be most effective for the core audiences?
- Are there ways you'd be willing to support this campaign?

# Discussion & Feedback



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# Look ahead



**Feb. 4, 2026: Stormwater & Water Conservation Standards Update**  
11 a.m.-12:30 p.m. Hybrid Meeting (Headquarters Building or Teams)

**March 4, 2026: Stormwater Program Update & Water Conservation Annual Reporting**  
11 a.m.-12:30 p.m. Hybrid Meeting (Headquarters Building or Teams)



# Thank you!



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# Accommodation Information for People with Disabilities



To obtain this information in an alternate format such as Braille, large print, electronic formats, etc. please contact Lori Faha at [lfaha@bendoregon.gov](mailto:lfaha@bendoregon.gov) or (541) 317-3025; Relay Users Dial 7-1-1.

