



CITY OF ASHLAND

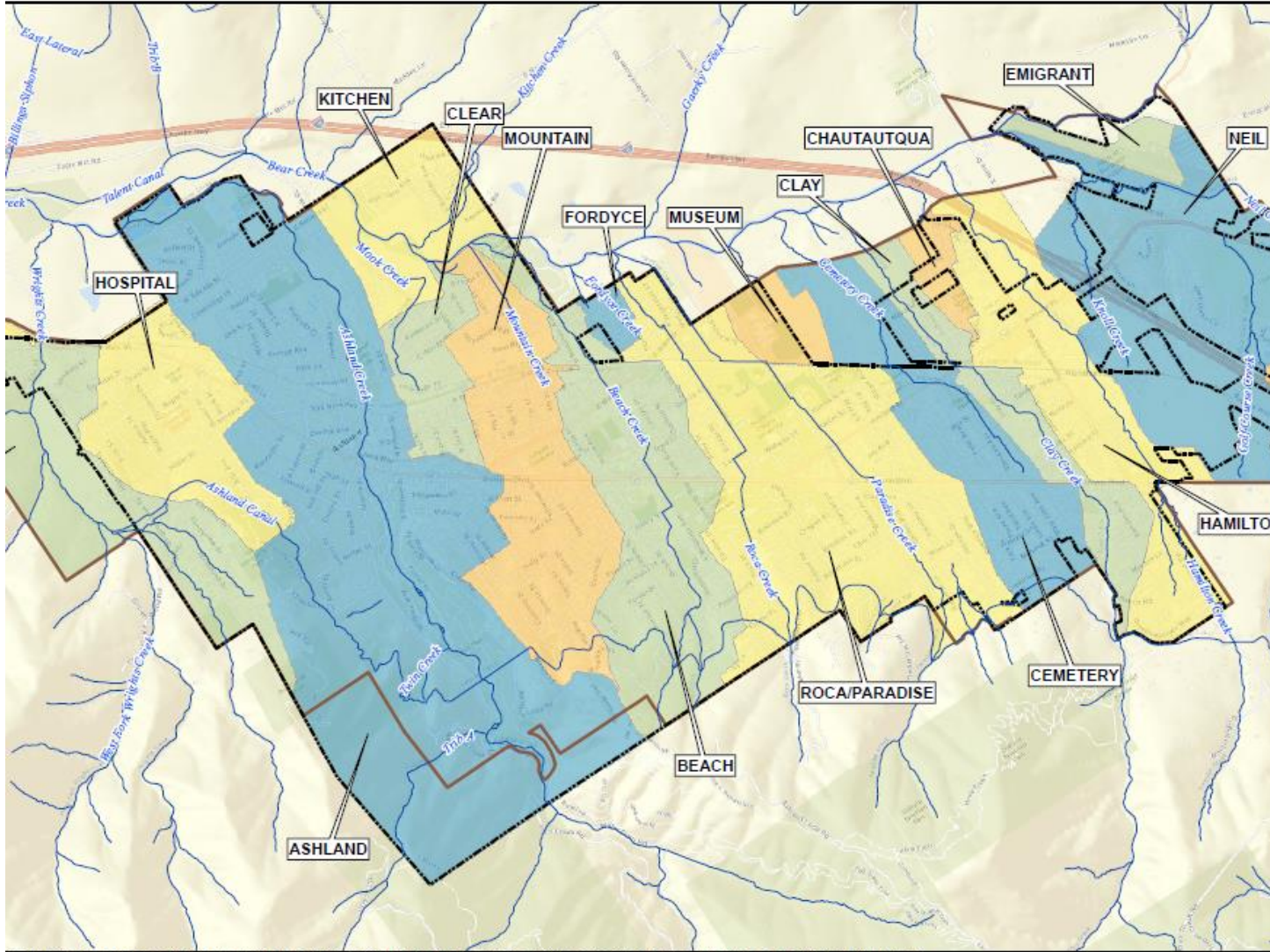
# Storm Water and Drainage Master Plan

# Master Plan Overview

- Executive Summary
- Study Area
- System Evaluation
- Storm Water Program
- Capital Plan
- Financial Analysis
  - Operating requirements (fees)
  - Debt Service Plan
  - System Development Charges (SDCs)

## Master Plan Goals

- Comprehensive Information Update (system)
- Summarize New Regulatory Requirements
- Develop Prioritized Capital Plan
- Develop a Financial Plan



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# Study Area

- **Drainage Basins**
- Topography
- Significant Features
- Soils
- Rainfall
- **Regulatory Drivers**
  - MS4 Phase II Permit
  - Total Maximum Daily Load (TMDL)
  - Ashland Comprehensive Plan
  - Water Resources Protection Zone

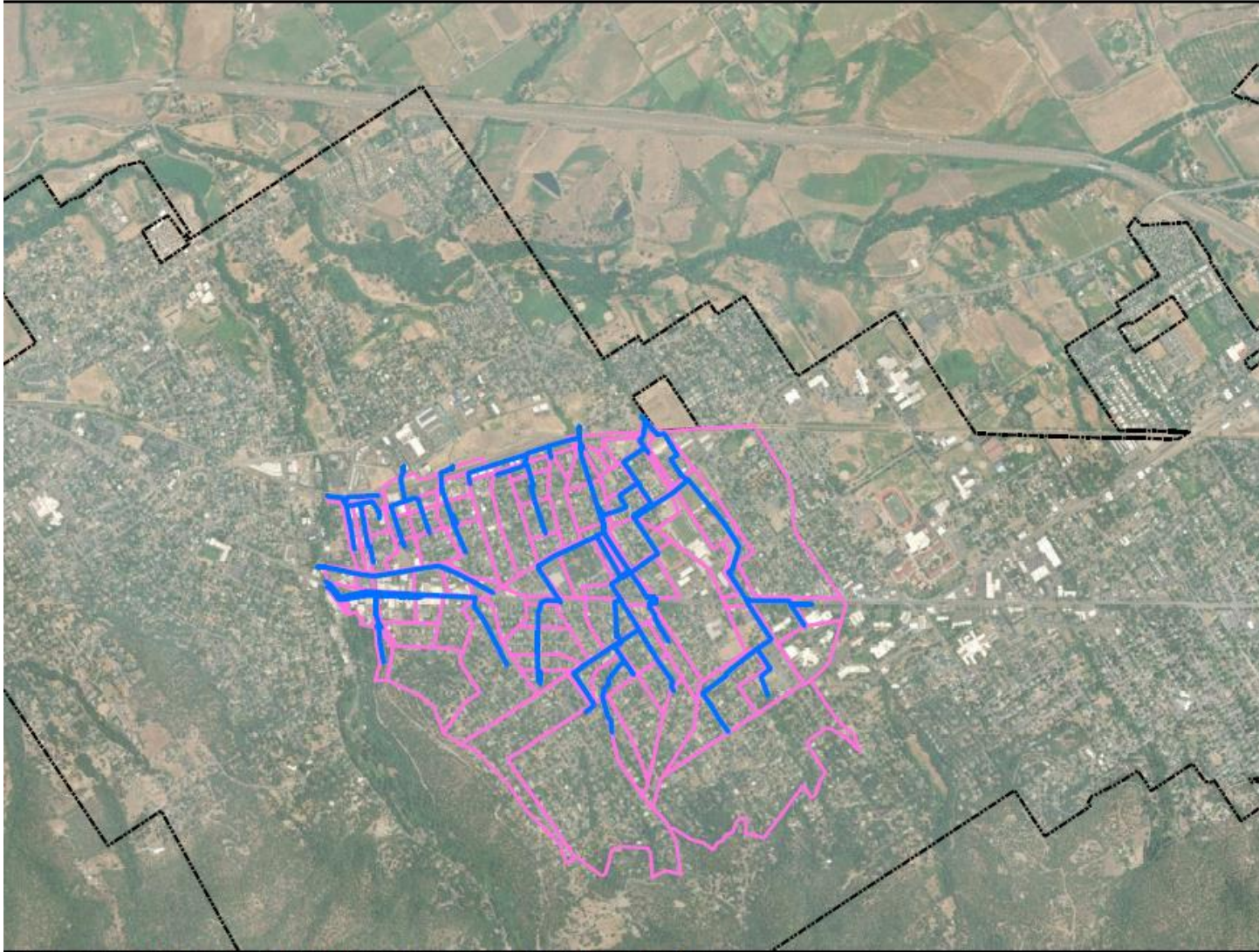
# System Evaluation

- **Hydrologic Analysis**

- Basin analysis

- **Hydraulic Analysis**

- Known deficiency areas
- Data Collection
- Model results





# Storm Water Program

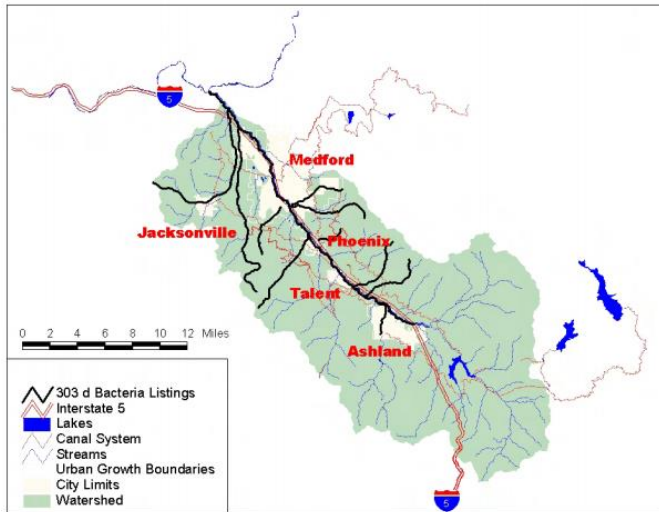
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- **Applicable Code and Program Component Review**
- **Stormwater Manual**
  - **Rogue Valley Sewer Services Storm Water Design Manual**
    - Regional Design Requirements
      - Design Storm
      - Methodology
      - Treatment Systems
    - Regional Low Impact Development Best Management Practices



# Storm Water Program

- **National Pollution Discharge Elimination System (NPDES) MS4 Phase II Permit (DEQ)**
  - **Permit Focus**
    - Public Education and Outreach
    - Public Involvement and Participation
    - Illicit Discharge Detection and Elimination
    - Construction Site Runoff Control (*Erosion Control BMP*)
    - Post-Construction Site Runoff (*New and re-development*)
    - Pollution Prevention and Good Housekeeping for Municipal Operations
  - **Annual Reporting**



# Storm Water Program

- o **Total Maximum Daily Load (TMDL)**

- o Bear Creek TMDL

- o Sediment
- o Bacteria
- o Temperature

- o **Regional Partnership**

- o Rogue Valley Council of Governments

- o **Annual Reporting**







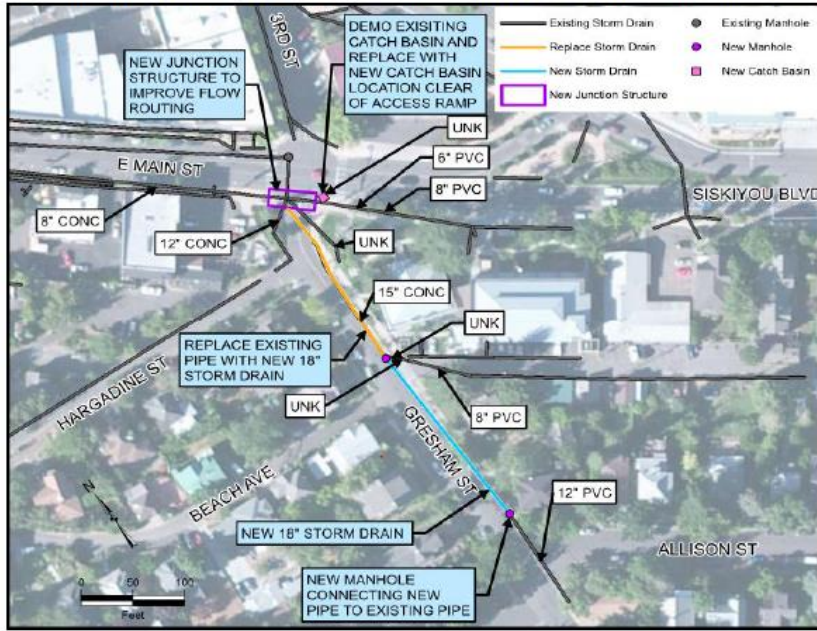
# Storm Water Program

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## ○ **New Requirements and Recommendations**

- Ashland Municipal Code Update (MS4)
- Storm Water Operations and Maintenance Program (MS4)
- Stormwater Capture Analysis & Program (recommendation)
- Feasibility Study
  - Projects
  - Programs
  - Policies

**CIP Project #1: Gresham Street at Beach Avenue**    **Project Category: "Bubble Up" Removal**



# Capital Improvement Plan

## Capital Projects

- Eliminate "Bubble Ups"
- Reduce Flooding
- Infrastructure Improvements
- Stream Improvements
- Stormwater Quality Improvements

**Capital Project Background and Description**

The City has reported a "bubble up" catch basin northwest of the intersection of Allison Street and Gresham Street. The "bubble up" structure was designed as an outlet point of a stormwater conveyance system where runoff overflows from the downstream catch basin and sheet flows along the curblin to the next stormwater collection system. The City would like to eliminate "bubble up" catch basins by conveying runoff to new piped systems.

This project will include new storm drain piping between Allison Street and Beach Avenue and new structures at each junction to connect to existing infrastructure. This new piping will tie into the downstream end of the conveyance system in the alley near the Ashland Library. The existing storm drain piping from the alley to Main Street will be upsized to increase drainage capacity.

Existing storm drain piping on Main Street is relatively flat, causing backwater effects into infrastructure on Gresham Street. The junction structure at the intersection of Main Street and Gresham Street will be replaced to reduce energy losses and improve hydraulic routing; however, surcharging and flooding is still anticipated during larger storm events.

**Design Considerations**

Preliminary hydrologic and hydraulic modeling have been completed for pipe sizing purposes based on the City's current GIS data. Additional modeling, topographic survey, and an analysis of downstream impacts is recommended to confirm existing and proposed pipe diameters and invert elevations prior to final design.

Preliminary Cost Estimates		
+50%	Total Est.	-30%

# Financial Analysis

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## Review of Operating Requirements

- 20 Year Planning Period
- Cash
- Financial Policy Requirements
- Debt Service

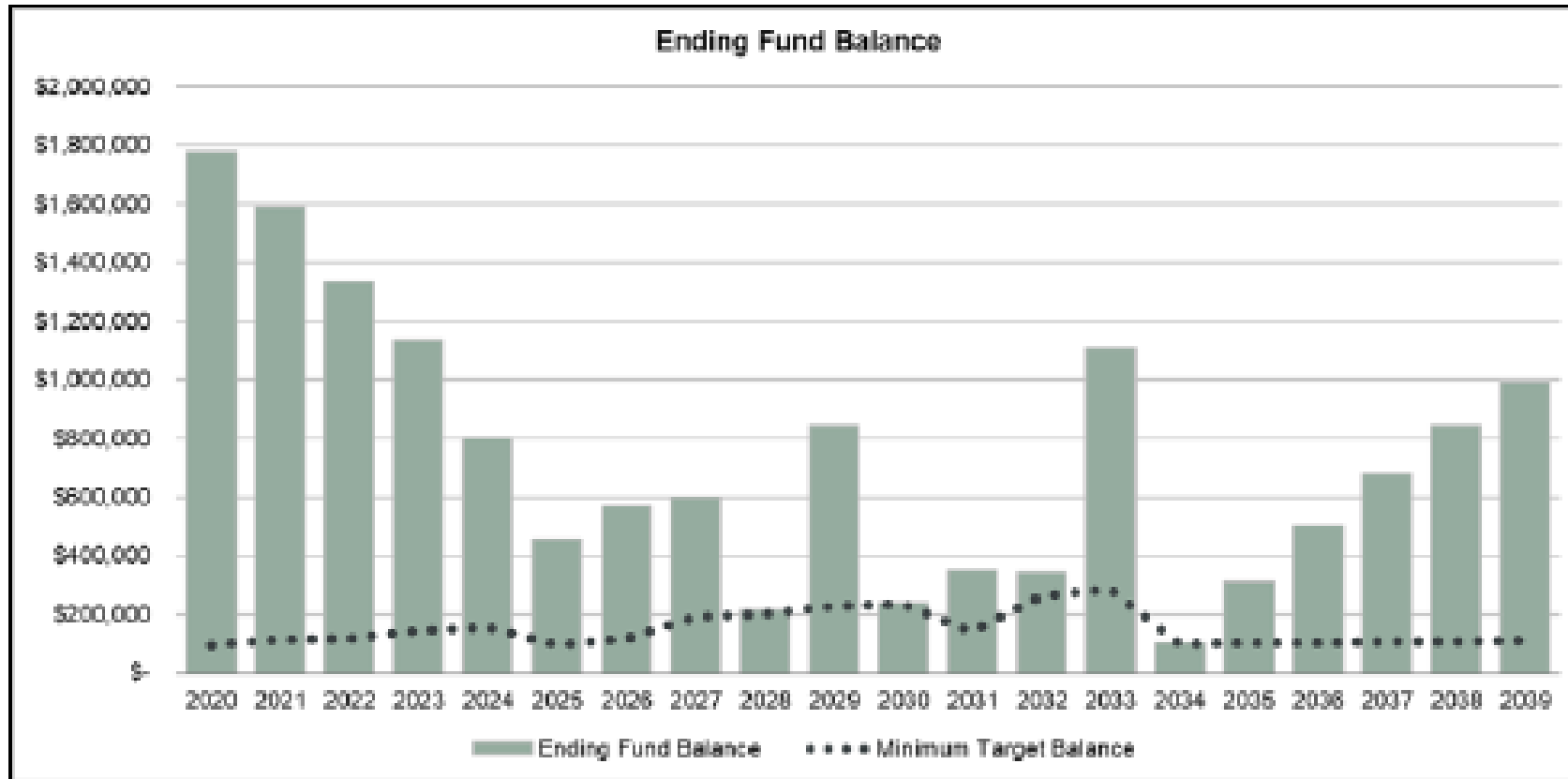
## System Development Charges

- Reimbursement Fee
- Improvement Fee

# Financial Analysis-Revenue Requirement

Revenue Requirement	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Revenues</b>										
Rate Revenues Under Existing Rates	\$ 817,955	\$ 822,045	\$ 826,155	\$ 830,266	\$ 834,437	\$ 838,610	\$ 842,803	\$ 847,017	\$ 851,252	\$ 855,508
Non-Rate Revenues	7,280	5,286	3,003	1,711	1,660	1,707	1,736	1,775	1,806	1,847
<b>Total Revenues</b>	<b>\$ 825,235</b>	<b>\$ 827,331</b>	<b>\$ 829,158</b>	<b>\$ 831,997</b>	<b>\$ 836,097</b>	<b>\$ 840,316</b>	<b>\$ 844,539</b>	<b>\$ 848,792</b>	<b>\$ 853,058</b>	<b>\$ 857,355</b>
<b>Expenses</b>										
Cash Operating Expenses	\$ 909,163	\$ 925,319	\$ 954,067	\$ 970,674	\$ 998,222	\$ 1,015,707	\$ 1,038,420	\$ 1,066,612	\$ 1,090,351	\$ 1,099,282
Existing Debt Service	11,950	11,750	11,550	11,350	11,150	10,944	10,725	10,494	10,258	-
New Debt Service	-	-	-	-	-	-	-	-	-	83,980
System Reinvestment Funding	-	-	-	-	-	-	-	-	-	-
Additional Required to Meet Revenues	-	-	-	-	-	-	-	-	-	-
<b>Total Expenses</b>	<b>\$ 921,113</b>	<b>\$ 937,069</b>	<b>\$ 965,617</b>	<b>\$ 982,024</b>	<b>\$ 1,009,372</b>	<b>\$ 1,026,651</b>	<b>\$ 1,049,145</b>	<b>\$ 1,067,106</b>	<b>\$ 1,095,609</b>	<b>\$ 1,183,275</b>
<b>Net Surplus (Deficiency)</b>	<b>\$ (95,878)</b>	<b>\$ (109,738)</b>	<b>\$ (136,459)</b>	<b>\$ (150,227)</b>	<b>\$ (173,275)</b>	<b>\$ (186,335)</b>	<b>\$ (204,606)</b>	<b>\$ (218,314)</b>	<b>\$ (242,481)</b>	<b>\$ (325,920)</b>
Additional to Meet Coverage	-	-	-	-	-	-	-	-	-	(7,380)
<b>Total Surplus (Deficiency)</b>	<b>\$ (95,878)</b>	<b>\$ (109,738)</b>	<b>\$ (136,459)</b>	<b>\$ (150,227)</b>	<b>\$ (173,275)</b>	<b>\$ (186,335)</b>	<b>\$ (204,606)</b>	<b>\$ (218,314)</b>	<b>\$ (242,481)</b>	<b>\$ (333,300)</b>
Annual Rate Increase		0.00%	9.00%	9.00%	7.00%	6.00%	6.00%	6.00%	5.00%	4.00%
Cumulative Rate Increase		0.00%	9.00%	18.81%	27.13%	34.75%	42.84%	51.47%	58.95%	65.34%
<b>Revenues After Rate Increases</b>	<b>\$ 817,955</b>	<b>\$ 822,045</b>	<b>\$ 900,509</b>	<b>\$ 996,463</b>	<b>\$ 1,050,793</b>	<b>\$ 1,130,062</b>	<b>\$ 1,203,855</b>	<b>\$ 1,262,467</b>	<b>\$ 1,353,324</b>	<b>\$ 1,414,494</b>
Additional Taxes from Rate Increase	-	-	-	-	-	-	-	-	-	-
<b>Net Cash Flow After Rate Increase</b>	<b>\$ (95,878)</b>	<b>\$ (109,738)</b>	<b>\$ (65,145)</b>	<b>\$ 5,960</b>	<b>\$ 53,080</b>	<b>\$ 105,118</b>	<b>\$ 156,447</b>	<b>\$ 217,137</b>	<b>\$ 259,991</b>	<b>\$ 233,066</b>
Coverage After Rate Increase: Bonded Debt	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.19
Coverage After Rate Increase: Total Debt	(1.82)	(3.03)	0.90	6.56	10.52	14.84	19.25	25.67	20.89	4.19

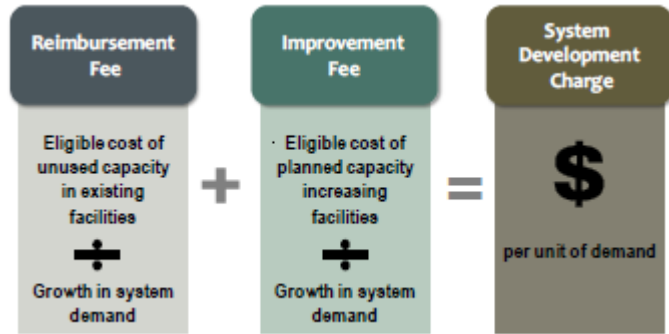
# Financial Analysis-Target Balances



# Financial Analysis-Rates

Across-the-Board Rate Schedule	Existing 2020	ATB 2021	ATB 2022	ATB 2023	ATB 2024	ATB 2025	ATB 2026	ATB 2027	ATB 2028	ATB 2029
<b>Annual System-Wide Rate Increase</b>		0.00%	9.00%	9.00%	7.00%	6.00%	6.00%	6.00%	5.00%	4.00%
<b><u>Monthly Storm Drainage Fee</u></b>										
Single Family (per residence)	\$4.99	\$4.99	\$5.44	\$5.93	\$6.34	\$6.72	\$7.13	\$7.56	\$7.93	\$8.25
Condominium 1-9 Units (per unit)	2.14	2.14	2.33	2.54	2.72	2.88	3.06	3.24	3.40	3.54
Multi-Family 1-9 Units (per unit)	2.14	2.14	2.33	2.54	2.72	2.88	3.06	3.24	3.40	3.54
Mobile Home and Trailer 1-9 Units (per unit)	2.14	2.14	2.33	2.54	2.72	2.88	3.06	3.24	3.40	3.54
Other (per 1,000 sq. ft. of impervious surface area)	1.66	1.66	1.81	1.97	2.11	2.24	2.37	2.51	2.64	2.74
<b><u>Minimum Charge</u></b>										
Residential Accounts	\$4.99	\$4.99	\$5.44	\$5.93	\$6.34	\$6.72	\$7.13	\$7.56	\$7.93	\$8.25
Commercial Accounts	4.99	4.99	5.44	5.93	6.34	6.72	7.13	7.56	7.93	8.25

# Financial Analysis-SDC



## System Development Charge Calculation

### Improvement Fee

Capacity Expanding CIP	\$ 549,895
Less FY 2018-19 Improvement Fee Fund Balance	\$ (6,180)
<b>Improvement Fee Cost Basis</b>	<b>\$ 543,715</b>

Growth to End of Planning Period	1,178,154	square feet of impervious surface area
<b>Improvement Fee</b>	<b>\$ 0.4615</b>	<b>per square foot of impervious surface area</b>

### Compliance Fee

Annual Administration Costs	\$ 9,007
Administration Costs for 20 Years	\$ 180,140

Growth to End of Planning Period	1,178,154	square feet of impervious surface area
<b>Compliance Fee</b>	<b>\$ 0.1529</b>	<b>per square foot of impervious surface area</b>

### Total System Development Charge

Improvement Fee	\$ 0.4615	
Compliance Fee	\$ 0.1529	
<b>Total SDC</b>	<b>\$ 0.6144</b>	<b>per square foot of impervious surface area</b>

This calculated SDC represents an increase of \$0.4455 over the current SDC of \$0.1689 per square foot of impervious surface area.

# Next Steps

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Finalize Draft Document

Schedule Council Meeting for Adoption

System Development Charge Updates (in process)



# Questions

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In Coordination with:  
Barney & Worth, Inc.  
FCS Group

## **Stormwater and Drainage Master Plan**

19 November 2020

Prepared for  
**The City of Ashland**  
20 East Main Street  
Ashland, Oregon 97520

KJ Project No. 1796053\*00