

MONDAY, OCTOBER 2, 2017

WORK SESSION TO DISCUSS WASTEWATER FACILITY MASTER PLAN, 6:00 PM

**Scappoose Council Chambers
33568 East Columbia Avenue**

Mayor Burge called the Work Session to order at 6:00 p.m.

Present: Mayor Scott Burge, Council President Mark Reed, Councilor Rich Riffle, Councilor Patrick Kessi, Councilor Megan Greisen, Councilor Natalie Sanders, City Manager Michael Sykes, City Recorder Susan Reeves, Legal Counsel Shelby Rihala, Public Works Director Dave Sukau, Treatment Plant Supervisor Kevin Turner, and Carollo Consultants Bhargavi Ambadkar and Bob Eimstad.

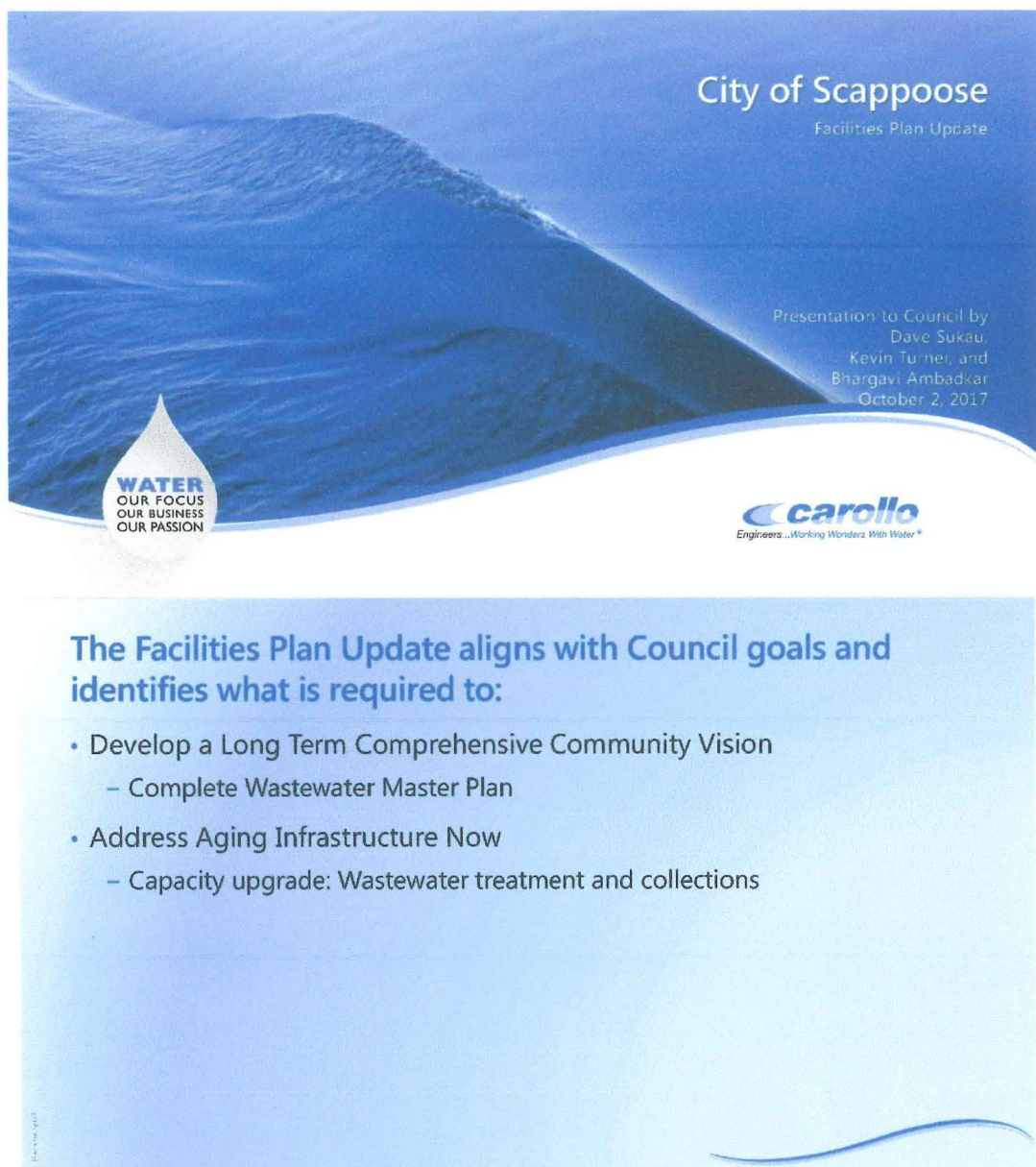
Also present in audience: Assistant to City Manager Alexandra Rains and Treatment Plant Supervisor Darryl Sykes.

Treatment Plant Supervisor Kevin Turner explained the plant's major upgrade was in 1992, and the last master plan update was in 1998. He explained in October of 2015 we started the master plan process. In February of 2017 we changed focus a bit and got Carollo on board, and here we are with the treatment portion only. He explained there were some issues with the original modeling flow data for the collections portion, so we are going to redo the flow testing this winter and then probably have completion of that by spring of next year, and then wrap it up sometime in the summer.

Carollo Consultant Bob Eimstad introduced Bhargavi, and explained she has done most of the work on this project, but they have both been involved since it started. He explained they have put together a plan that they feel meets the City's needs over the longer term. He explained they have developed an update to the facility plan that meets and aligns with the Council's goal and identifies what's required to develop a long term comprehensive community vision, in other words, a completed wastewater master plan, and working to address aging infrastructure now. He stated the City's treatment is in need of an upgrade, not just for capacity, but also to address some deficiencies in lack of investments over the years that need to be made to bring it up to date and simplify operations and make it a more reliable facility. He stated their objectives were to provide capacity to accommodate growth, so you have some growth projections that have been developed for the City, so they want to make sure that they have planned to provide capacity to treatment. He explained the planning period goes out to 2035, and they will show how the wastewater flows are going to change over that period of time. He explained regulatory requirements always change so we need to make sure, and a lot of times we can anticipate how they are going to change, new regulations come out, so wastewater discharges are regulated by the Clean Water Act, which is Federal Legislation. He explained a lot of that is delegated to the Oregon Department of Environmental Quality, so there is both Federal and State regulations that have to be met. He explained the Treatment Plant has a discharge permit that gets renewed every five years, sometimes longer. He explained the City has some facilities that are at the end of their useful life, and equipment that has been in service for a long time that needs to be replaced may not have adequate capacity. He stated we also need to look at what is out there right now and

make sure that if they are going in and doing and upgrade to the Treatment Plant they are also replacing process's and equipment that are well past the end of their useful life.

Carollo Consultant Bhargavi Ambadkar and Carollo Consultant Bob Eimstad went over the power point ~

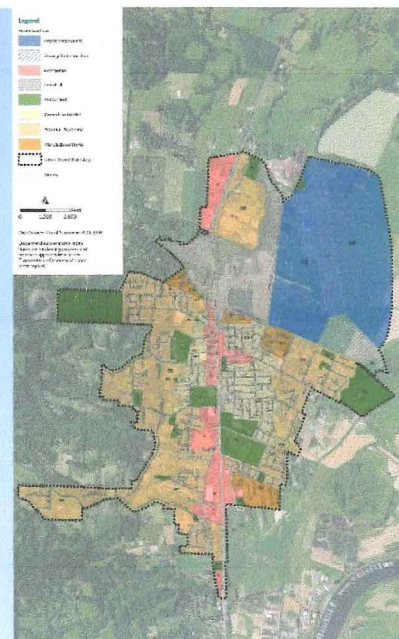


Facilities Plan Update Objectives

- Treatment capacity to accommodate growth
- Treatment processes to meet regulatory requirements
- Improve and replace existing facilities that are deficient or are anticipated to become deficient during the planning period

City of Scappoose Service Area

- Worked with City to define extent of study area
- Used PSU PRC 2017 data for current population
- Used existing land use calibrating current flows
- Used projected zoning, estimate of large commercial/industrial customers for projecting flow and loads to the plant
- Used DEQ methodology to compare projections



Carollo Consultant Bob Eimstad wanted to clarify that what they are presenting this evening is a little bit of a simplified summary. He stated treatment plants have to be designed to handle both the water, that is called hydraulic capacity, and then sewage, but there is also stormwater and rainwater that can get into your system, either from high ground water, improper connections, or street runoff. He stated you can get rainwater in your system as well, and all that has to be dealt with at the treatment plant. He stated there is also the strength of the wastewater that we have to consider. He explained we have different parameters ~ summertime average flow, monthly average flow, wet weather monthly average flow, and peak loads. He stated there are a whole bunch of different things they look at.

Bhargavi Ambadkar continued to go over the power point.

Anticipated growth within the UGB

- 56% of growth on Average Dry Weather basis
 - Increase in population
 - New industrial growth – metallurgy, light/heavy industrial customers
 - Commercial – hotels
 - Institutional – community college

Flow Parameter	Current	Year 2035
Average Dry Weather Flow, mgd	0.66	0.96
Peak Instantaneous Flow, mgd	4.0	5.6

Treatment facility evaluation included:

- Regulatory scenarios
- Condition assessments
- Hydraulic assessments
- Process assessment
- Liquids and solids stream evaluations

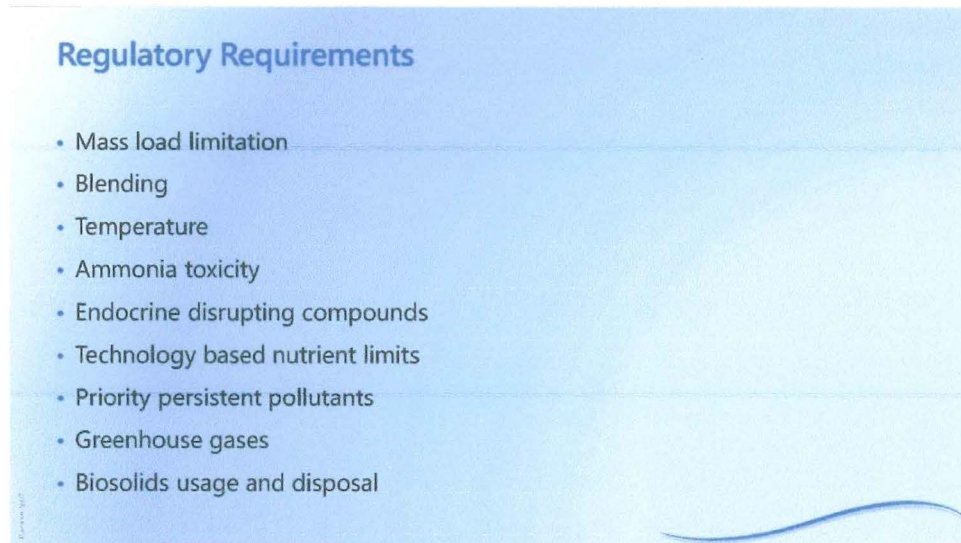
Mayor Burge stated in regards to OMIC he doesn't think their flow is going to be the same as a normal industrial site. He explained he thinks we would want to focus in on how what they are doing is different than an industrial model, because they would be doing research and development so the flow would be different.

Bob Eimstad replied that is a good point. He explained it is hard to have a category called industry and assign a flow for that particular business. He explained so what they have done is tried to fine tune this a little bit more to identify exactly what types of development is going to take place and what type of activity is going to take place. He stated in fact they have scaled that back a bit from what the original assumptions were, as to how much flow and load you would have coming from those particular areas. He stated they have done a lot of planning for other communities that have similar types of activities going on, either existing or planned so they can look at that and come up with the kind of numbers per acre for different type of development.

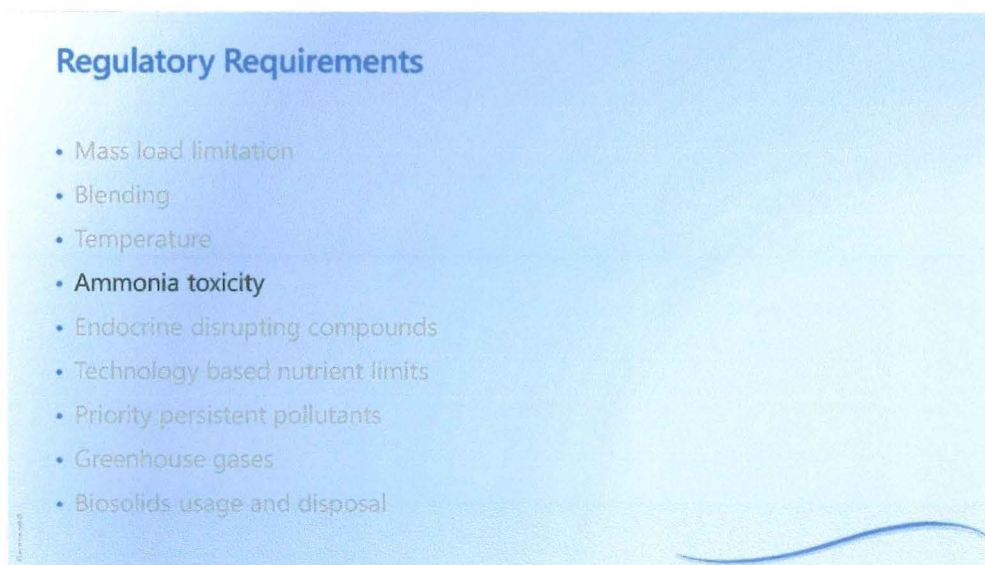
Public Works Director Dave Sukau replied he thinks we are going in the right direction on numbers, at this point.

Bob Eimstad stated their goal has been to be reasonably conservative, but not make it so big that it's capacity is never used. He stated they don't want the City building things they don't need.

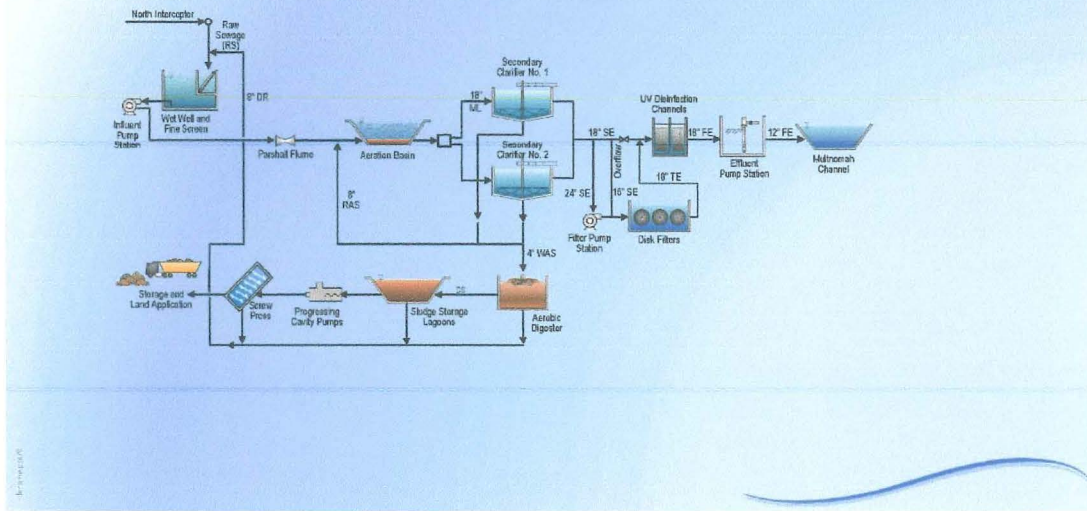
Bhargavi Ambadkar explained they came up with unit flows for each, whether it is industrial or commercial, that is reasonable and comparable to other communities within Oregon and SW Washington.



Bhargavi Ambadkar explained for the City it looks like the ammonia toxicity item that might be effected and the limit might be less than 5 milligrams per liter is what they are expecting, which is well within the treatment plants reach.



Existing Treatment Processes

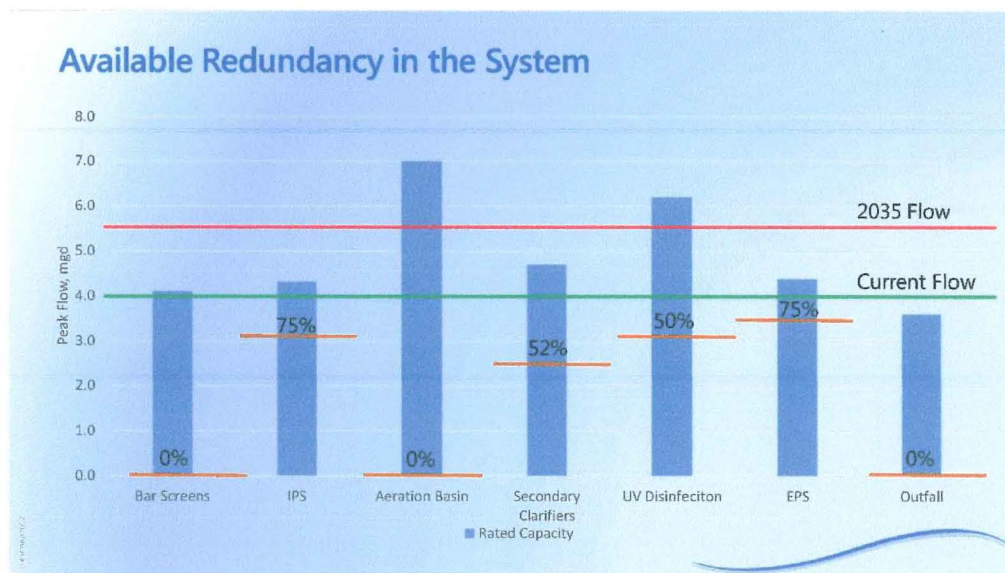
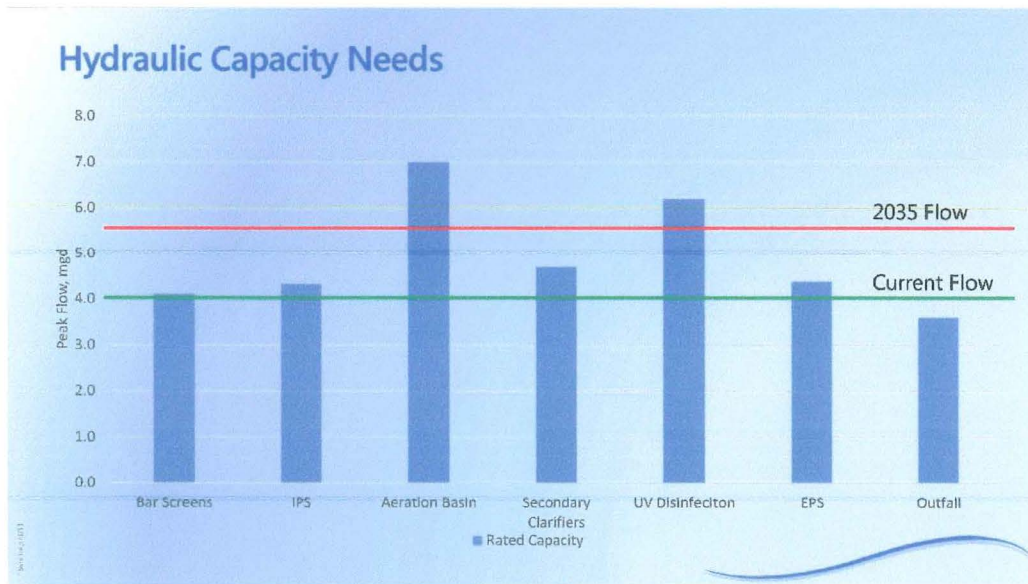


Bhargavi Ambadkar and Bob Eimstad went over the capacity needs. Bob explained in order to have a reliable treatment plant you need to have capacity when things break down. He stated when you only have one of something and it breaks down, you have to scramble in order to keep things up and running.

Bhargavi Ambadkar stated in addition to the capacity needs, there are condition issues. She went over the slide that shows just a brief summary of issues at the treatment plant.

Condition Assessment

- Influent Pumping Station
 - Pumps at the end of their useful life
 - Severe leaks
 - HVAC system does not meet current code
- Secondary clarifiers
 - Wiring to drive mechanisms
- UV Disinfection
 - At the end of its useful life
 - Seals leaking
- Effluent Pumping Station
 - Pumps at the end of their useful life
 - Difficult to remove pumps for maintenance
- Aerobic Digester
 - Some diffusers are plugged
 - No backup for sludge pump
- SCADA
- WWTP Office



Solids Process

- Aerobic digester needed to meet Class B biosolids requirements
- Currently undersized – 12 days average SRT
- Need 15 days SRT

Treatment Facility Capital Improvement Plan:

CIP Project Phase	Cost, \$	Project Period
Immediate Phase (Condition Improvements)	\$1,321,000	2018 - 2019
Spring Lake Lift Station	\$272,000	
UV Disinfection	\$617,000	
Aerobic Digester	\$433,000	

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Immediate Phase (Condition Improvements)	\$1,321,000	2018 - 2019
Spring Lake Lift Station	\$272,000	
UV Disinfection	\$617,000	
Aerobic Digester	\$433,000	
Phase 1	\$12,117,000	2020 - 2022
Headworks and Influent Pumping	\$5,500,000	
UV Disinfection (Addition of second channel)	\$1,686,000	
Effluent Pumping Station	\$537,000	
Outfall	\$2,171,000	
Hydraulic Improvements	\$520,000	
Operational Improvements	\$1,700,000	

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Operational Improvements	\$1,700,000	
Phase 2	\$4,590,000	2026 - 2028
Secondary Clarifier with RAS/WAS pumping Upgrades	\$4,590,000	

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Total CIP Cost = \$20.5 M		
Hydraulic Improvements	\$520,000	
Operational Improvements	\$1,700,000	
Phase 2	\$4,590,000	2026 - 2028
Secondary Clarifier with RAS/WAS pumping Upgrades	\$4,590,000	
Phase 3	\$2,487,000	2033 - 2035
Aerobic Digester	\$2,487,000	

Mayor Burge asked if all of the dollar amounts are in today's dollars?

Bhargavi Ambadkar replied yes. She explained they could add an inflation amount, like 2 or 2.5% if Council would like to see that.

Councilor Kessi asked how fast does technology change in these facilities?

Bhargavi Ambadkar replied there are several technologies to treat the sludge. She explained the City has the aerobic digester, which is typically used in conjunction with the type of aeration basin that the City has.

Treatment facilities strategically located on existing site:



Treatment facilities strategically located on existing site:



Call to Action

- Council to Adopt Facility Plan Update

City Manager Sykes explained one of the things we have talked about is having Steve Donovan take a look at the capital improvement costs and to discuss what is appropriate for SDC's, and what's not and figure out how that might affect our SDC's and bring that information back to Council.

Treatment Plant Supervisor Kevin Turner explained there is a work session scheduled for November with Steve Donovan to go over the information.

City Manager Sykes explained the good news in all of this is a year ago we had a consultant look at our needs for the facility and they came back with a number around 43 million for improvements. He explained Carollo came back with 20.5 million, which is a lot more achievable than what we were facing. He stated to Bhargavi and Bob he appreciates the quality of their work.

Councilor President Reed asked how do we compare with other cities?

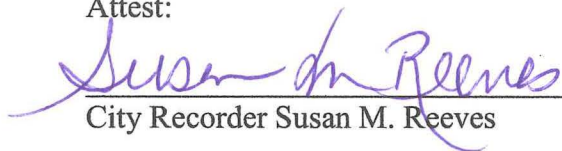
Bhargavi Ambadkar replied she thinks a lot of communities are facing similar challenges.

Mayor Burge adjourned the Work Session at 6:56 pm.



Mayor Scott Burge

Attest:



City Recorder Susan M. Reeves