

City of Salem
Water/Wastewater Task Force
2024-2025

Public Works Department
July 11, 2024

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MEETING
AGENDA

Extension of Emergency
Utility Assistance Program

Resiliency Update

Future Capital Needs

2

Extension of Emergency Utility Assistance Program

Water/Wastewater Task Force

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Assistance Available to Customers

- Payment Arrangements
Utility Customer Care team at 503-588-6099
- Utility Rate Relief Program (on-going monthly)
Discount on Wastewater Base Fee
Qualified by Mid Willamette Valley Community Action Agency
Credit applied to bill
- Emergency Utility Assistance Program (up to \$500 per year)
Qualified on site by partner agencies
Pre-qualification Criteria

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Utility Rate Relief Program

- 60% monthly discount on Wastewater Base Fee
 Elderly (over 60) or Disabled Head of Household
 At or below 60% of Median Income
- Applied to utility bill
 $\$18.38 * 0.6 = \11.03 Inside City
 $\$19.99 * 0.6 = \12.00 Outside City
- 935 Participants Inside and Outside City
- Foregone revenue = \$126,000 annually



Utility Bill Estimator

Account Class: Residential
 Wastewater Volume: 5.5
 Stormwater Area: 2,800
 Water Meter Size: 5/8"
 Consumption Units: 8

Bill Estimates	2024
Water	
Volume	\$24.16
Base Fee	\$12.90
Wastewater	
Volume	\$22.50
Base Fee	\$18.38
Stormwater	
Impervious Area	\$7.49
Base Fee	\$13.22
Backflow	
Franchise Fee	\$4.93
Total	\$103.58

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Emergency Utility Assistance Program

History

- Developed over 14 years ago
- Originally funded entirely with donations
- 2016 - **\$150 max/account**, funded by donations, up to **\$10,000 match** from utility revenue
- 2020 - **\$500 max/account**, **\$500,000** one-time utility revenue allocation and donations
- 2022 - \$500 max/account, up to **\$300,000 annually** from utility revenue and donations
- 2023 – Federal program ended after 22 months; average assistance \$300/account

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Emergency
Utility
Assistance
Program

Combined Emergency Utility Assistance and Federal Funding

Year	Funding	Customers	Average
2019	\$ 27,013.95	297	\$ 90.96
2020	\$ 71,611.76	495	\$ 144.67
2021	\$ 229,393.36	1716	\$ 133.68
2022 ⁽¹⁾	\$ 481,566.00	2659	\$ 181.11
2023 ⁽¹⁾	\$ 795,879.07	3269	\$ 243.46
2024 ⁽²⁾	\$ 396,015.72	2154	\$ 183.85

(1) Includes federal Low Income Housing Water Assistance (LIHWA) Program Funding
 (2) Expended through June 30, 2024
 (3) 1% of Utility Revenue Slope = \$1.1 million

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Emergency
Utility
Assistance
Program

Discussion of Decision Points

1. Extend Emergency Utility Assistance Program for two more years concurrent with rate cycle
2. Funding Level for Program
3. Maximum per account per calendar year

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Water System Seismic Resiliency Assessment

Water/Wastewater Task Force


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OBJECTIVES

1. Establish level of service (LOS) goals
2. Identify infrastructure (both pipelines and facilities) needed to supply water to critical customers and locations after an earthquake– also called the water system backbone;
3. Assess seismic hazards and the likelihood of these hazards to impact critical infrastructure;
4. Assess the expected seismic performance of the backbone pipelines and selected facilities; and
5. Identify preliminary recommendations for system improvements that should be implemented to restore water service more rapidly after a major earthquake to meet social and economic needs.

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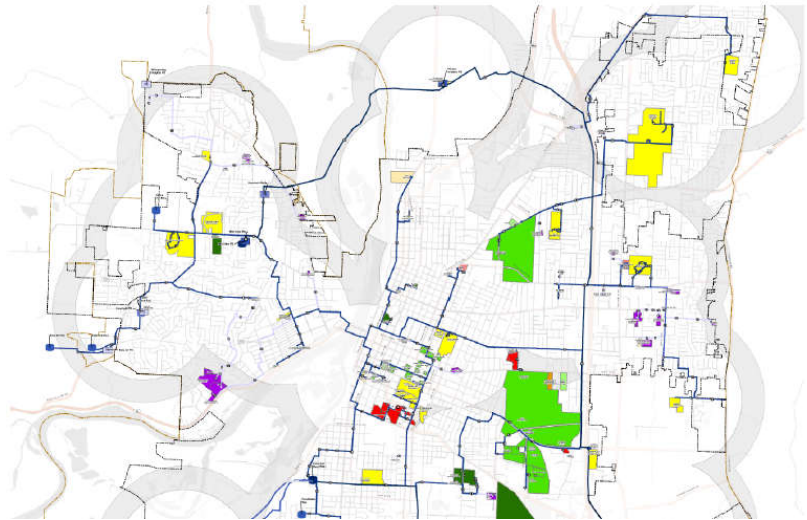
LEVEL OF SERVICE GOALS



Water Components	% "Operational" Scale/Scenario	Target Time Frame for Recovery									
		Phase 1: Short Term			Phase 2: Intermediate Term			Phase 3: Long Term			
		Days			Weeks			Months			
		0-1	1-3	3-7	1-2	2-4	4-12	3-6	6-12		
Source											
Raw or source water and terminal reservoirs	% of winter average day demand (ADD)	R	Y		G						
Raw water conveyance (pump stations and piping to WTP)	% of winter ADD	R	Y		G						
Water production (flow rate)	% of winter ADD	R	Y		G						
Well and/or treatment operations functional (quality)	Minimum water quality objectives met	R	Y		G						
Transmission (Including Booster Stations)											
Backbone transmission facilities (pipelines, pump stations, and tanks)	Supporting critical facilities and fire flow	G									
Water for fire suppression at key supply points (to promote redundancy)	% of fire flow x duration	G									
Control Systems & Instrumentation											
SCADA and other control systems (WTP and boosters)	% of components for normal operation	Y	G								
Distribution											
Critical Facilities											
Wholesale Customer - City of Turner	% of winter ADD	Y	G								
Critical City, community, and state facilities identified as having a short-term (no disruption) recovery goal in Table 2-2	% of winter ADD	G									
Critical City, community, county, and state facilities identified as having a short term (1-3 days) recovery goal in Table 2-2	% of winter ADD	Y	G								
Emergency Housing											
Emergency shelters	% of water for drinking & sanitation	Y	G								
Housing/Neighborhoods											
Potable water available at community distribution centers	% of water for drinking & sanitation		Y	G							
Water for fire suppression at fire hydrants	% of hydrants		R	Y	G						
Community Recovery Infrastructure											
All other customers	% of customers	R	Y	G							

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WATER SYSTEM BACKBONE



Backbone City Scoring

- Highly Critical
- Critical
- Semi Critical
- Local Critical
- Not Critical

Pump Station (PS) Risk Level

- Highly Critical
- Critical
- Semi Critical
- Local Critical
- Not Critical

Reservoir (Res) Risk Level

- Highly Critical
- Critical
- Semi Critical
- Local Critical
- Not Critical

Valve Risk Level

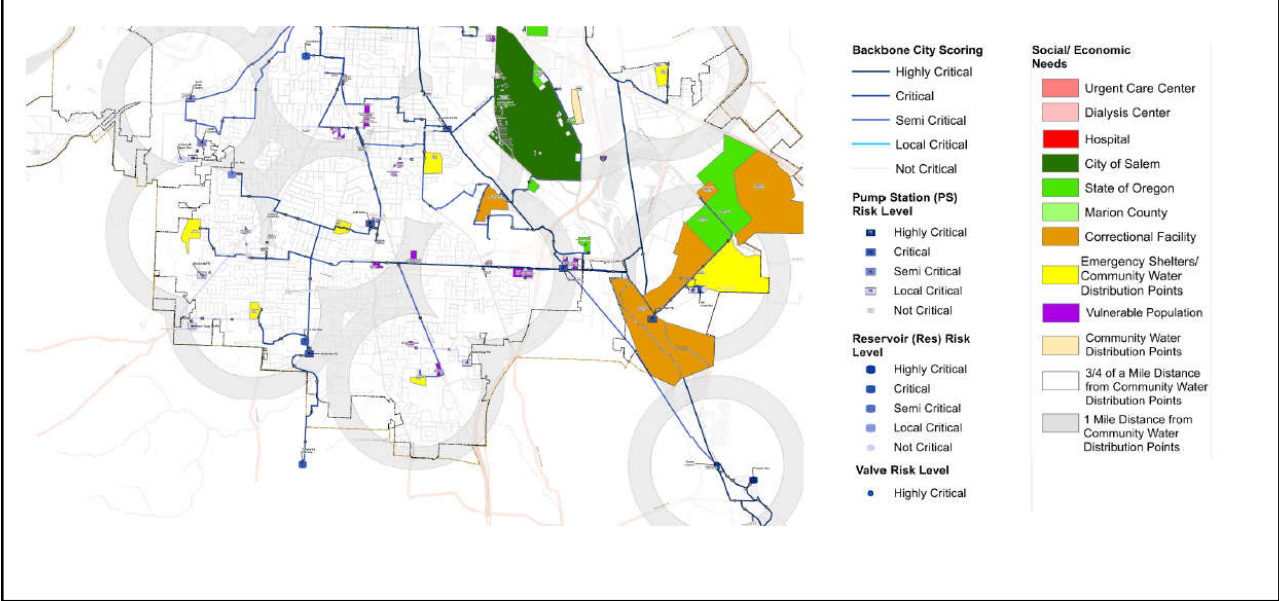
- Highly Critical

Social/ Economic Needs

- Urgent Care Center
- Dialysis Center
- Hospital
- City of Salem
- State of Oregon
- Marion County
- Correctional Facility
- Emergency Shelters/Community Water Distribution Points
- Vulnerable Population
- Community Water Distribution Points
- 3/4 of a Mile Distance from Community Water Distribution Points
- 1 Mile Distance from Community Water Distribution Points

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WATER SYSTEM BACKBONE



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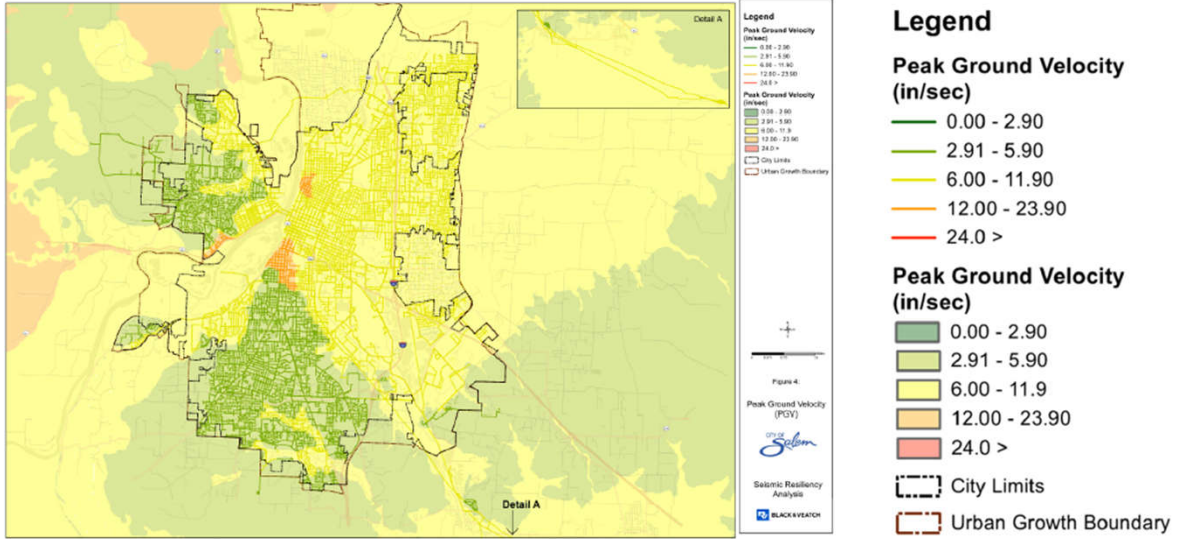
FACILITY CRITICALITY

Criticality Level	Name	Service Level
Supply/Valves		
5 – Highly Critical	Geran Island WTP	G-0
5 – Highly Critical	Turner Control Facility	G-0
4 – Critical	ASR Wells	S-2
2 – Local Critical	Hemlock Well	G-0
Reservoirs		
5 – Highly Critical	Fairmont Reservoir	G-0
	Franzen Reservoir	Franzen
	Mountain View Reservoir	G-0
4 – Critical	Candalaria Reservoir	S-1
	Champion Hill Reservoir	S-3
	Eola #1b Reservoir	W-2
	Eola #2 Reservoir	W-3
	Grice Hill Reservoir	W-1
	Lone Oak Reservoir	S-2
3 – Semi Critical	Mill Creek Reservoir	MCCC S-1
	Glen Creek Reservoir	W-1
2 – Local Critical	Kurth Reservoir	S-2
	Croisan Mt Upper Reservoir	S-2
1 – Not Critical/ Redundant	Chakarun Reservoir	S-2
	College Reservoir	T
	Mader Reservoir	S-1
	Seeger Reservoir	S-2
	Skyline Reservoir	S-3

Criticality Level	Name	Service Level
Pump Stations		
4 – Critical	Boone Pump Station	S-2
	Creekside Pump Station	S-3
	Deer Park Pump Station	S-1
	Edwards S1 Pump Station	S-1
	Keizer Intertie Pump Station	G-0
	Mountain View Pump Station	W-1
3 – Semi Critical	Lower Croisan Pump Station	S-2
	South River Rd Pump Station	S-1
2 – Local Critical	Davis Road Pump Station	S-4
	Eola #2 Pump Station	W-3
	Limelight Pump Station	W-2
	Mill Creek Pump Station	T
	Rock Ridge Pump Station	S-3
	Skyline #4 Pump Station	S-4
	Upper Croisan Pump Station	S-3
	Whispering Heights Pump Station	W-2
	Chatnicka Pump Station	W-3
1 – Not Critical/ Redundant	Edwards S2 Pump Station	S-2
	Fairmont Pump Station	S-2
	Illahe Pump Station (Private)	S-1
	Jefferson Pump Station	W-1
	Skyline Pump Station	S-3

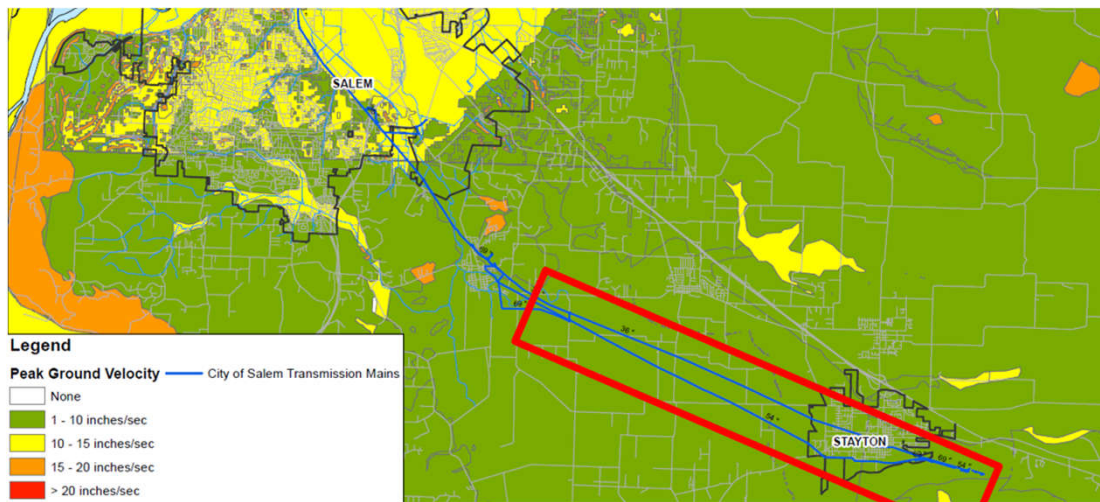
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PEAK GROUND VELOCITY



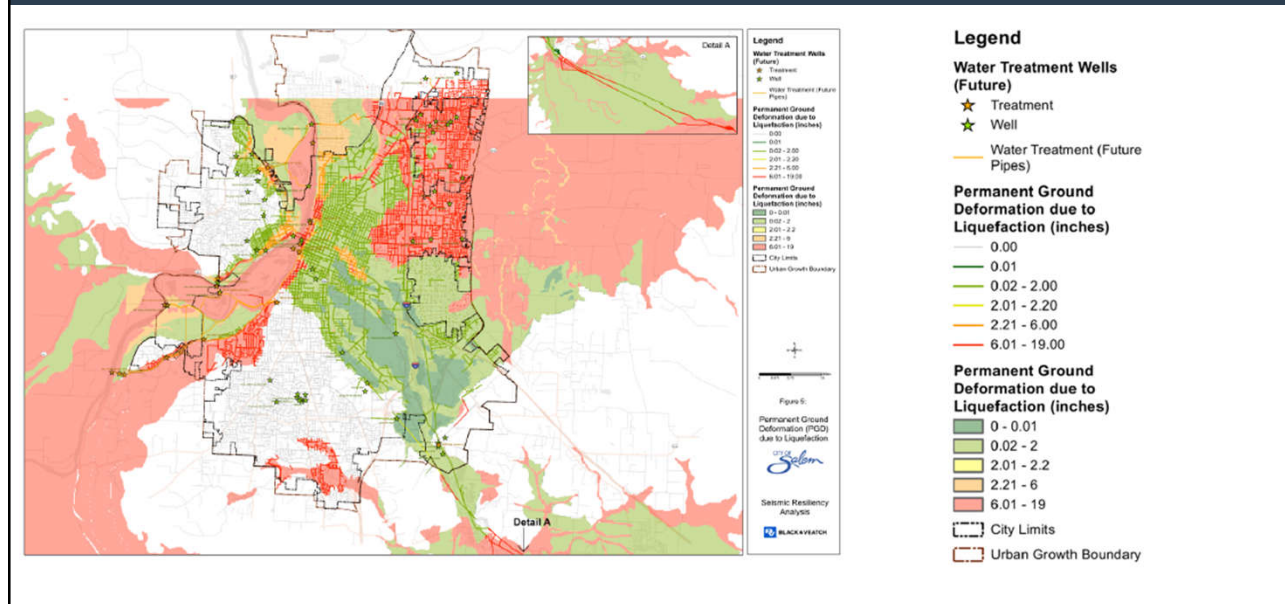
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PEAK GROUND VELOCITY - TRANSMISSION



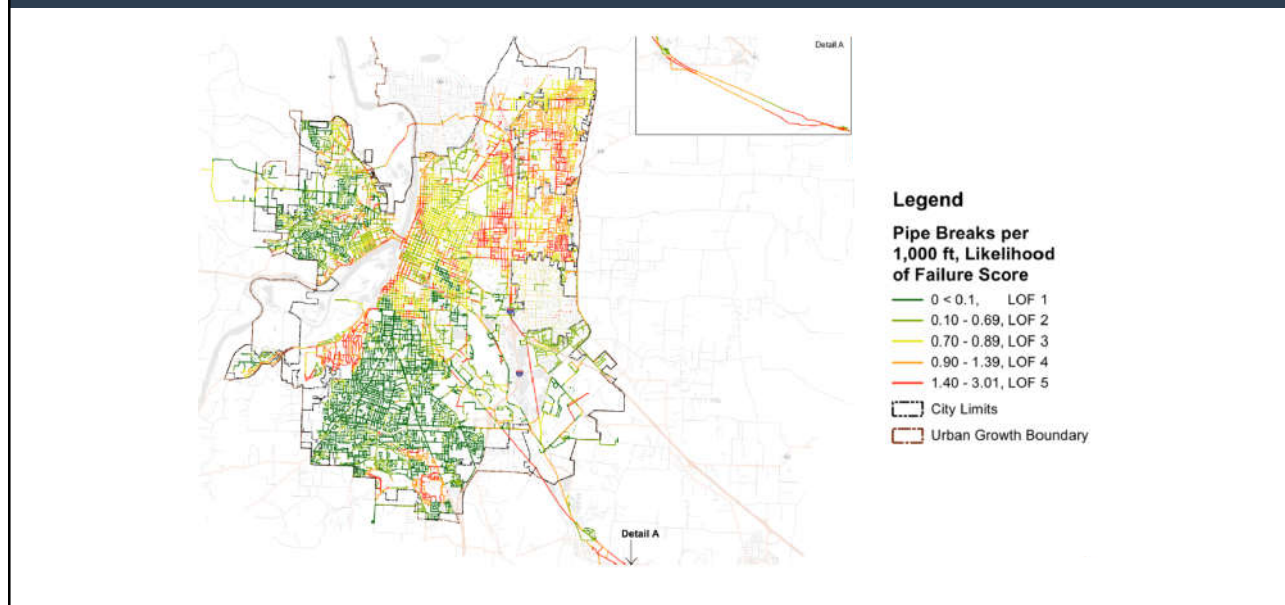
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PGD DUE TO LIQUEFACTION



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LIKELIHOOD OF FAILURE



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CAPITAL PROGRAM METHODOLOGY

Term	Years	Priority
Short	0-15	1. Preserve Water in the System 2. Convey Treated Water 3. Implement Alternative Supplies
Medium	10-25	4. Harden the Rest of the Backbone
Long	20-50	5. Harden Distribution System to Reduce the Number of Repairs

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SHORT-TERM CIP PRIORITIES

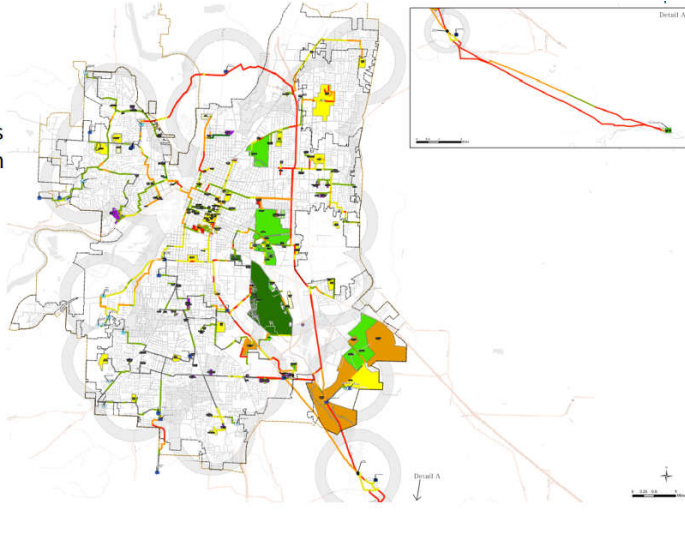
1. Preserve Water in the System
 - Seismic isolation valves on all reservoirs
 - Seismic upgrades on **Very High** to **Moderate** Risk reservoirs and their control buildings, then Pump Stations

Facility	Service Level	Potential Liquefaction	LOF	COF	Risk
Fairmount Reservoir	G-0		5	5	25 Very High
Fairmount Pump Station	S-2		5	1	5 Low
Mountain View Reservoir	G-0		4	5	20 High
Mountain View Pump Station	W-1		4	4	16 Moderate to High
Grice Hill Reservoir Control Building	W-1		3	4	12 Moderate
Turner Control Facility	G-0	X	4	5	20 High
ASR #1 and #2 Wells	S-2		4	4	16 Moderate to High
ASR #5 Well	S-2		4	4	16 Moderate to High
Salem/Keizer Intertie #1	G-0	X	4	4	16 Moderate to High
ASR #4 Well	S-2		3	4	12 Moderate
Deer Park Pump Station	S-1		5	4	20 High
Edwards S1 Pump Station	S-1	X	5	4	20 High
Boone Road Pump Station	S-2		4	4	16 Moderate to High
Candalaria Reservoir	S-1		3	4	12 Moderate
Champion Hill Reservoir Control Building	S-3	X	4	4	16 Moderate to High
Champion Hill Reservoir	S-3	X	3	4	12 Moderate
Lone Oak Reservoir Control Building	S-2		3	4	12 Moderate
Mill Creek #1 Reservoir Control Building	MCCC S-1		3	4	12 Moderate
Creekside Pump Station	S-3		3	4	12 Moderate

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SHORT-TERM CIP PRIORITIES

- 2. Convey Treated Water
 - Harden transmission line to critical reservoirs including to West Salem
 - Harden all High- and Moderate High-Risk Pipes
- 3. Implement Any Alternative Supplies
 - Emergency wells/new WTP



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MEDIUM-TERM CIP PRIORITIES

- 4. Harden the Rest of the Backbone
 - Seismic upgrades on Low to Moderate to Low-Risk facilities

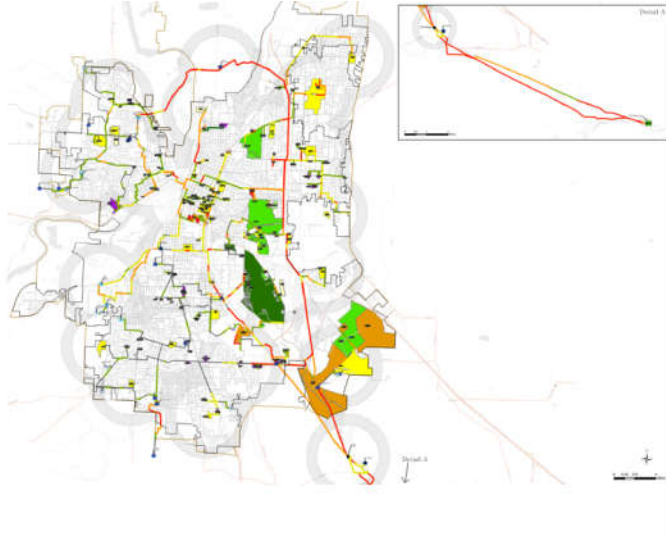
Facility	Service Level	Potential Liquefaction	LOF	COF	Risk
Eola #1B Reservoir	W-3		2	4	8 Low to Moderate
Grice Hill Reservoir	W-1		2	4	8 Low to Moderate
Mill Creek #1 Reservoir	MCCC S-1		2	4	8 Low to Moderate
Limelight Pump Station	W-2		3	2	6 Low to Moderate
Edwards S2 Pump Station	S-2	X	5	1	5 Low
Lone Oak Reservoir	S-2		1	4	4 Low

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MEDIUM-TERM CIP PRIORITIES

4. Harden the Rest of the Backbone

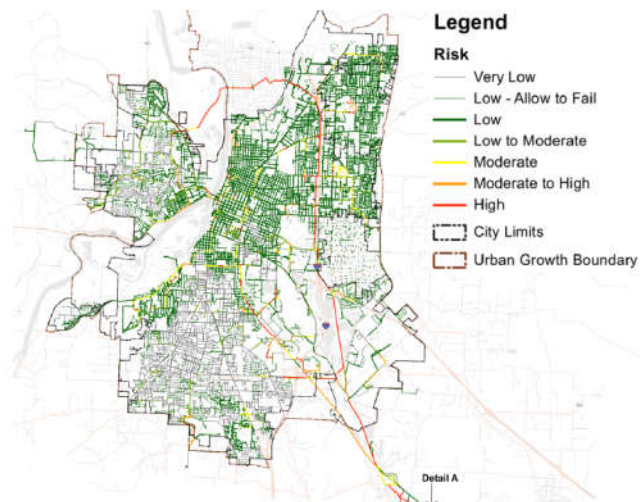
- Seismic upgrades on **Low to Moderate** to **Low-Risk** facilities
- Harden the rest of the backbone distribution system



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LONG-TERM CIP PRIORITIES

5. Harden **low-risk** distribution system to reduce the number of repairs



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COST PROJECTIONS – HIGH PRIORITY FACILITIES

Facility	Known issues	Additional Studies	Total Base Costs	Contingency	Total Potential Costs
ASR 1&2	\$170,000	\$55,000	\$225,000	\$100,000	\$325,000
ASR 4	\$100,000	\$35,000	\$135,000	\$0	\$135,000
ASR 5	\$70,000	\$46,000	\$116,000	\$160,000	\$276,000
Creekside PS	\$110,000	\$90,000	\$200,000	\$80,000	\$280,000
Deer Park PS	\$120,000	\$57,000	\$177,000	\$180,000	\$357,000
Mountain View PS	\$220,000	\$10,000	\$230,000	\$30,000	\$260,000
Salem Keiser Intertie #1	\$130,000	\$20,000	\$150,000	\$210,000	\$360,000
Turner Control Facility	\$70,000	\$58,000	\$128,000	\$90,000	\$218,000
Candalaria Reservoir	\$10,000	\$94,000	\$104,000	\$220,000	\$324,000
Champion Hill Reservoir	\$100,000	\$50,000	\$150,000	\$0	\$150,000
Champion Hill Reservoir Control Bldg	\$160,000	\$45,000	\$205,000	\$10,000	\$215,000
Fairmount Reservoir	\$2,400,000	\$30,000	\$2,230,000	\$870,000	\$3,100,000
Fairmount Res. Control Bldg	\$50,000	\$15,000	\$65,000	\$20,000	\$85,000
Grice Hill Res Control Bldg	\$130,000	\$0	\$130,000	\$0	\$130,000
Lone Oak Res. Cntrl Bldg	\$30,000	\$40,000	\$70,000	\$10,000	\$80,000
Mill Creek Reservoir	\$40,000	\$10,000	\$50,000	\$840,000	\$890,000
Mill Creek#1 Res. Cntrl. Bldg	\$50,000	\$40,000	\$90,000	\$140,000	\$230,000
Mountain View Reservoir	\$7,570,000	\$0	\$7,370,000	\$70,000	\$7,440,000
Eolia 1B Seismic Valve	\$200,000				\$200,000
Subtotal - High Priority	\$11,730,000	\$695,000	\$11,825,000	\$3,030,000	\$15,055,000

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COST PROJECTIONS – REMAINING FACILITIES

Facility	Known issues	Additional Studies	Total Base Costs	Contingency	Total Potential Costs
Boone Road PS	\$100,000	\$24,000	\$124,000	\$130,000	\$254,000
Edwards PS	\$180,000	\$51,000	\$231,000	\$750,000	\$981,000
Limelight PS	\$100,000	\$62,000	\$162,000	\$280,000	\$442,000
Eola #1B Reservoir	\$80,000	\$8,000	\$88,000	\$20,000	\$108,000
Grice Hill Reservoir	\$20,000	\$2,000	\$22,000	\$20,000	\$42,000
Lone Oak Reservoir	\$10,000	\$7,000	\$17,000	\$0	\$17,000
Subtotal - Medium Priority	\$490,000	\$154,000	\$644,000	\$1,200,000	\$1,844,000
Total Program Costs (rounded)	\$12,220,000	\$850,000	\$12,470,000	\$4,230,000	\$16,900,000

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PIPE REPLACEMENT COST SUMMARY

Assumes

- Replacement of pipes with butt welded steel throughout (\$117 per inch-Diameter Foot for large pipes; \$53 per inch-Diameter Foot for small pipes)
- No distinction for highway, creek, or rail crossing (typ. extra cost)
- Includes contingency and engineering

Not Included:

- Very Low and Low - Allow to Fail, which will not be replaced

Risk Category	Total Cost to Replace
High	\$959,440,000
Moderate to High	\$333,660,000
Moderate	\$255,780,000
Low to Moderate	\$268,250,000
Low	\$1,047,480,000
Total Program Costs (rounded)	\$2,864,580,000

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Future Capital Needs

Water/Wastewater Task Force

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Utility FY25-29 CIP Highlights



Projects

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Projects

Programming

\$191.7 Million
Total Project Costs

Funding

Federal Grants,
System
Development
Charges, Utility
Rates

Grant Applications

Bennett Dam Complex
Geren Island Bridge

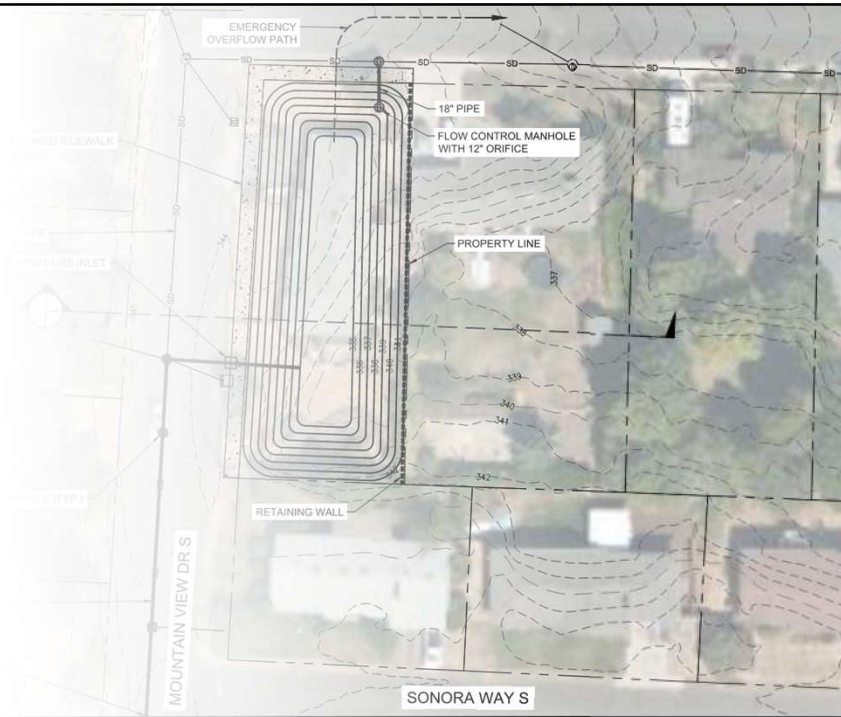
Scoring

Equity added to all
scoring criteria

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Stormwater Key Projects

- Deerhaven Culvert Replacement
- Mountain View Stormwater Improvements
- Center Street Stormwater Improvements



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Wastewater Key Projects

- Willow Lake South Secondary Clarifiers
- Willow Lake North Primary Digester Coatings and Secondary Digester Cover
- Portland Road NE Sanitary Sewer
- Airport Landfill Closure
- Manzanita Way NE SSO Pipe Replacement



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Water Key Projects

- Bennett Dam Complex
- State Street Waterline
- Center Street Bridge Waterline
- Fairmount Reservoir Seismic Upgrades



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Allocation by Infrastructure

Utilities Projects by Category						
Category	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
Stormwater	\$ 4,535,120	\$ 7,063,340	\$ 3,484,000	\$ 3,288,120	\$ 1,915,000	\$ 20,285,580
Wastewater	16,196,420	8,104,730	13,368,390	13,283,530	24,452,110	75,405,180
Water	20,729,870	19,672,400	31,533,620	16,590,400	7,515,520	96,041,810
Total:	\$ 41,461,410	\$ 34,840,470	\$ 48,386,010	\$ 33,162,050	\$ 33,882,630	\$ 191,732,570

Utilities Projects by Funding Source						
Funding Source	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
NOAA	\$ 5,000,000	\$ 10,000,000	\$ 10,000,000	\$ -	\$ -	\$ 25,000,000
SDC-Stormwater	140,000	-	-	-	-	140,000
SDC-Wastewater	2,340,000	-	-	-	-	2,340,000
SDC-Water	1,300,000	725,000	1,700,000	1,500,000	-	5,225,000
Utility Rates	32,681,410	24,115,470	36,686,010	31,662,050	33,882,630	159,027,570
Total:	\$ 41,461,410	\$ 34,840,470	\$ 48,386,010	\$ 33,162,050	\$ 33,882,630	\$ 191,732,570

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Future Utility CIP Issues

- Franzen Reservoir Cover Replacement
- Water Transmission Mains
- Utility System Seismic Resiliency Measures



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Future Utility CIP Issues

- Distribution and Collection System Rehabilitation and Replacement
- West Salem Pump Station and Force Main Rehabilitation
- Temperature TMDL Impacts for Stormwater and Wastewater
- Willow Lake Outfall/NPDES Permit Renewal



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Meeting and Public Outreach Schedules

Water/Wastewater Task Force

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TASK FORCE SCHEDULE

- ✓ **Thursday, June 20, 2024**
 - ✓ Introduction and background
 - ✓ Review of Service Areas and Rate Structure
- ✓ **Thursday, July 11, 2024**
 - ✓ Extension of Utility Assistance Program
 - ✓ Resiliency Update
 - ✓ Future Capital Needs
- **Friday, July 26, 2024**
 - Extension of Service Outside of UGB
- **Thursday, August 8, 2024**
 - Irrigation Rates and Creekside Proposal
- **Thursday, August 29, 2024**
 - Utility Revenue Slope Proposal
 - Hauled and Septic Waste Rates
- **Thursday, September 12, 2024**
 - Discussion/Recommendation on Utility Revenue Slope and Rate Proposal

OUTREACH, PUBLIC HEARING AND IMPLEMENTATION

Public Outreach

- September 15 - 30, 2024
 - Rate proposal information published (website)
 - Post cards mailed to all utility customers

Public Hearing

- November 12, 2024, public hearing before Salem City Council

Effective Dates

- January 1, 2025 & January 1, 2026

Customer Bills Reflect New Rates

- February 1, 2025 & February 1, 2026

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Thank you!

Questions?

Next Meeting of the
Water/Wastewater Task Force
July 26, 2024

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