

MONDAY, NOVEMBER 16, 2020
WORK SESSION
COLLECTION SYSTEM FACILITIES PLANNING STUDY UPDATE, 6:00PM

Mayor Burge called the work session to order at 6:00 p.m.

Present: Mayor Scott Burge, Council President Megan Greisen, Councilor Joel Haugen, Councilor Josh Poling, Councilor Brandon Lesowske, Councilor Pete McHugh, Interim City Manager Alexandra Rains, City Recorder Susan Reeves, Public Works Director Dave Sukau, Program Analyst Huell White, Legal Counsel Peter Watts, Consultants Emily Flock and Peter Olsen.

Remote via phone: Marisa Jacobs and Council Candidate Tyler Miller.

Public Works Director Dave Sukau explained tonight we are joined by Emily Flock and Peter Olsen from Keller Associates. He explained over the last year they have been helping the City update the Collections Master Plan.

Emily Flock, Project Engineer, Keller Associates, gave a brief scope overview as she presented the power point.



**Collection System Facilities
Planning Study (CSFPS) Update**

City Council Workshop

November 16th, 2020

Project Scope Overview



- Scope of Work
 - Project Meetings
 - Technical Review Committee (TRC)
 - Additional Data Collection
 - Flow monitoring
 - Smoke testing (2015; previous data collection)
 - Collection System Evaluation
 - Proposed and Recommended Alternatives
 - Capital Improvement Plan (CIP)
 - Plan Documentation and Adoption

Project Planning - Population

- Population history and projections aligned with 2018 Facilities Plan Update (FPU)
- Projected to 2040 for 20-year planning period using PSU coordinated annual growth rate



Year	Population	Source
2017	7,610	Facilities Plan Update (Carollo, Mar 2018)
2035	10,461	Facilities Plan Update (Carollo, Mar 2018)
2040	11,104	Projected Using AAGR of 1.2%

Note: Coordinated Growth Rates (AAGR) from PSU Coordinated Population Forecast 2017-2067 Columbia County.

Project Planning - Flows

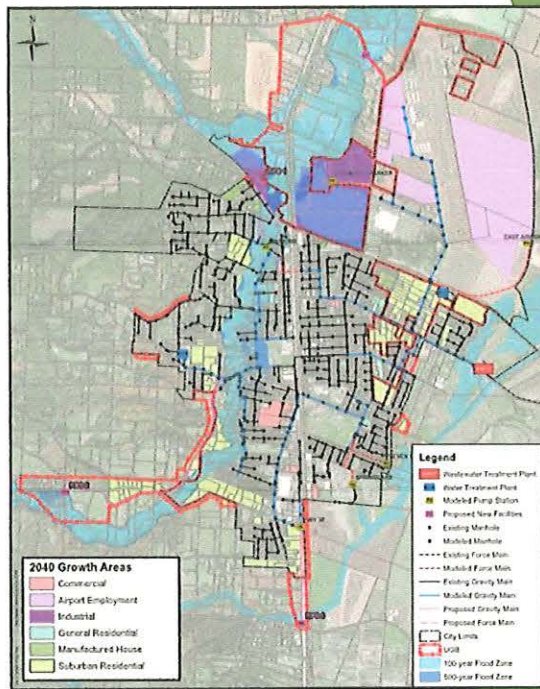
- Aligned with 2018 FPU flows
- Added projected flows to 2040 for 20-year planning period

	Planning Criteria (MGD) ¹	Projected Unit Flow (gpcd)	Projected Flows (MGD) ²	
Year	2017	2017	2035	2040
Population	7,610	7,610	10,461	11,104
ADWF	0.646	85	0.956	1.01
AWWF	0.878	115	1.30	1.37
MMWWT ₁₅	0.871	114	1.22	1.29
MMWWT ₅	1.200	158	1.68	1.78
PDAF ₅	2.730	364	3.88	4.11
PiF ₅	3.96	520	5.56	5.89

1. Planning Criteria are from 2018 Scappoose Facilities Plan Update.
 2. 2035 projected flows are from 2018 FPU and 2040 projected flows based on planning criteria and population projections.
 3. MGD = million gallons per day; gpcd = gallons per capita per day

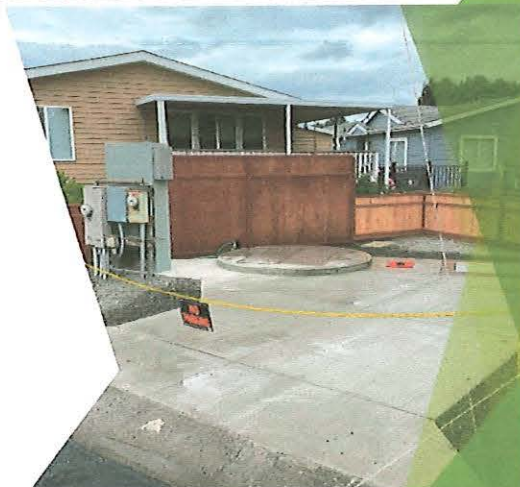
ADWF – avg. dry weather flow
 AWWF – avg. wet weather flow
 MMWWT₁₅ – max. month dry weather
 MMWWT₅ – max. month wet weather
 PDAF₅ – peak dry
 PiF₅ – peak instantaneous

20-year Projected Development Areas



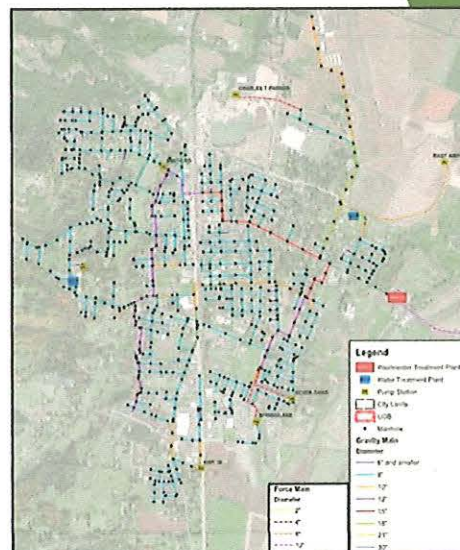
Planning Criteria

- ▶ Collection system hydraulic evaluation
 - ▶ 5-year, 24-hour storm event peak flows
 - ▶ City PW Design Standards
 - ▶ 2/3 full depth of pipe
 - ▶ Pump stations evaluated at firm capacity



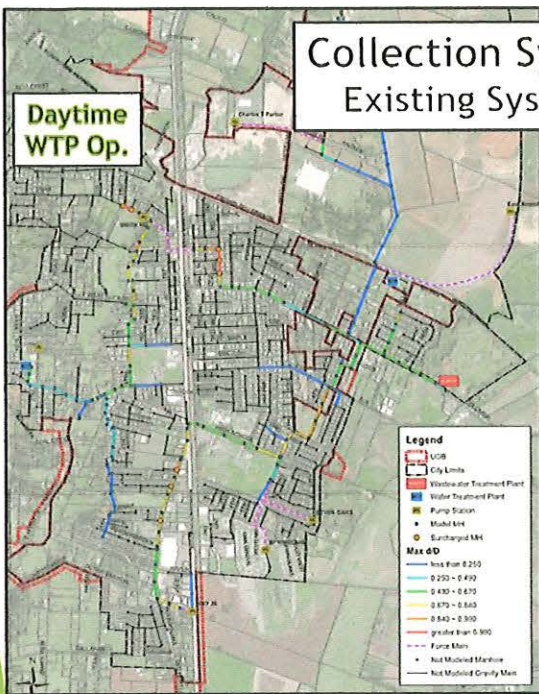
Existing Collection System

- ▶ Approx. 32 miles of gravity pipelines
- ▶ Approx. 1.4 miles of force mains
- ▶ Majority of pipes are concrete installed in 1970's
- ▶ Seven pump stations

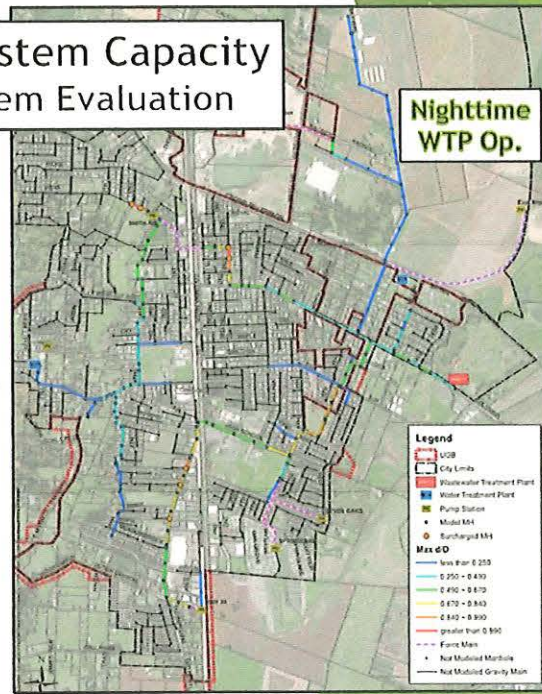


Collection System Capacity Existing System Evaluation

Daytime
WTP Op.

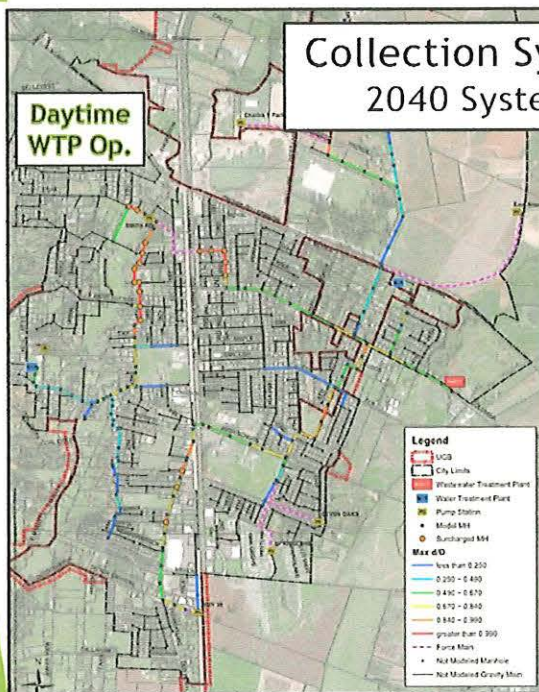


Nighttime
WTP Op.

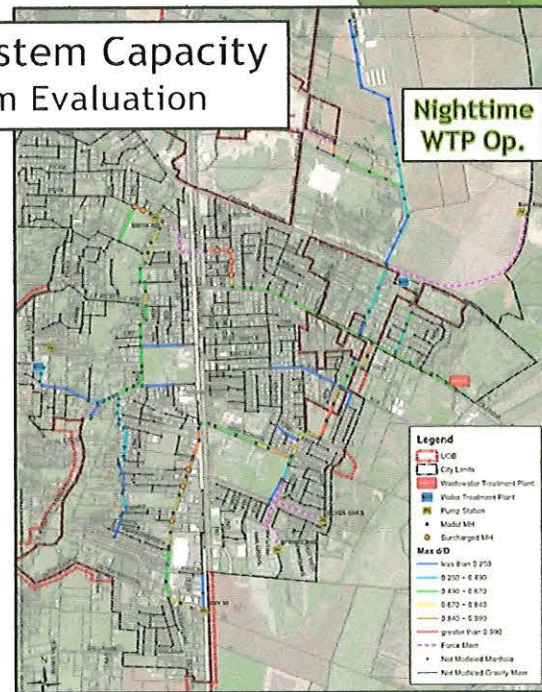


Collection System Capacity 2040 System Evaluation

Daytime
WTP Op.

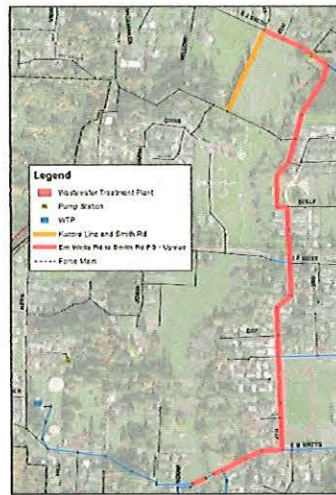


Nighttime
WTP Op.



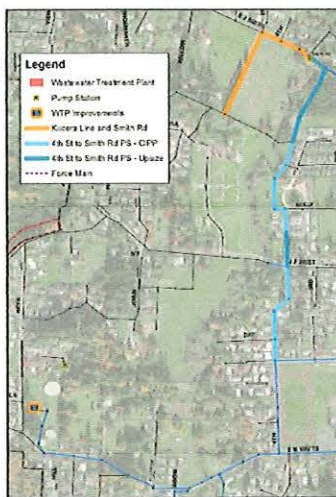
Collection System Capacity Alternatives

- ▶ Alt. 1 - Daytime WTP Ops., Upsize existing



Collection System Capacity Alternatives

- ▶ Alt. 2 - Nighttime WTP Ops., Upsize & CIPP line existing

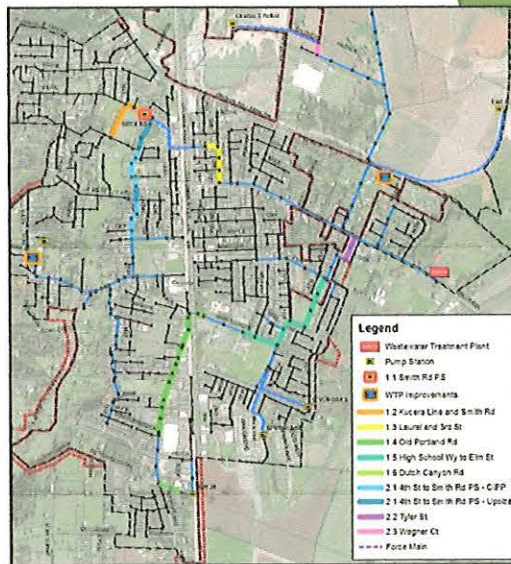


Collection System Capacity Alternatives

- ▶ Alt. 3 - Nighttime WTP Ops., New crossing at Maple St, CIPP line existing



Recommended Capital Improvement Map



Mayor Burge asked if money wasn't a consideration which option would you recommend?

Peter Olsen replied if money wasn't an object, you would want everything to flow by gravity.

Emily Flock explained Alternative 1 is approximately 3.3 million, Alternative 2 is approximately 1.9 million and Alternative 3 is just over 4 million.

Councilor Lesowske asked if there is State or Federal financing programs or is this something, we should be putting funds away for in the future?

Public Works Director Dave Sukau replied he is not aware of any grants at this time.

Interim City Manager Alexandra Rains replied there are loans with low interest rates that we have come across.

Operation & Maintenance Recommendations

- ▶ Pipeline cleaning and CCTV inspection
 - ▶ Continue operations - clean and inspect 20-25% of system annually
- ▶ Flow monitoring - help identify sources and area of high I/I
- ▶ Annual replacement program - replacement budget

Item	Life Span	Cost/Year
Pipelines	75 year	\$ 519,000
Manholes	50 year	\$ 169,000
Cleanouts	50 year	\$ 4,000
Lateral Cleanouts	50 year	\$ 85,500
Total		\$ 777,500

Capital Improvement Plan (CIP)



ID #	Item	Total Estimated Cost (2020)	SDC Growth Portion %	Cost	City's Estimated Portion
Priority 1 Improvements					
1.1	Smith Road Pump Station	\$ 883,000	24%	\$ 215,000	\$ 668,000
1.2	WTP Improvements and Smith Rd	\$ 908,000	40%	\$ 364,000	\$ 544,000
1.3	Laurel and 3rd St	\$ 594,000	18%	\$ 109,000	\$ 485,000
1.4	Old Portland Rd	\$ 1,398,000	10%	\$ 145,000	\$ 1,253,000
1.5	High School Wy to Elm St	\$ 1,412,000	12%	\$ 165,000	\$ 1,247,000
1.6	Dutch Canyon Rd	\$ 285,000	2%	\$ 5,000	\$ 280,000
1.7	Pump Station Improvements (Springlake and HWY 30 PS)	\$ 84,000	36%	\$ 30,000	\$ 54,000
Total Priority 1 Improvements (rounded)		\$ 5,584,000		\$ 1,033,000	\$ 4,551,000
Rate Impact (20 yr, 1.6%)					\$ 8.70
Priority 2 Improvements					
2.1	4th St to Smith Rd Pump Station	\$ 958,000	13%	\$ 126,000	\$ 832,000
2.2	Tyler St	\$ 303,000	13%	\$ 40,000	\$ 263,000
2.3	Wagner Ct	\$ 126,000	100%	\$ 126,000	\$ -
2.4	Pump Station Improvements (Keys Landing and Seven Oaks PS)	\$ 149,000	36%	\$ 53,000	\$ 96,000
2.5	Miller WTP Improvements	\$ 49,000	36%	\$ 17,000	\$ 32,000
Total Priority 2 Improvements (rounded)		\$ 1,585,000		\$ 382,000	\$ 1,203,000
Rate Impact (20 yr, 1.6%)					\$ 2.35
TOTAL COLLECTION SYS. IMPROVEMENTS COSTS (rounded)		\$ 7,149,000			\$ 5,754,000

4-Year Priority 1 CIP

ID #	Item	Total Estimated Cost (2020)	Opinion of Probable Costs (2020)			
			2021	2022	2023	2024
Priority 1 Improvements						
1.1	Smith Road Pump Station	\$ 883,000	\$ -	\$ 883,000	\$ -	\$ -
1.2	WTP Improvements and Smith Rd	\$ 908,000	\$ -	\$ 181,600	\$ 726,400	\$ -
1.3	Laurel and 3rd St	\$ 594,000	\$ -	\$ 118,800	\$ 475,200	\$ -
1.4	Old Portland Rd	\$ 1,398,000	\$ -	\$ -	\$ 279,600	\$ 1,118,400
1.5	High School Wy to Elm St	\$ 1,412,000	\$ -	\$ -	\$ 282,400	\$ 1,129,600
1.6	Dutch Canyon Rd	\$ 285,000	\$ -	\$ -	\$ 57,000	\$ 228,000
1.7	Pump Station Improvements	\$ 84,000	\$ -	\$ 84,000	\$ -	\$ -
Total Priority 1 Improvements (rounded)		\$ 5,584,000	\$ -	\$ 1,267,400	\$ 1,820,600	\$ 2,476,000



Questions or Comments?



Thank you for your participation.



Councilor Poling asked what is the life span of the product that goes inside the pipe.

Emily Flock & Peter Olsen both replied it is similar to new pipe.

Councilor Lesowske asked in the priority for 2023 for Old Portland Road \$279,600 and High School Way \$282,400, is that just for preparation for two very large projects that we would be taking on.

Peter Olsen replied that would be for the preliminary concept design, your design, your permitting, etc.

Councilor Haugen asked are the estimates for the four-year priority optimistic, pessimistic, or in between or what could interfere with those costs?

Peter Olsen replied that is a great question. He explained there is a construction cost index that you can look at to see what those costs might be, based on previous costs. He stated it is a constantly changing environment.

Public Works Director Dave Sukau stated the good news is that we now have a road map, the bad news is, can we follow it, he doesn't know. He explained the problem that we are faced with is the treatment plant is the wild card in all of this. He explained the next step is staff will be bringing this plan to Council at the next Council meeting for adoption.

Council thanked staff and the consultants.

Adjournment

Mayor Burge adjourned the work session at 6:50 p.m.


Mayor Scott Burge

Attest:


City Recorder Susan M. Reeves, MMC