

Developing Master Plans Enterprise Funds and the City's Capital Improvement Program



Paula C. Brown, Public Works Director

Thomas McBartlett III, Interim Director of Electric

Value of Master Plans



2

- Provide the framework for future improvements to accommodate growth and to keep the system from falling into unsafe repair deficiencies
 - Prioritize improvements on a 20 year outlook (not 2 year budget cycle)
- Define significant system repairs/replacements
 - Will include projects that may be capitalized
 - Will help to provide “just in time” improvements/rehabilitation so infrastructure systems do not fail
 - Allows lowest responsible costing for infrastructure systems
- Verify or determine deficiencies in operational requirements and staffing
- Ensure adequacy in meeting regulatory compliance concerns
- Include financing strategy: rate evaluation and SDC component
 - Final capital projects lists are financially constrained and balanced with anticipated funds
- Review master plans on a regular cycle to verify impact of recent development and system improvements

Elements of Master Planning



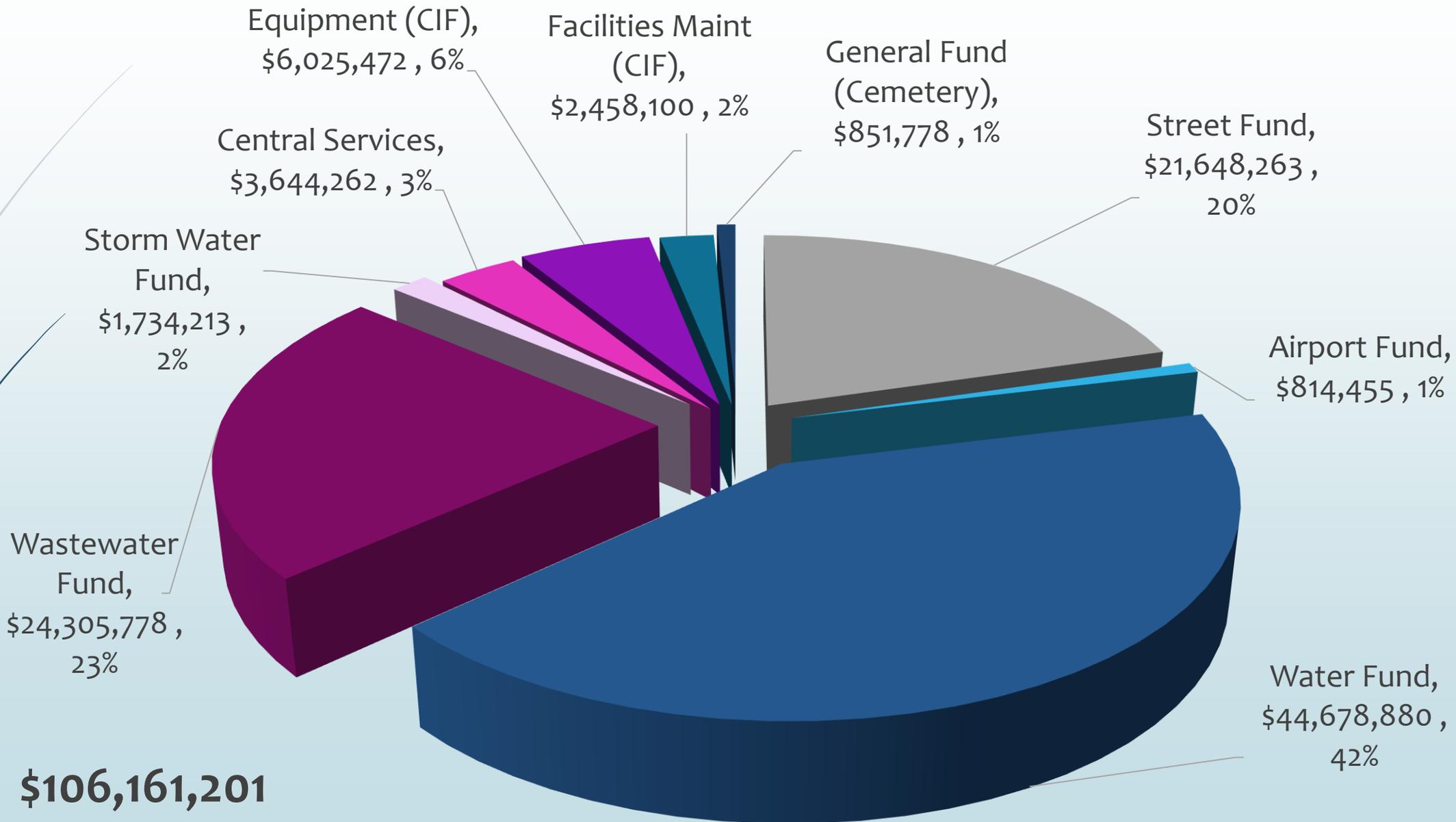
3

- ✓ Assessment of Existing System Conditions
- ✓ Level of Service Goals
 - ✓ Plans and Policy Level Decisions
- ✓ Population/Demand Projections (typically a 20 year planning period)
- ✓ System Component Analysis
 - ✓ Water: sources, treatment, distribution, conservation
 - ✓ Transportation: roadway, bike, pedestrian, transit, rail, other
 - ✓ Wastewater: collection, treatment
 - ✓ Stormwater: collection piping and detention capabilities
 - ✓ Electric: service levels, reliability and rates
- ✓ Capital Improvements Plan
- ✓ Operations, Maintenance, Regulatory Impacts
- ✓ Financial Analysis
 - ✓ Revenue Stability
 - ✓ Rate Structure
 - ✓ SDC (future capacity)
 - ✓ Staffing

Public Works BN 2017-19 Approved Budget



4



Water Fund – Master Plan



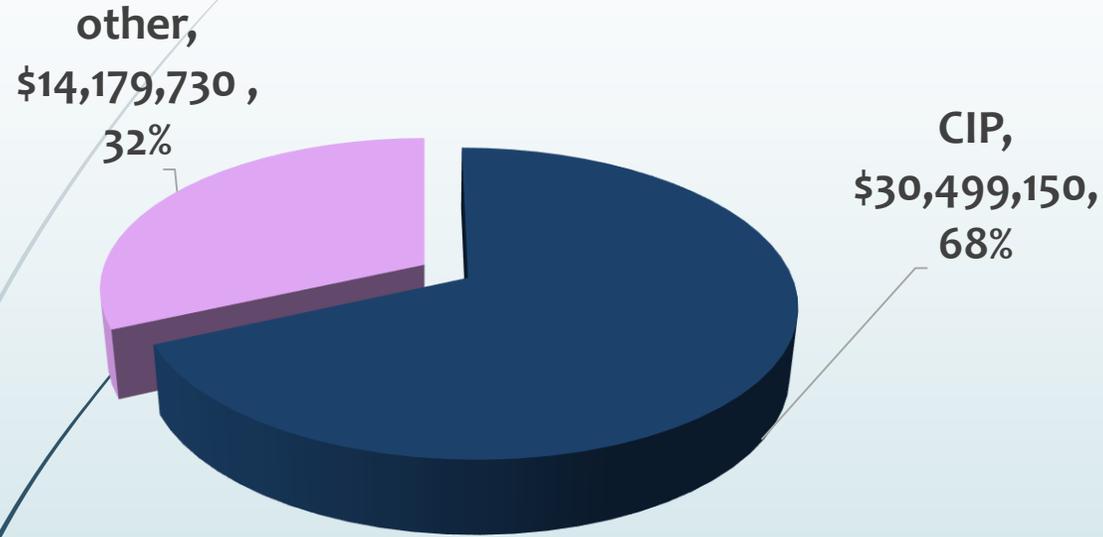
5

- Current Plan:
 - Comprehensive Water Master Plan
 - Adopted in 2012, Carollo Engineers
 - Water Management and Conservation Plan
 - Completed 2013, City Staff
- Update
 - In Progress
 - RH2 Engineering
 - Includes update to the conservation modeling by Maddaus
 - Will be complete by June 2019
 - Plan delayed as staff completes Phase 1 for the new Water Treatment Plant which will drive cost projections and ancillary improvement needs
- Regulatory Requirements
 - Oregon Department of Human Services through Oregon Administrative Rules (OAR) Chapter 333, Division 061, Public Water Systems



Water Fund – CIP (BN 2017-19)

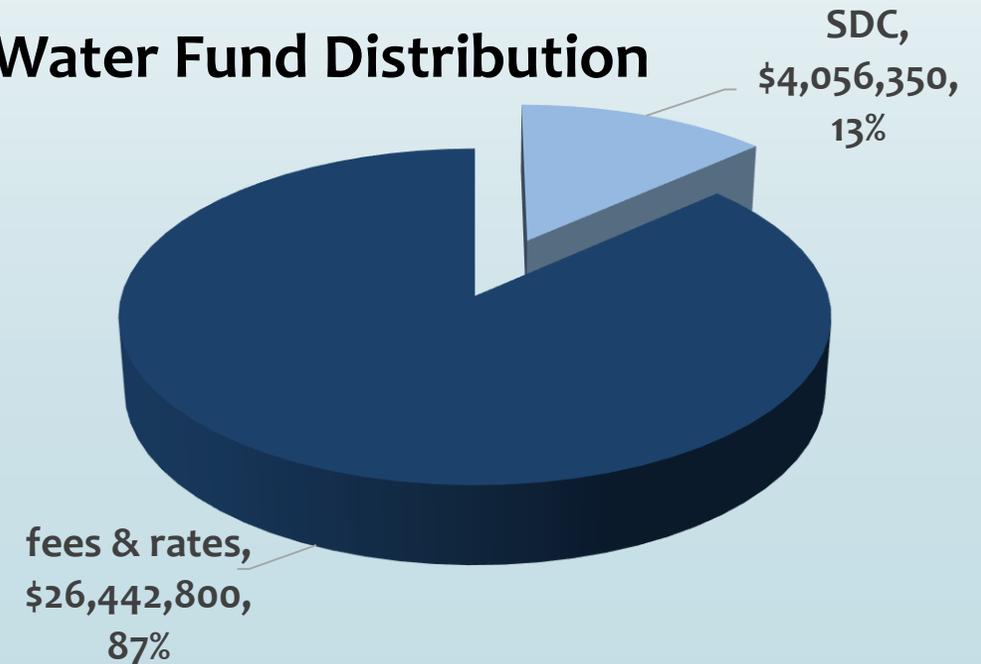
Water Fund Total \$44,678,880



Other:

- ✓ Operations
 - ✓ Personnel
 - ✓ Material and services
 - ✓ Includes professional services; FERC, etc.
- ✓ Debt Services

CIP Water Fund Distribution



Water Fund – CIP (BN 2017-19)



7

PROJECT STATUS CODES

- progress on schedule
- delayed somewhat
- significant delays
- completed

Multi-year project;
likely 6 years; ties
several projects
together

Balance
contracted jobs
with PW work
force capabilities

STATUS	PROJECT NAME	ADOPTED BN 2017-19	anticipated	ACTUAL BN 2017-19
	Water Supply			
■	Ashland (TID) Canal Piping: Starlite to Terrace Street	\$1,452,000	\$600,000	\$123,851
■	TID Terrace St Pump Station Improvements	\$650,000	\$910,000	\$193,414
■	Reeder Reservoir Access Road TMDL Compliance	\$116,000	\$0	\$0
■	East & West Fork Transmission Line Rehabilitation	\$309,000	\$103,000	\$0
■	Ashland Creek West Fork Bridge Construction	\$129,000	\$10,000	\$0
■	Sediment TMDL in Reeder Reservoir	\$120,000	\$0	\$0
	Subtotal Water Supply	\$2,776,000	\$1,623,000	\$317,266
	Water Treatment & Storage			
■	7.5 MGD Water Treatment Plant	\$23,306,000	\$900,000	\$367,674
■	Permanganate Feed Facility Study & Implementation	\$316,000	\$316,000	\$300,000
	Subtotal Water Treatment & Storage	\$23,622,000	\$1,216,000	\$667,674
	Water Distribution			
■	Park Estates Pump Station/Loop Road Reservoir Alternatives	\$2,604,000	\$1,991,000	\$482,093
■	Granite Reservoir Valving	\$127,000		\$0
■	Radio Read Meter Program	\$126,000	\$125,000	\$25,000
	Subtotal Water Distribution	\$2,857,000	\$2,116,000	\$507,093
	Water Mainline Projects			
■	Siskiyou Boulevard - Crowson Road south towards I-5 Exit 11	\$175,000	\$175,000	\$0
■	Oak Street - Nevada to Bear Creek Bridge	\$273,200	\$275,000	\$0
■	Grandview Drive - Skycrest Dr to Ditch Rd	\$131,250	\$50,000	\$0
■	Ivy Lane - Morton Street to west end of Ivy Lane	\$357,000		\$0
■	Ivy Lane - South Mountain to FH-16AD-038	\$103,000	\$73,000	\$72,333
■	A Street - 1st St to 6th St	\$155,000	\$50,000	\$0
■	Misc Water Line Projects (in-house crews)	\$49,700	\$50,000	\$0
	Subtotal Water Mainline Projects	\$1,244,150	\$673,000	\$72,333
	WATER TOTAL	\$30,499,150	\$5,628,000	\$1,564,366

Wastewater Fund – Master Plan



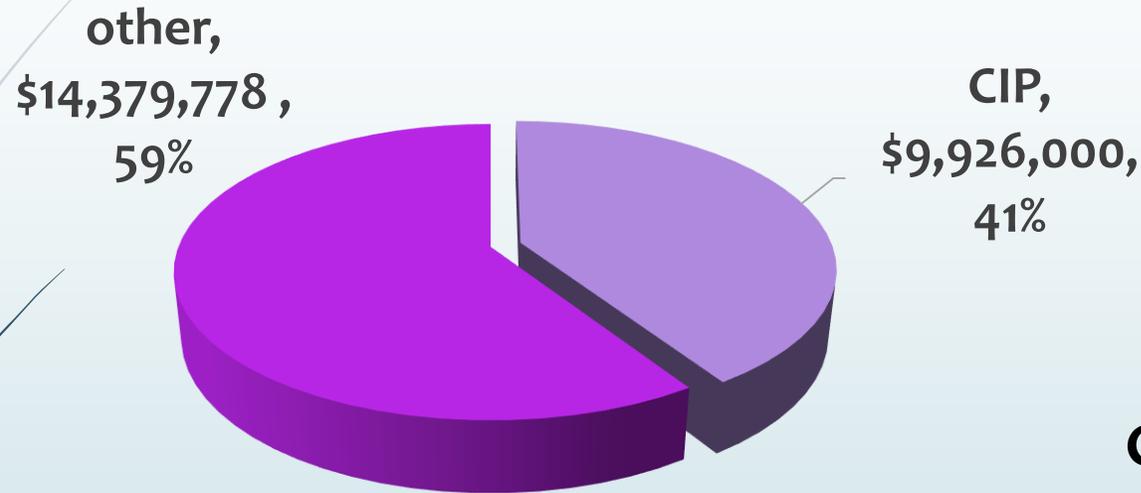
8

- ▶ **Current Plan:**
 - ▶ Comprehensive Sanitary Sewer Master Plan
 - ▶ Adopted in 2012, Keller Associates
 - ▶ Wastewater Facilities Plan
 - ▶ completed 2014, Keller Associates
- ▶ **Update**
 - ▶ A facilities plan update and efficiency assessment is out for proposals
 - ▶ Should be awarded in November 2018
 - ▶ Will be complete by August 2019
 - ▶ Will assess Wastewater Treatment Plant hydraulic and mechanical systems and assess the timing and need for the 3rd oxidation ditch
 - ▶ Planning for collection system plan update in BN 2019-21 (2nd year)
- ▶ **Regulatory Requirements**
 - ▶ Oregon Department of Environmental Quality (DEQ) is the regulatory agency through Oregon Administrative Rules (OAR) Chapter 340

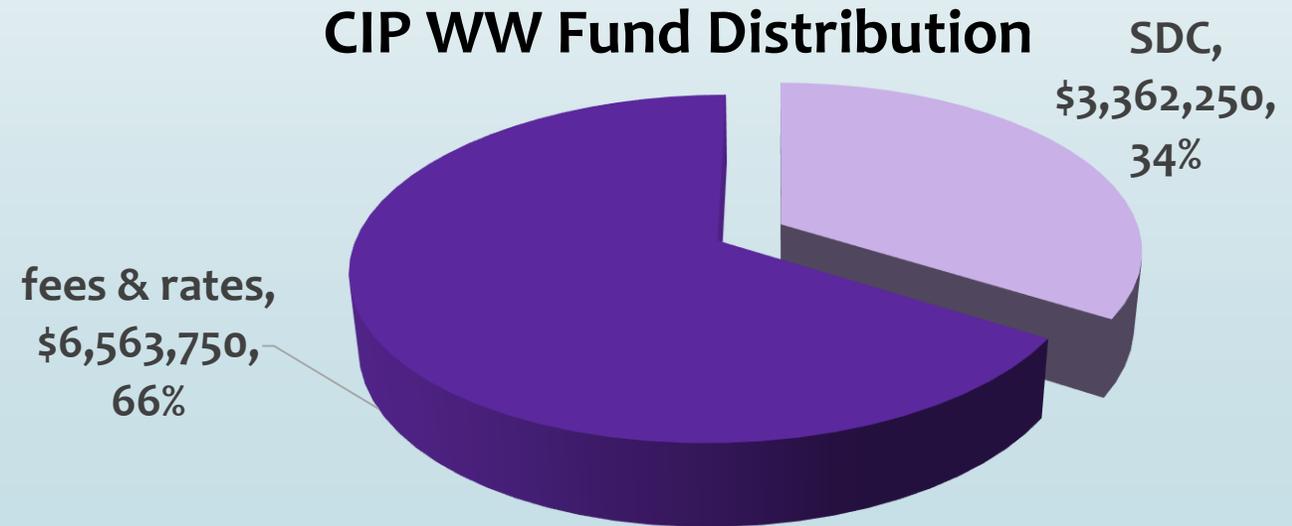
Wastewater Fund – CIP (BN 2017-19)



Wastewater Fund Total \$24,305,778



CIP WW Fund Distribution



Wastewater Fund – CIP (BN 2017-19)



assessing timing and need with new Facilities Update

STATUS *	PROJECT NAME	ADOPTED	anticipated	ACTUAL
		BN 2017-19		BN 2017-19
	Wastewater Treatment Plant			
■	Outfall Relocation / Fish Screen	\$660,000	\$620,000	\$480,616
■	Shading (Capital Cost + first 6 years of O&M)	\$1,262,000	\$300,000	\$28,000
■	Oxidation Ditch Shell	\$5,020,000	\$50,000	\$0
■	RAS Pump Replacement	\$122,000	\$120,000	\$0
	Subtotal Treatment Plant	\$7,064,000	\$1,090,000	\$508,616
	Wastewater Collection System			
■	Wastewater Line Upsizing - 18" & 24" Parallel Trunkline along Bear Creek	\$1,424,000	\$0	\$0
■	Wastewater Line Replacement; 15" Main - Mountain Avenue	\$141,000	\$140,000	\$0
■	Grandview Pump Station Replacement	\$697,000	\$505,000	\$504,823
■	Wastewater Line Replacement; 15" Main - A Street	\$600,000	\$100,000	\$0
	Subtotal Collection System	\$2,862,000	\$745,000	\$504,823
	WASTEWATER TOTAL	\$9,926,000	\$1,835,000	\$1,013,439

PROJECT STATUS CODES

- progress on schedule
- delayed somewhat
- significant delays
- completed

Transportation (Street Fund) – Master Plan



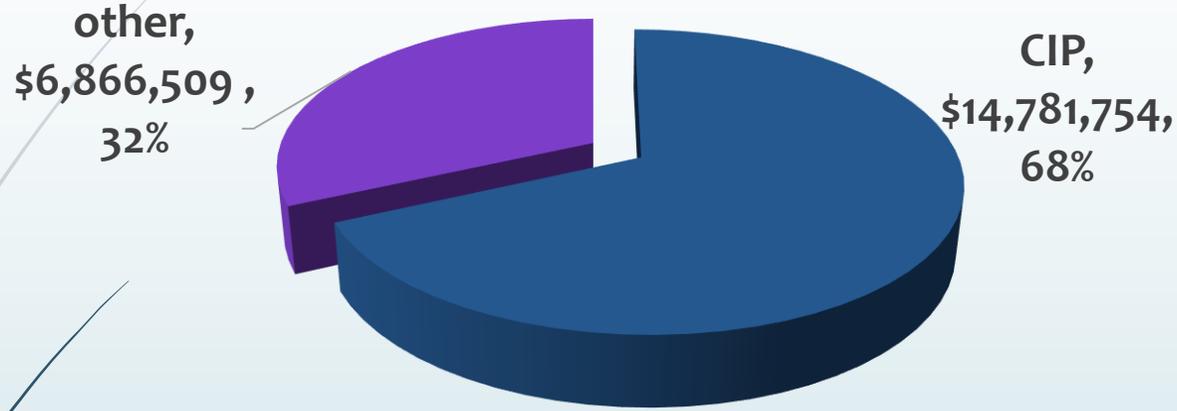
11

- Current Plan:
 - Transportation System Plan (TSP)
 - Adopted in 2013, Kittleson & Associates, Inc.
 - Wastewater Facilities Plan
 - completed 2014, Keller Associates
- Update
 - Transit Feasibility Study being completed by Nelson Nygaard
 - Should be complete by June 2019
 - Coordinated with the MPO and RVTD
 - Planning for full Transportation System Plan update in BN 2019-21 (2nd year)
 - Coordinate with the Transportation Growth Management Grant that will be awarded in 2019
- Regulatory Requirements
 - Oregon Department of Transportation and Department of Land Conservation and Development through Oregon Administrative Rules (OAR) Chapter 660

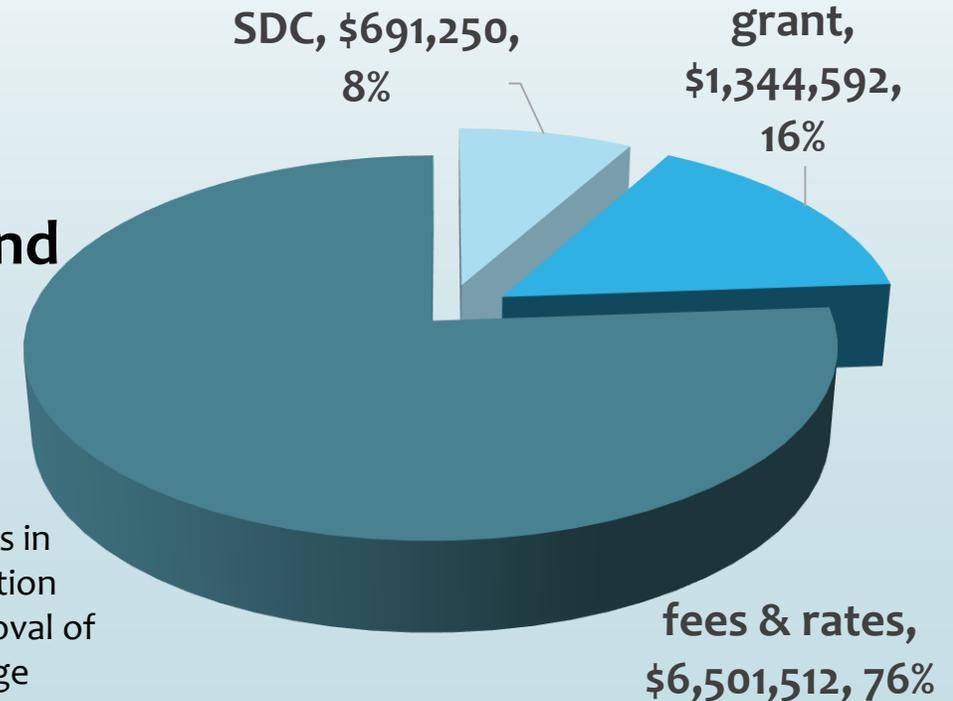
Transportation (Street) Fund – CIP (BN 2017-19)



Street Fund Total \$21,648,263



CIP Street Fund Distribution



Please note: the totals in the CIP Fund Distribution chart reflect the removal of the East Nevada Bridge project costs

Transportation (Street) Fund – CIP (BN 2017-19)



13

PROJECT STATUS CODES

- progress on schedule
- delayed somewhat
- significant delays
- completed

Council removed from this BN will reconsider timing with TSP update

Construction will continue into BN 2019-21

* STATUS	PROJECT NAME	ADOPTED BN 2017-19	anticipated	ACTUAL BN 2017-19
	Roadway			
■	Railroad Crossing Improvements; Hersey & Laurel	\$450,000	\$50,000	\$34,995
■	Independent Way - Washington St to Tolman Creek Rd (design const only)	\$1,590,000	\$500,000	\$100,800
■	N. Main Refuge Island	\$80,000	\$80,000	\$0
■	East Nevada Street Extension	\$6,494,400	\$0	\$0
■	Grandview Drive Improvements - Phase II	\$350,000	\$0	\$0
■	City Wide Chip Seal Project	\$93,404	\$0	\$0
	Subtotal Roadway	\$9,057,804	\$630,000	\$135,795
	Street Improvements/Overlays per Pavement Management System			
■	Overlay/Partial Rebuild - N Mountain Avenue - Hersey to I-5	\$840,000	\$40,000	\$4,495
■	Overlay - Wightman Street - Quincy to Siskiyou	\$225,000	\$25,000	\$630
■	Repave/Rebuild - Hersey Street - N. Main to N. Mountain	\$4,000,000	\$600,000	\$189,155
■	Overlay/Partial Rebuild - N Mountain Avenue - E.Main to R/R Tracks	\$200,000	\$20,000	\$0
	Subtotal Street Improvements/Overlays	\$5,265,000	\$685,000	\$194,280
	Sidewalk/Pedestrian			
■	Hersey Street - N Main Street to Oak Street (CMAQ)	\$250,000	\$50,826	\$50,826
■	Downtown ADA Ramp Replacement	\$88,950	\$25,000	\$8,068
■	N Main Street RRFB Installation - Nursey Street & Van Ness Avenue	\$75,000	\$75,000	\$0
■	Mountain Avenue RRFB Installation - Fair Oaks Avenue	\$40,000	\$40,000	\$0
■	A Street - Oak Street to 100' west of 6th Street	\$155,000	\$50,000	\$0
	Subtotal Sidewalk/Pedestrian	\$358,950	\$240,826	\$58,894
	Bicycle			
■	Downtown Super Sharrows	\$100,000	\$50,000	\$0
	Subtotal Bicycle	\$100,000	\$0	\$0
	TRANSPORTATION TOTAL	\$14,781,754	\$1,555,826	\$388,968

Storm Drain Fund



14

- ▶ **Current Plan:**
 - ▶ Storm Water and Drainage Master Plan
 - ▶ Adopted in 2000, Tetra Tech/KCM
- ▶ **Update**
 - ▶ Update to the SW and Drainage Master Plan began in 2017 by Kennedy Jenks
 - ▶ Should be complete by June 2019
 - ▶ City staff completing filed work for modeling
- ▶ **The Storm Water Fund was created in 2017**
 - ▶ No current CIP projects are in the financially constrained plan
- ▶ **Regulatory Requirements**
 - ▶ Oregon Department of Environmental Quality (DEQ) through a NPDES Municipal Separate Storm Sewer System (MS4) Discharge Permit based on the Bear Creek Watershed TMDL limits

Facilities Maintenance - Master Plan



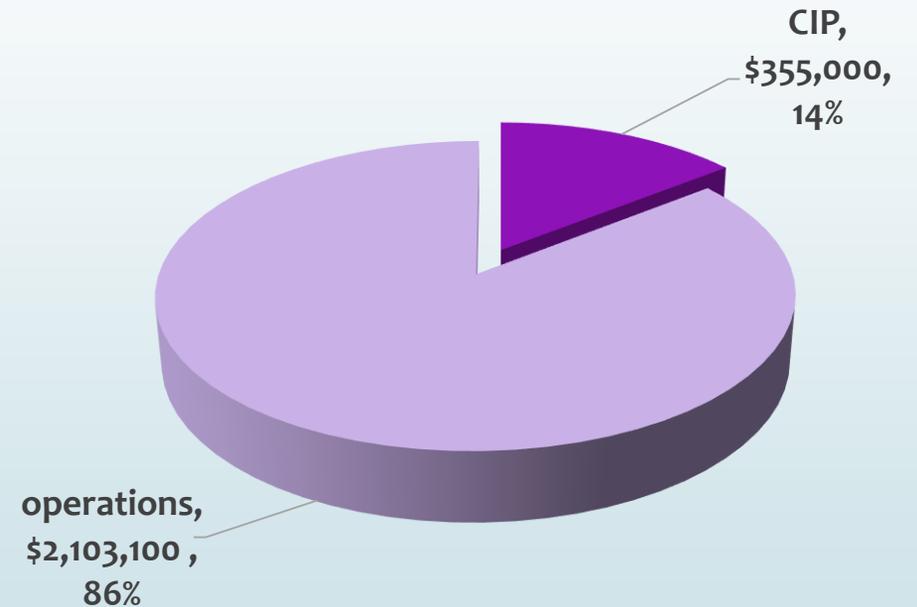
15

- Current Plan:
 - Facilities Master Plan and Space Needs Analysis
 - Completed June 2008, ORW
 - Intended as a guide for effective use of City facilities
- Update
 - City Hall Decision
 - ORW 2018
 - Should be complete by March 2019
 - Should complete a full facilities review in BN 2019-21
- Regulatory Requirements
 - Building Code
 - City Council

Facilities Maintenance Capital Improvements Fund (BN 2017-19)

- Expenditures
 - Utilities; all City Buildings
 - Janitorial
 - Operations and Maintenance
 - Smaller “capitalizable” projects
- Revenues
 - Internal charges
 - Use of facility charges; space and all utilities
 - Parks uses some SDCs
 - Grants (if appropriate)

Facilities Maintenance
(Capital Improvement Fund)



PROJECT STATUS CODES
■ progress on schedule
■ delayed somewhat
■ significant delays
■ completed

	Administration - City Facilities			
2018-27	City Facility Upgrades & Maintenance	\$355,000	\$300,000	\$0
	ADMINISTRATION - FACILITIES TOTAL	\$355,000	\$0	\$0

PW Other Significant Projects (BN 2017-19) (not CIP)



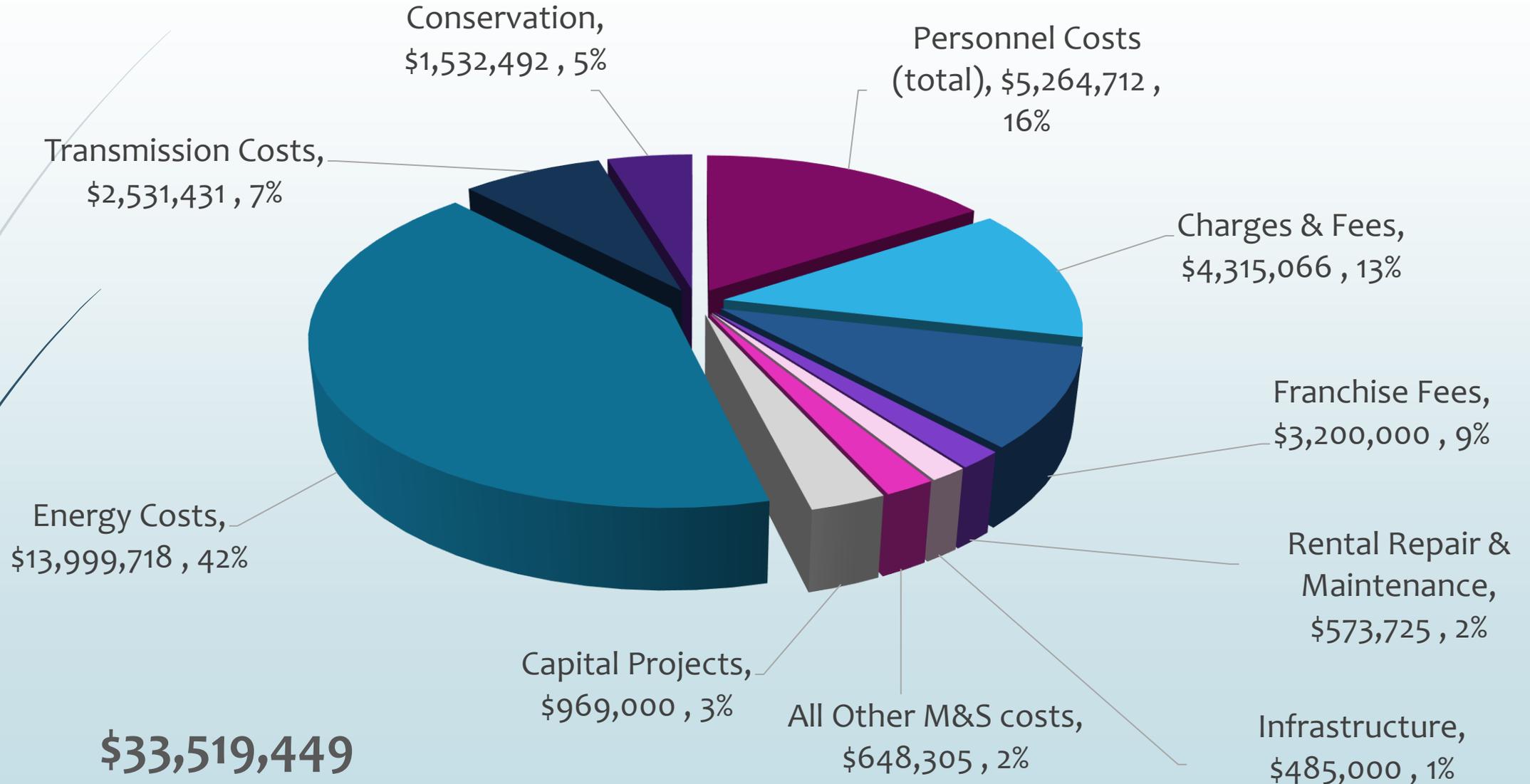
17

OTHER PROJECTS									
PW Project #	PROJECT NAME	PROPOSED BN 2017-19	ANTICIPATED	ACTUAL BN 2017-19	DESIGN START	DESIGN COMP	CONST START	CONST COMP	Consultant/Support Point of Contact
Transportation									
2016-31	Transit Feasibility Study	\$99,394	\$100,000	\$48,515	X		na	na	Nelson Nygaard
2018-07	Transportation/Wastewater SDC Update (sewer)	\$60,000	\$40,000	\$29,235	X	X			Galardi/Kittleson
Water Supply									
	Water Master Plan	\$315,976	\$315,000	\$226,579	X		na	na	RH2
	FERC Dam Engineer	\$80,686	\$100,000	\$76,537	X		na	na	Bob Willis
	FERC Part 12 IC Inspection/PFMA Updates	\$0	\$20,000	\$0	X		na	na	AECOM
2018-15	FERC Part 12 (2018)	\$97,500	\$80,000	\$27,309	X		na	na	Cornforth
2018-17	Sediment Removal of East and West Fork	\$0		\$0					
Water Conservation									
PO	Gilligan's Island Landscape and Irrigation Maintenance	\$4,000	\$4,000	\$4,000	na	na	X	X	Carols Colors
	DSS Water Conservation Model (part of the Water Master Plan)	--	--	--					Maddaus
Wastewater Treatment Plant									
2018-31	WWTP Facilities Optimization	\$0	\$50,000	\$0			na	na	
Storm Drain									
2015-11	Storm Water Master Plan	\$250,000	\$227,146	\$94,443	X		na	na	Kennedy Jenks
2016-29	Stormwater Sediment Trap Dredging	\$70,000	\$51,185	\$51,185	na	na	X	X	Mason Bruce & Girrard
Airport									
2014-21	Airport Master Plan - ALP Update	\$341,793	\$340,000	\$235,287	X		na	na	Century West
2016-21	Airport Tree Trimming	\$53,100	\$25,000	\$13,001	na	na	X		Frison Tree Service
2018-22	FBO Restrooms Update	\$25,000	\$25,000	\$0					
Administration - City Facilities									
2017-06	Pioneer Hall Architectural/Engineering Design	\$55,320	\$40,024	\$40,024	X	X	na	na	Ennis / Marquess
2016-23	Police Department Generator Replacement Engineering and Construction	\$100,746	\$91,404	\$91,404	X	X	X	X	Cummins Northwest
2018-14	Engineering Workspace Reconfiguration	\$30,000	\$30,000	\$0	X	X	X		
2009-07	Gun Club Wetland Mitigation	\$347,704	\$350,000	\$254,043	X	X	X		CEC/TOL/Henderson
2017-03	Pioneer Parking Lot Wall Improvement Design and Construction	\$73,810	\$70,000	\$10,623	X				Covey Pardee/Ciota
2016-22	Butler Bandshell Repair and Improvement	\$70,000	\$67,260	\$67,260	X	X	X	X	ACE Eng/Vitus
2018-12	City Hall Architectural/Engineering Concepts, Design, Const	\$97,085	\$97,085	\$4,876	X				ORW
		\$2,172,114	\$2,123,104	\$1,274,322					

Electric Fund – Expenses Approved BN 2017-19



18



Electric Department – Master Plan 10 Year System Planning Study

- Current Plan:
 - Adopted in 2014
 - Completed by CVO Electrical Systems, LLC
- Update
 - Recommend updating in BN 2019-21 (year 2)
 - OS Engineering
- Regulatory Requirements
 - Oregon Public Utilities Commission NESC safety regulations

Electric Fund – Capital Improvements BN 2017-19

- ▶ Capital projects are 3% of total budget
- ▶ Based upon an approved 10 year Plan
- ▶ All funded through fees and rates
- ▶ Evaluating potential grant options
- ▶ Will develop 20 year capital plan for future budgets

PROJECT STATUS CODES
■ progress on schedule
■ delayed somewhat
■ significant delays
■ completed

	ADOPTED BN 2017-19	ANTICIPATED expenditures	ACTUAL BN 2017-19	
ELECTRIC DEPARTMENT				
■	Install New Servcies & Infrastructure: Cost include new transformers, switch cabinets, poles and conductors to service new development	\$600,000	\$348,000	\$148,000
■	Electric Utility Upgrades: Cost for repairs and replacement of aging infrastructure identified during routine inspections	\$200,000	\$200,000	\$100,000
■	SCADA Improvements, Routine Maintenance, Liscensing and Upgrades	\$39,000	\$115,400	\$15,400
■	MAS Design Review and Purchase Study: feasibilty for City ownership, valuation of substation, and ROI	\$55,000	\$0	\$0
■	New Distrbution Buss at Ashland Substation	\$0	\$0	\$0
■	Purchase of Mountain Ave Substation	\$0	\$0	\$0
■	Mountain Ave and Ashland Substation Interite Engineering Study and Benefit Analysis	\$75,000	\$75,000	\$0
ELECTRIC				
	\$969,000	\$738,400	\$263,400	

BN 2019-21 Planning 20 Year CIP



21

► Capital Plans

- Utilize Master Plans on a 20 year horizon
- Update every 5-8 years
- Evaluate changes every budget cycle and verify project/program priorities
- Include Council goals and priorities

► 20 Year CIP

- Layer project priorities
- Assess utility components with street improvements

► Budgeting

- 2 year appropriation; forecast spending
- Capital Program focus on 6 years
 - with the ability to forecast through the 20 year planning horizon
- Update every 2 years
- Validate priorities and project timing
- Capital Plan approved by Council ahead of budget
 - Ensures forward planning
 - Allows multi-year programming
 - necessary for larger capital projects that span more than one budget cycle



Recap: Coordination Capital Plans, Rates and Operations

► Financing and Rates

- Ensure a financing plan is included in each Master Plan
- Evaluate long term costs
- Plan ahead for rate increases
- Smooth the cost of operations and minimize dramatic increases

► Maintenance vs Capital

- CIP allows for planned capital expenses
- Should reduce the need for major unplanned maintenance expenses

► Operational Expenses

- Generally, should be known and predictable