

**REGULAR MEETING OF BOARD OF DIRECTORS
ROGUE VALLEY SEWER SERVICES
September 18, 2019**

TIME AND PLACE OF MEETING

The regular meeting of the Board of Directors of the Rogue Valley Sewer Services, Jackson County, Oregon, was held at the Rogue Valley Sewer Services Office, 138 West Vilas Road, Central Point, Oregon September 18, 2019 at noon.

PLEDGE OF ALLEGIANCE

PRESENT

Kay Harrison, Chair; Wayne Brown, Vice-Chair; Mike Parker, Director; Jim Snyder, Director

Absent: Jim Lewis, Director

ALSO PRESENT

Carl Tappert, Manager; Brenda Baldovino, Finance Director; Jennie Morgan, Stormwater Manager; Joan Pariani, Executive Secretary; Mike Parson, Liaison for the City of Central Point.

Absent: Nick Bakke, District Engineer; Shane Macuk, Operations Manager; Kevin James, Treatment Plant Manager;

CONSENT AGENDA

Mike Parker motioned and Wayne Brown seconded approval of the consent agenda consisting of minutes of the August 21, 2019 Board Meeting. The motion carried with a unanimous vote of the board members.

RESOLUTION 19-22: ADOPTION OF THE STORMWATER DESIGN MANUAL

The Stormwater Design Manual has been updated to comply with the new MS4 requirements. This has been approved by the Stormwater Advisory Team which consists of representatives from each of the MS4 communities as well as private development and environmental groups. The changes require approval from the Board.

Mike Parker motioned and Wayne Brown seconded approval of Resolution 19-22. The motion carried with a unanimous vote of the all board members.

RESOLUTION 19-23: CHANGE IN AUTHORIZED SIGNATURES

With the changes of Board members, the signers on the checking account need to be updated.

Mike Parker motioned and Wayne Brown seconded approval of Resolution 19-23. The motion carried with a unanimous vote of the all board members.

RESOLUTION 19-24: AWARD ENGINEERING CONTRACT FOR DUNN PUMP STATION

A request for qualifications was issued for the engineering design of replacement pumps at the Dunn Pump Station. Two submittals were received. Staff is recommending that we enter into a contract with RH2 engineering. This resolution directs the Manager to negotiate a contract for the design services. The final contract will be brought back to the Board for approval.

Mike Parker motioned and Wayne Brown seconded approval of Resolution 19-24. The motion carried with a unanimous vote of the all board members.

PROJECT UPDATES

In Nick's absence, Carl updated the Board on recent projects. See Engineer's Report attached

STORMWATER UPDATES

Jennie updated the Board on Stormwater happenings. Stormwater report is attached.

O&M UPDATES

In Shane's absence, Carl represented his report, which is attached.

MANAGER'S REPORT

Some of the Board members have had problems with the current tablets that the Board information is sent. Carl asks the Board if they would rather have iPad instead of the Samsung tablets. The Board decided to update to the basic iPad without the service contract.

Carl announced that Brenda has been awarded the certificate of excellence in financial reporting from GFOA

Carl presented the annual Operations report, which is attached.

With the passing of Bob Dunn and the election of two new Board members, Carl would like to have a short presentation each month on different subjects. Some information may be new to the Board members and some will just be a refresher. This month Carl explained RVSS' jurisdictional boundaries.

CLAIMS LISTING

Mike Parker motioned and Wayne Brown seconded to approve the Claims Listing of \$1,396,471.30. The motion carried with a unanimous vote of the all board members.

ADJOURNMENT

There being no further business, the meeting was adjourned at 1:08 p.m.

ROGUE VALLEY SEWER SERVICES



Kay Harrison, Chair
Board of Directors



Joan Parjani, Executive Secretary



ROGUE VALLEY SEWER SERVICES

Location: 138 West Vilas Road, Central Point, OR - Mailing Address: P.O. Box 3130, Central Point, OR 7502-0005
Tel. (541) 664-6300, Fax (541) 664-7171 www.RVSS.us

September 11, 2019

To: RVSS Board of Directors

From: Nick Bakke, District Engineer

J276, Magnolia Avenue Sewer Extension (Jackson County):

This project will install 1936 feet of new 8 inch gravity sewer replacing the existing 4 inch effluent line and 18 STEP/STEG tanks. Three additional properties currently on septic will have the option to connect to gravity sewer. We plan to begin construction this summer.

- **Updates:** A pre-construction meeting was held September 12th. Construction is scheduled to begin next week.
- **Status:** Construction

J281, West Gregory Pump Station Rehab (Jackson County):

The existing pump station was retrofit in 2004 in anticipation of a full rehab at some point. This project will install a new fiberglass wetwell insert, Flyght pumps, level sensor, and variable frequency drive pump controls. The existing valves and vault installed in 2004 are in good condition and will remain in place. Construction is planned for this summer.

- **Updates:** The wetwell, pumps and control cabinet have been delivered. Construction will begin September 23rd.
- **Status:** Construction

J292, Church Street Sewer Replacement (Phoenix):

The City Of Phoenix will reconstruct North Church Street from 1st Street to 6th Street providing an opportunity to replace the deteriorating unreinforced concrete sewer within the project footprint. Approximately 1,100 feet of 8 inch concrete sewer and associated manholes will be replaced with the project. For efficiency, the City's consultant will perform the sewer design. RVSS will reimburse the City for costs associated with design and construction of the sewer.

- **Updates:** Pilot Rock Excavation has completed the sewer construction. Sewer manholes will be adjusted after final paving is complete.
- **Status:** Construction

J296, Northridge Terrace Sewer Realignment (JC north of Phoenix):

There is a poor manhole configuration between multiple pipes currently on our special cleaning list. The configuration creates adverse flow, backwater, and FOG buildup in the pipe. This project will redirect the incoming flow by installing a new manhole downstream of the existing manhole. Three adjacent asbestos concrete pipe segments have multiple sags and intruding services which will also be replaced. A total of 1,217 ft of 8" main and 4 manholes will be replaced.

- **Updates:** Construction is substantially complete. Punch list items must be completed.
- **Status:** Construction
- **Payments:** August Payment - **\$183,918.23 (does not include final retainage)**

D003, 11th Street Ditch Piping (WC Industrial):

Initially Stormwater management improvements were planned for the existing detention basin to enhance treatment and flow control for the facility. Upon visiting the site it was apparent very little could be done without acquisition of additional space. However, the existing drainage ditch has become a maintenance issue due to the construction of the adjacent warehouse and use of the property. The 175 foot ditch will be piped reducing the need for vegetation reduction and continual maintenance. The 36" conveyance pipe has been designed to convey the 10 year, 24 hour storm event.

- **Updates:** Construction is complete.
- **Status:** Construction



ROGUE VALLEY SEWER SERVICES

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September 18th, 2019

To: RVSS Board of Directors
From: Jennie Morgan, Stormwater Program Manager

RE: Stormwater Program Update

Colver Park Stormwater Facility, Q005

The stormwater swale will be planted during the Bear Creek Stewardship Day September 28th. This is a volunteer event. RVSS is providing the plants and the City of Phoenix public works staff are prepping the site for planting.

Talent Stormwater Master, R016

We held a kickoff meeting with the Talent Public Works Director Sept. 9th. Our EIT and SW Technician will begin surveying the stormwater system in the next week.

National Municipal Stormwater and Green Infrastructure Award

Attached to this report is the letter from the water Environment Federation stating the award of Gold Level in Project Management and silver Level in Innovation to RVSS. There were 24 entities from across the country competing for the award.

Stormwater Design Manual

RVSS has been leading a Post-Construction Working Group made of the MS4 permittees in the Rogue Valley, as well as private engineers and environmental interest groups, for the past six months. The role of the Working Group is to evaluate the Rogue Valley Stormwater Design Manual for compliance with the new permit requirements and determine what changes are needed. The Rogue Valley Stormwater Design Manual is hosted on RVSS' website, <https://www.rvss.us/pilot.asp?pg=StormwaterDesignManual> .

All changes to the Design Manual must be approved by the Stormwater Advisory Team (SWAT), the voting members of which are the MS4 permittees that have adopted the Design Manual. Current voting members of the SWAT are: Ashland, Central Point, Eagle Point, Phoenix, Talent, Jackson County, Medford and RVSS. Each entity receives one vote. In July, several changes were recommended to the SWAT for approval. All but one proposed change were approved by the SWAT at the July 17th meeting. A list of the changes and their locations within the design manual is attached.

Action Needed: Approve the Resolution adopting changes to the Rogue Valley Stormwater Design Manual.

BOARD OF TRUSTEES

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Ifetayo Venner, PE, ENV SP
Tampa, FL

August 5, 2019

Dear Ms. Morgan,

Thank you for participating in the National Municipal Stormwater and Green Infrastructure Awards Program. We very much appreciate the time and effort you took to prepare and submit your extensive application.

Congratulations! Rogue Valley Sewer Services has been selected as one of the three winners for the Phase II awards. We were impressed with both the quality and quantity of submittals received this year. The competition for the top three awards (Program Management, Innovation, and Overall Highest Score) was extremely tight. Your community/MS4 has been selected as winner of the "Program Management Category – Phase II".

We are also excited to announce that your program has been categorized as a "Silver Level in Innovation" and "Gold Level in Project Management". This level was selected for your MS4 program based on rigorous review by the work team, and provides a comparative benchmarking level for your community among other 2019 applicants.

We hope that you can join us at WEFTEC 2019 to receive a certificate and be recognized as one of this year's winners at the Stormwater Congress Luncheon on Monday, September 23rd. For more information on WEFTEC and the Stormwater Congress, please [click here](#).

Congratulations and thank you again for taking the time to prepare and submit your application. We hope you will consider submitting an application and participating again next year.

For more information, on the National MS4 awards program, [click here](#), and on the WEF awards program in general, visit www.wef.org/awards/

Sincerely,



Eileen J. O'Neill, Ph.D.
Executive Director
Water Environment Federation

**Rogue Valley Stormwater Design Manual, revised 2018
Post-Construction Working Group Recommended Changes**

Item	Page/ Section	Change	Reason	Approved by SWAT
1	1.3	removed: "Existing facilities are only required to implement LID for added imervious surfaces of 2,500sq ft or more."	This sentence confounded the 1st sentence in the paragraph	7/17/2019
2	1.3	Added second exemption	Can't require LID facilities if field testing reveals soils are not highly infiltrating.	7/17/2019
3	3.2	Added SCS method as allowable	It was felt manual needed to specifically state that this method was allowed.	7/17/2019
4	3.3	Added SCS method as allowable	It was felt manual needed to specifically state that this method was allowed.	7/17/2019
5	3.3.1	added allowance for effective porosity to be used as storage volume	Allowing the effective porosity to be used for storage may reduce required facility volumes. After reviewing available literature, WG chose a value of 20% effective porosity to be conservative.	7/17/2019
6	4.3.3	Changed from Porous pavement to Pervious Surface. Change made throughout manual.	Pervious surface encompasses porous gravel and flexible paving systems which are included in this section.	7/17/2019
7	4.3.3 Design	removed minimum design infiltration rates	added a simplified approach for non-vehicular applications	7/17/2019
8			added a performance approach that must be designed by and modelled by an engineer	7/17/2019
9		added a recommendation for vertical woven geotextile	to protect adjacent nonpervious structures	
10	4.3.3 Maintenanc e	Revised maintenance section to improve clarity.		7/17/2019
11	4.4.1, pg 4- 22	Added Curb Cut Design Criteria	Curb cut design varies widely and not all are effective. WG decided to provide recommended design guidance for curb cuts.	7/17/2019

**Rogue Valley Stormwater Design Manual, revised 2018
Post-Construction Working Group Recommended Changes**

Item	Page/ Section	Change	Reason	Approved by SWAT
12	4.4.2	Revised UIC Authorization paragraph	Put the onus for determining whether a facility is a UIC on DEQ.	7/17/2019
13	Definitions	Added Effective porosity, field capacity and total porosity	Effective porosity is used in section 3.3.1, which is a factor of field capacity and total porosity.	7/17/2019
	General Notes for Vegetated BMPs			7/17/2019
14		Revised the Stormwater Growing Medium Spec. to improve clarity.	Needed to clarify to which portion of the mix the sieve analysis applied.	7/17/2019
15		Added AASHTO T2 as the specification for soil sampling.	Needed to specify how soil should be sampled.	7/17/2019
16		Added AASHTO T27 and T11 as the specification for Sieve analysis	Needed to specify what analyses are acceptable.	7/17/2019
17		removed requirement for weed free soil from the specification	Hilton does not guarantee weed free, only free of noxious weeds.	7/17/2019
18		removed requirement for organic matter from 8-10% by weight in the topsoil	organic matter will be present in the compost	7/17/2019
19		removed requirement for CEC \geq 5meq./100g dry soil		7/17/2019
20		removed text specifying 2-5% clays fines content in topsoil	this is covered in the sieve analysis spec.	7/17/2019
21	Standard Drawings	Created BMP 9.01 Roadway Curb Opening	See item 11.	7/17/2019
22	General Notes for Pervious Surfaces	Added Notes to Design Manual	Inadvertently left out of July 2018 revision.	7/17/2019



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November 18, 2019

To: RVSS Board of Directors

From: Shane Macuk, Operations Manager

RE: Operations & Maintenance Report

Collection System

- a. Rotational Footages: Staff have flushed a total of 7,986' and have video inspected 49,076'.
- b. White City Storm Drain: Flushed 19,844' and video inspected 10,425'.
- c. Special Cleaning: Flushed 3,961' and root sawed 15,653'.
- d. Requests: Flushed 1,162' and video inspected 694'.
- e. Lagoons: Received 152,260 gallons of septage, 24,010 gallons of porta potty waste and 29,603 gallons of FOG for a total of \$30,880.95.
- f. Gold Hill: Nothing to report
- g. Special Cleaning Summary: 60 equipment hours and 121.5 labor hours were spent on special cleaning for a total cost of \$8,753.02.
- h. City of Shady Cove: Cleaned culvert pipe at the end of Rene Drive.

Pump Stations

- a. Echo's P/S: Pump failure due to rags.

FOG Update

- a. Was not able to get the data.

Vehicles & Equipment

- a. Nothing to report.

Annual Report on Operations

Rogue Valley Sewer Services

Fiscal Year 2019

The Capacity Management, Operations and Maintenance Program (CMOM) is an effort promoted by the US Environmental Protection Agency to improve the performance of sewer collection systems and prevent sewer overflows. There is no regulatory requirement to develop or implement a CMOM program but it is considered a good management practice and collection system operators are encouraged to develop a CMOM program.

RVSS' CMOM program has grown organically and continues to evolve. We have a program document which describes the basic components of the program. The key to the program comes down to the tracking and reporting of performance data. Recent and on-going developments in our geographic information system (GIS) allows us ever greater abilities to track a wide variety of performance measures.

Operating under the principal that "you get what you measure" we have developed a comprehensive set of statistics that cover nearly every aspect of our operations. This information allows us gauge our effectiveness and to identify areas of weakness that need more attention.

The following statistical report covers 14 areas of performance. A brief description of each of the data sets is included in each section.

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

1. General Information				
	Agency Name	Rogue Valley Sewer Services		
	Agency Address	138 West Vilas Road		
		Central Point	OR	97502
	Contact Person	Carl Tappert	Manager	
		541-664-6300		
		ctappert@rvss.us		

2. Service Area: RVSS provides sanitary sewer and stormwater service to different areas of the region. There are six distinct service areas within RVSS:

- **RVSS Core:** This is the area that is served by the Regional Water Reclamation Facility.
- **Shady Cove:** This is defined by the city limits of Shady Cove. It is served by Shady Cove Sewer Treatment Plant and was annexed into RVSS effective July 1, 2019
- **Gold Hill:** This is defined by the city limits of Gold Hill. It is served by the Gold Hill Sewer Treatment Plant and is operated by RVSS under the terms of a 5 year contract, which expires on June 30, 2022.
- **MS4 Stormwater Area:** This is the area that falls under the MS4 Stormwater permit. It includes the cities of Talent and Phoenix, and the “urbanized” areas of Jackson County, as defined by the US Census Bureau.
- **White City Industrial Storm Drainage Area:** This is the industrial side of White City. The boundary of the area was defined when the storm drainage utility was formed in 1989.
- **Sycamore Properties:** This is a small community septic system near Gold Hill. RVSS assumed responsibility for operating the system at the request of DEQ in 1979.

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

2. Service Area	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
2.1 District Area (sq. mi.)	189.76	189.76	189.76	189.76	189.76
2.2 Population Data - RVSS Core					
Population served (est.)	80,552	82,085	82,990	84,723	89,970
Residential Units	30,628	31,211	31,555	32,214	34,209
Commercial/Industrial Accounts	1,741	1,744	1,761	1,783	1,924
Total ERU	35,415	35,888	37,032	36,681	37,069
2.3 Population Data - Shady Cove	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Population served (est.)	3,025	3,040	3,105	3,105	3,105
Residential Accounts					
Commercial/Industrial Accounts					
Total ERU		1,465	1,614	1,538	1,567
2.4 Population Data - Gold Hill (Contract)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Population served (est.)	1,220	1,220	1,220	1,220	1,220
Residential Accounts					
Commercial/Industrial Accounts					
Total ERU					769
2.5 MS4 Stormwater Area					
Total Area (sq. mi.)	13.34	34.24	34.24	34.24	30.41
Total Area (acre)	8,538	21,914	21,914	21,914	19,462
Assessed Impervious Area (acre)					1,217
Residential Impervious Area (acre)					1,371
# of Commercial Accounts					1,714
# of Residential Accounts					19,908
2.6 White City Industrial Storm Drainage					
Total Area (acres)					1,291
Assessed Impervious Area					573
Assessed Pervious Area					526
# of Accounts					263
2.7 Sycamore Properties					
Residential Accounts	9	9	9	9	9

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

3.2 Collection System - Shady Cove						
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Miles of Gravity Sewer					20.45	20.45
Miles of Force Main					1.025	1.025
Number of Manholes					497	
Number of Pump Stations	5	5	5	5	5	5
Number of Siphons						0
Number of Creek Crossings						10
Number of Railroad Crossings	0	0	0	0	0	0
Number of Freeway Crossings						0
Number of Air/vac valves						
Number of Design Overflows	0	0	0	0	0	0
Number of Grinder Pumps						0
Number of STEP Tanks					1	1
Number of STEG Tanks						0
Age Distribution of Collection System (miles)						
	Gravity Sewer	Force Mains	Pump Stations			
0-25 years	0.34	0.31	18.00			
26-50 years	17.72	0.69	3.00			
51-75 years	-		-			
>76 years	-		-			
no data	3.39	0.03				
Average age of system	36	32				
Size Distribution of Collection System (miles)						
	Gravity Sewer	Force Mains				
8 inches or less	16.63	0.344				
9 -18 inches	3.82	0				
19-36 inches	0	0				
> 36 inches	0	0				
no data	0	0.68				
Material Distribution of Gravity Mains (miles)						
Plastic (all types)	17.0					
Concrete	1.2					
Asbestos Cement	-					
Clay	0.1					
Other	-					
no data	2.2					
Material Distribution of Pressure Mains (miles)						
Plastic						
Ductile Iron						
no data	1.0					

3. Collection System: RVSS maintains an inventory of the various components of the sewer collection system. The collection systems for the RVSS Core, Shady Cove, and Gold Hill are tracked separately.

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

3 Collection System - RVSS Core					
3.1 System Inventory	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Miles of Gravity Sewer	391.51	392.91	394.27	395.92	398.20
Miles of Force Main	16.40	16.40	16.40	16.40	16.40
Number of Manholes					8,728
Number of Pump Stations	23	24	24	24	21
Number of Siphons	12	12	12	12	12
Number of Creek Crossings	78	78	78	78	78
Number of Railroad Crossings	29	29	29	29	29
Number of Freeway Crossings	6	6	6	6	6
Number of Air/vac valves	16	16	16	16	16
Number of Design Overflows	2	2	2	2	2
Number of Grinder Pumps	-	-	-	-	5
Number of STEP Tanks	102	102	102	102	84
Number of STEG Tanks	28	28	28	28	22
3.2 Age Distribution of Collection System (miles)					
	Gravity Sewer	Force Mains	Pump Stations		
0-25 years	193	5.94	18		
26-50 years	167	8.56	3		
51-75 years	20		0		
>76 years	8		0		
no data	11	0.92			
Average age of system	31	28			
3.3 Size Distribution of Collection System (miles)					
	Gravity Sewer	Force Mains			
8 inches or less	282	8.54			
9 -18 inches	69	1.53			
19-36 inches	25	3.69			
> 36 inches	19	0			
no data	3	1.66			
3.4 Material Distribution of Gravity Mains (miles)					
Plastic (all types)	262.0				
Concrete	82.1				
Asbestos Cement	43.2				
Clay	5.1				
Other	0.8				
no data	5.1				
3.5 Material Distribution of Pressure Mains (miles)					
Plastic	11.0				
Ductile Iron	1.8				
no data	2.6				

4. Stormwater System: RVSS is responsible for maintaining the public water quality facilities within the MS4 system, and monitoring the private water quality facilities. RVSS is also responsible for monitoring outfalls from the stormwater system into streams.

RVSS is not responsible for maintaining stormwater collection systems outside of the White City Storm Drainage Area, so no data on these systems is provided.

RVSS is responsible for maintaining the drainage system in White City.

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

4. Stormwater System					
MS4 Area					
4.1 Water Quality Facilities - Publicly Maintained					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Manufactured Structures				51	41
Detention Structures				2	2
Vegetated Swale				0	0
Pond/Wetland				2	2
Other Vegetated Facility				0	0
Area Draining through facilities (acres)				994	741
4.2 Water Quality Facilities - Privately Maintained					
Manufactured Structures				8	5
Detention Structures				21	15
Vegetated Swale				76	57
Pond/Wetland				10	10
Other Vegetated Facility				21	3
Porous Paving				7	7
Area Draining through facilities (acres)				430	366
4.3 Number of Stream Outfalls					
Agate Slough				5	5
Anderson Creek				1	1
Bear Creek				15	15
Coleman Creek				11	11
Crooked Creek				7	7
Daisy Creek				24	24
Elk Creek				13	13
Gore Creek				5	5
Griffin Creek				66	66
Horn Creek				30	30
Jackson Creek				32	32
MID Canal				1	1
Mingus Creek				65	65
No Name #48				2	2
No Name # 50				2	2
No Name #52				7	7
North Fork Whetstone				1	1
Payne Creek				8	8
Phoenix Canal				9	9
Upton Slough				2	2
Wagner Creek				23	23
Whetstone Creek				4	4

5. Pressure Systems: Pump station alarms provide a measure of the integrity of the upstream collection system and the condition of the pump station. Alarms have traditionally been recorded on a spreadsheet. As most of the stations are now equipped with Mission telemetry the alarm records are stored on the Mission website. Many conditions that trigger alarms are self-correcting and do not require a response. As a result, the number of alarms reported by Mission is far higher than what was recorded by hand.

The low-pressure systems consist of a series of pumps which each serve a single service connection. STEP tanks are effluent pumps inside a traditional septic tank. The pump discharges the effluent into a small-diameter pressure main while the solids remain in the tank.

STEG tanks are located such that a pump is not needed to discharge the effluent into the small-diameter main. Like STEP tanks, the solids remain in the tank.

Grinder pumps pass all of the waste to the small-diameter main.

There are areas where customers have installed pressure systems that do not meet RVSS standards. In these cases RVSS does not assume any maintenance responsibility. If the customer chooses to improve their system to meet RVSS standards they will be considered public facilities and RVSS will assume maintenance responsibility.

Rogue Valley Sewer Services
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5. Pressure Systems					
5.1 RVSS Core					
Pump Station Alarms	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Total	18	13	21	7	4
Pump Failure	3	1	1	6	1
Motor Failure	5	5	7		2
High Water	10	7	12		1
Other			1	1	0
High Water Alarms - Mission					81
Number of Pump Stations Flow Tested	0	0	0	7	2
Frequency of Inspections					
Number of PS with capacity redundancy					19
Number of PS with backup power on site	3	3	3	3	3
Number of PS with flow meters					3
Number of PS with remote monitoring	0	0	7	14	17
Number of PS with run time meters	28	29	29	29	26
Force Mains Inspected (miles)	0	0	0	0	0
Force Mains Cleaned (miles)	0	0	0	0	0
Air Relief Valves Inspected	0	0	0	0	0
5.2 RVSS - Shady Cove					
Pump Station Alarms	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Total	8	2	0	1	6
Pump Failure	5				3
Motor Failure					
High Water	3	2		1	2
Other					1
High Water Alarms - Mission					7
Number of Pump Stations Flow Tested				0	1
Frequency of Inspections					
Number of PS with capacity redundancy					3
Number of PS with backup power on site	1	1	1	1	1
Number of PS with flow meters					1
Number of PS with remote monitoring					1
Number of PS with run time meters	5	5	5	5	5
Force Mains Inspected (miles)	0	0	0	0	0
Force Mains Cleaned (miles)	0	0	0	0	0
Air Relief Valves Inspected	0	0	0	0	0

Rogue Valley Sewer Services
Annual Report - Fiscal Year 2019

	STEP Tanks	STEG Tanks	Grinder Pumps	Owner Maintained System
5.3 Low Pressure Systems				
Camp Baker Road, Project 89-15	29	0	0	1
Dutton Road, 91-06	2	5	0	1
Dutton Road, 94-14	1			1
Dutton Road, 97-35	5	2		1
Stanfield Extension, 00-23	2	0		
Eagle Mill Road, 92-09	0	8		1
Hartley Road, 83-05			1	3
Hartley Road, 88-05	7	0	3	
Highbanks Road, 91-08	4			
Highbanks Road, 08-21	2			
Highbanks Road, 12-07	1			
Hillside Drive, 89-11	1			
Hillside Drive, 99-07	0	1		
Magnolia Ave, Project 90-12	13	3	0	
Hyacinth Ave, 05-37	1	2		
Old Stage Road, Project 89-18	5	1	0	
Peace & Justice, 79-15	1			8
Peace & Justice, 79-27				10
Cummings Sewer, 94-22	2	0		
RVSS Office, 72-04	1			
Jackson County Sherrif, 78-27	1			
Ross Lane, 98-37	1			
Truax Road, 77-08	1			
Alpine Way, 78-38	1			
Whetstone Laterals, 85-08	1			
Whetstone Laterals, 87-01	1			
Phoenix Legacy, 05-01				3
White City Legacy, 42-01				7
Talent Legacy, 68-01				3
Stage Road, 74-04				1
Vilas Road, 74-09				1
Table Rock Road, 78-09				1
S Pacific Hwy, 78-15				1
Westergard, 78-38				1
Reed Lane, 79-06				1
Niedermeyer Lane, 83-06				1
Medford Missionary Baptist, 89-23				1
Hanley Road, 91-12				1
Star Promenaders, 91-15				1
Kogap, 92-18				1
S Pacific Hwy, 97-12				1
Posse Lane, 80-04	1			
Ambrose Street (Gold Hill)			1	
Total	84	22	5	51

6. Flows: Flow data is collected at each of the permanent flow monitoring stations. Dry weather is measured from May to October, wet weather is measured from November to April. The peak factor is the peak wet weather flow divided by the average daily flow. Peak factors in excess of 3.5 are highlighted and considered excessive flow.

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6. Flows					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Annual Rainfall (airport)	16.76	19.92	25.27	11.69	
UPPER BEAR CREEK INTERCEPTOR					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
TALENT BASIN					
Peak Day Dry Weather Flow (mgd)	0.84	0.64	1.00	1.05	0.90
Peak Day Wet Weather Flow	2.32	2.27	2.30	0.75	1.54
Average Daily Flow	0.63	0.65	0.66	0.54	0.61
Wet Weather Peak Factor	3.70	3.48	3.48	1.39	2.53
PHOENIX BASIN					
Peak Day Dry Weather Flow (mgd)	0.28	0.38	0.58	(0.05)	0.28
Peak Day Wet Weather Flow	0.22	0.45	0.58	0.17	0.40
Average Daily Flow	0.20	0.25	0.29	0.21	0.22
Wet Weather Peak Factor	1.07	1.79	1.96	0.79	1.81
SOUTH MEDFORD BASIN					
Peak Dry Weather Flow	1.71	0.87	1.91	1.18	1.49
Peak Wet Weather Flow	5.65	3.01	3.67	1.96	2.36
Average Daily Flow	1.12	1.22	1.25	1.08	1.10
Wet Weather Peak Factor	5.05	2.46	2.93	1.81	2.15
EAST MEDFORD BASIN (MEDFORD COLLECTION SYSTEM)					
Peak Dry Weather Flow	6.78	5.73	16.22	4.91	6.61
Peak Wet Weather Flow	9.03	15.79	17.37	5.46	14.96
Average Daily Flow	4.17	4.53	4.87	3.97	4.76
Wet Weather Peak Factor	2.16	3.48	3.56	1.38	3.15
NORTH MEDFORD BASIN					
Peak Dry Weather Flow					3.31
Peak Wet Weather Flow					27.17
Average Daily Flow					4.29
Wet Weather Peak Factor					6.33

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LOWER BEAR CREEK INTERCEPTOR					
JACKSONVILLE BASIN					
Peak Dry Weather Flow	0.40	0.32	0.70	0.34	0.31
Peak Wet Weather Flow	1.09	0.87	1.24	0.26	0.97
Average Daily Flow	0.20	0.29	0.26	0.18	0.22
Wet Weather Peak Factor	5.58	3.03	4.72	1.46	4.34
WEST MEDFORD BASIN					
Peak Dry Weather Flow	0.81	0.72	1.73	0.57	0.69
Peak Wet Weather Flow	2.05	2.07	3.36	0.64	1.93
Average Daily Flow	0.63	0.61	0.81	0.51	0.60
Wet Weather Peak Factor	3.24	3.38	4.14	1.25	3.21
CENTRAL POINT BASIN					
Peak Dry Weather Flow	3.86	2.63	3.30	3.75	3.41
Peak Wet Weather Flow	8.42	7.20	10.46	2.55	7.27
Average Daily Flow	2.74	2.92	2.98	2.60	2.99
Wet Weather Peak Factor	3.07	2.47	3.51	0.98	2.43
BURSELL BASIN (MEDFORD COLLECTION SYSTEM)					
Peak Dry Weather Flow	1.17	1.02	1.63	1.08	0.92
Peak Wet Weather Flow	1.94	2.57	2.77	1.88	2.72
Average Daily Flow	0.52	0.61	0.70	0.63	0.64
Wet Weather Peak Factor	3.77	4.18	3.95	2.98	4.22

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OLD MEDFORD TRUNK					
DOWNTOWN MEDFORD (MEDFORD COLLECTION SYSTEM)					
Peak Dry Weather Flow	3.35	1.26	3.22	1.34	1.84
Peak Wet Weather Flow	7.99	9.21	10.28	1.69	7.36
Average Daily Flow	1.19	1.26	1.26	0.98	1.19
Wet Weather Peak Factor	6.74	7.32	8.19	1.72	6.20
WHETSTONE BASIN					
Peak Dry Weather Flow	0.98	0.89	1.56	2.05	1.28
Peak Wet Weather Flow	3.11	4.61	5.12	1.18	4.67
Average Daily Flow	0.76	0.91	1.00	0.73	0.87
Wet Weather Peak Factor	4.08	5.08	5.10	1.61	5.40
WHITE CITY TRUNK					
EAGLE POINT BASIN					
Peak Dry Weather Flow	1.04	1.86	2.33	0.79	0.87
Peak Wet Weather Flow	1.63	2.88	2.55	1.01	2.49
Average Daily Flow	0.69	0.73	0.74	0.67	0.75
Wet Weather Peak Factor	2.37	3.92	3.43	1.51	3.32
WHITE CITY BASIN					
Peak Dry Weather Flow	3.29	0.35	2.59	2.94	1.66
Peak Wet Weather Flow	5.64	5.42	6.67	2.35	5.97
Average Daily Flow	1.48	1.57	1.58	1.20	1.21
Wet Weather Peak Factor	3.82	3.46	4.22	1.96	4.92

7. Preventative Maintenance: This page is a summary of preventative maintenance activities. Specific targets for these tasks have been identified as follows:

- CCTV Inspection: complete entire system ≤ 18 " pipe once every 5 years.
- Flushing: complete entire system ≤ 18 " pipe once every 3 years.
- Root Saw: complete entire root saw list annually
- Special Cleaning: complete entire special cleaning list monthly
- STEP/STEG tanks inspected: Inspect all tanks once every 3 years, pump as needed.
- Stormwater Quality Facilities: Inspect all publicly maintained facilities annually, clean as needed.
- Stormwater Quality Facilities: Inspect all privately maintained facilities once every 3 years.
- White City Storm Drain: Inspect all storm drainage facilities once every 3 years, clean as needed.
- Fats, Oils, and Grease: Inspect all food service establishments once every XX years.

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7. Preventative Maintenance of System					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
7.1 RVSS Core					
CCTV (miles)	71.00	92.00	94.00	84.00	120.44
Flush (miles)	48.00	60.00	85.00	95.00	97.66
Root Saw (miles)		-	4.00	10.00	2.32
Special Cleaning (miles)	12.00	17.00	13.00	18.00	22.62
STEP/STEG Tanks Inspected				13.00	59.00
STEP/STEG Tanks Pumped					4.00
Smoke Testing					-
7.2 RVSS - Shady Cove					
CCTV (miles)					0.07
Flush (miles)					14.34
Root Saw (miles)					
Special Cleaning (miles)					
Smoke Testing	-	-	-	-	-
7.3 Gold Hill (Contract)					
CCTV (miles)					3.15
Flush (miles)					5.79
Root Saw (miles)					
Special Cleaning (miles)					
Smoke Testing (miles)					4.39
7.4 MS4 Area					
Proprietary Structures Inspected	43	46	42	44	35
Proprietary Structures Cleaned	16	6	20	10	19
Pipes Cleaned (Miles)					0
Catch Basins Cleaned					0
Outfalls Inspected		14	24	16	32
Outfalls Sampled		7	10	0	6
7.5 White City Industrial Storm Drain Area					
Miles of Pipe cleaned					5,062
Miles of Ditch cleaned					0
Catch basins cleaned					0
7.6 Sycamore Properties					
STEP/STEG Tanks Inspected					0
STEP/STEG Tanks Pumped					0
7.7 Fats, Oils, and Grease					
# of Food Service Establishmetns in System					292
FSE Initial Inspections			181	295	228
Violations			98	100	115
No Log Book Updated			43	50	54
Inadequate Maintenance			50	50	59
Water Temp > 140d			5		2

8. Repairs and Rehabilitation: Repair orders are system defects that are identified by our maintenance crews. They are prioritized based on the severity of the defect and are typically completed by our construction crew.

Rehabilitation projects are typically larger projects. They can be completed by contractors or our construction crew.

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8. Repairs and Rehabilitation					
8.1 Repair Orders	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Priority 1 Repairs	1	1	3	13	18
Priority 2 Repairs	5	7	14	13	7
Priority 3 Repairs	4	5	1	4	5
Priority 4 Repairs	1	1	1		
8.2 Sewer Rehab Projects	9	3	2	3	9
Pipe replaced (feet)	8,000	4,412	1,603	4,038	7,504
Pipe relined (feet)				762	4,772
Pump Stations Rehabilitated	2			1	
Pump Stations Removed	1	1			3
STEP Tanks Eliminated					18
STEG Tanks Eliminated					6
Cost of Rehab Projects	\$ 1,945,105	\$ 787,124	\$ 181,439	\$ 728,725	\$ 3,068,575
8.3 Stormwater Rehab Projects					
Pipe replaced (feet)					
Cost of Rehab Projects					

9. Blockages and Overflows: RVSS is required to file a report with DEQ whenever there is a sewer main blockage that leads to an overflow. Blockages in service laterals are not required to be reported, however RVSS has chosen to report these as well to build a better record of the system performance.

Stormwater illicit discharges are reported to RVSS for any type of discharge within the MS4 area. Each of these reports are investigated by RVSS to determine what action, if any, is needed.

Stormwater violations are issued by RVSS for violation of our illicit discharge or construction site stormwater control rules.

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9. Blockages and Overflows					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
RVSS - Core					
9.1 Number of Overflows	8	3	2	3	8
Weather	1	1			
Grease	1				
Roots	2				1
Debris			1	1	
Pipe Failure		1			
Equipment Failure			1		2
3rd Party Actions	1	1			
Service Lateral	3			2	5
Estimated Gallons of Overflow	319,825	9,150		1,000	65
RVSS - Shady Cove					
9.2 Number of Overflows	0	1	0	1	2
Weather					
Grease					
Roots					
Debris					
Pipe Failure		1			
Equipment Failure					1
3rd Party Actions					
Service Lateral				1	1
Estimated Gallons of Overflow		35			2,020
Gold Hill (Contract)					
9.3 Number of Overflows			2	1	0
Weather					
Grease			2	1	
Roots					
Debris					
Pipe Failure					
Equipment Failure					
3rd Party Actions					
Service Lateral					
Estimated Gallons of Overflow			1,050	20	-
9.4 Stormwater Illicit Discharges (other than sewer)	2	6	8	13	6
Number of Discharges					
Construction Related			1	6	1
Oil/grease	1	3	5	2	
Gray Water	1	1		1	2
Fertilizer		1			1
Other		1	2	4	2
9.5 Stormwater Violations					
Brown Tag	12	19	14	4	5
Notice of Non-Compliance	2	3	2	0	0
Stop Work Order	2	0	0	0	0

10. New Construction: Sewer projects are any new construction project that involves the construction of public sewer mainline.

Inquiries are requests made by customers to calculate sewer connection permit fees, they are normally done in advance of issuing the connection permit.

Utility locate requests are made by anyone digging in the vicinity of a sewer main. RVSS is required to mark the location of the underground pipes to minimize the chance of damage.

SWQ projects are construction projects within the MS4 Stormwater area that require preparation of stormwater management plan. There is some overlap between sewer projects and SWQ projects, but it is not perfect.

1200-C permits are issued to construction sites that disturb 5 acres of land or more.

1200-CN permits are issued to construction sites that disturb between 1 and 5 acres of land.

Small lot stormwater permits are issued to construction sites less than 1 acre.

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10. New Construction					
10.1 RVSS - Core	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Projects Initiated	15	25	22	31	20
Projects Completed	10	14	13	21	23
Residential Lots Completed	156	143	303	335	273
New Pipe Completed	7,398	7,167	8,717	12,056	17,354
Cost of Completed Projects	\$ 584,615	\$ 664,429	\$ 732,474	\$ 1,247,603	\$ 1,883,192
Number of Inquiries	369	316	299	320	431
Number of Permits Issued	335	327	330	349	389
Utility Locate Requests	6194	6216	6140	6902	6,783
10.2 RVSS - Shady Cove					
Projects Initiated	-	2	2		2
Projects Completed	-	-		1	1
Residential Lots Completed				6	-
New Pipe Completed				392	42
Cost of Completed Projects				\$ 17,100	\$ 14,267
Number of Inquiries	13	13	18	10	14
Number of Permits Issued	13	13	16	11	12
Utility Locate Requests					
10.3 Gold Hill (Contract)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Projects Initiated				-	-
Projects Completed				-	-
Residential Lots Completed				-	-
New Pipe Completed				-	-
Cost of Completed Projects				\$ -	\$ -
Number of Inquiries				8	10
Number of Permits Issued				8	10
Utility Locate Requests					
10.4 MS4 Area					
# of SWQ Projects Initiated	11	15	20	27	23
# of SWQ Projects completed	2	4	6	15	23
# of 1200-C permits issued	1	1	0	2	2
# of 1200-CN permits issued	5	6	10	6	11
# of Small Lot SW Permits	100	90	47	51	52
10.5 White City Industrial Storm Drain Area					
Storm Drain Project Completed					0
New Pipe Completed					0
Cost of Completed Projects					0

11. Treatment: RVSS operates three treatment facilities: The Shady Cove Sewer Treatment Plant; the Gold Hill Sewer Treatment Plant; and the White City Lagoon. This page includes summary data from the monthly monitoring reports.

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11. Treatment					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
11.1 SHADY COVE TREATMENT PLANT					
Volume of Waste Treated (MG)	140.20	172.26	187.21	136.11	141.57
Hauled Waste Received (Gallon)	901,800	1,227,250	1,205,930	282,650	-
Pounds of BOD Removed	225,122	367,899	238,269	268,489	157,264
BOD Removal Rate	98.95%	99.13%	98.37%	98.59%	97.76%
Pounds of TSS Removed					
TSS Removal Rate					
Pounds of BOD Discharged	2,394	3,210	3,947	3,829	3,607
Pounds of TSS Discharged	4,123	3,211	5,220	3,566	2,529
Pounds of Nitrogen Discharged					
Pounds of Phosphorus Discharged					
Dry Tons of Biosolids Generated (calend	80.33	94.9	82.15	45.26	
Pounds of Chlorine Used	2,890	2,914	3,152	3,081	3,612
Pounds of Sodium Bisulfate Used					
Pounds of Polimer Used					
Total Energy Used (kw-hr)	536,960	498,480	462,880	444,675	440,000
kW-hr per Million Gallons	3,806	2,873	2,457	3,260	3,108
kW-hr per lb BOD Removed	2.39	1.35	1.94	1.66	2.80
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
11.2 GOLD HILL TREATMENT PLANT					
Volume of Waste Treated (MG)		12.73	41.17	22.49	24.13
Pounds of BOD Removed			69,726	67,608	48,195
BOD Removal Rate			97.76%	98.63%	98.14%
Pounds of TSS Removed					
TSS Removal Rate					
Pounds of BOD Discharged			1,600	941	915
Pounds of TSS Discharged			1,589	941	957
Pounds of Nitrogen Discharged					
Pounds of Phosphorus Discharged					
Dry Tons of Biosolids Generated		7.4	18.38	11.75	
Pounds of Chlorine Used		612	1288	855.9	799
Pounds of Sodium Bisulfate Used					
Total Energy Used (kw-hr)				180,145	208,720
Energy per Million Gallons				8,010	8,648
Energy per lb BOD Removed				2.66	4.33
11.3 WHITE CITY LAGOON					
Hauled Waste Received (gallons)					
Domestic Septage			964,721	2,471,506	2,283,379
Chemical Toilet			-	31,285	210,725
Fats, Oils, and Grease				26,760	306,015
Gray Water					9,400
Total			964,721	2,529,551	2,809,519

12. Level of Service: Level of service includes a variety of factors that relate to RVSS' interaction with our customers.

- Staff level is the total number of employees within each department. The Stormwater and Treatment departments did not exist prior to FY 2019. Employees working with stormwater and treatment were considered part of the Engineering and O&M departments, respectively.
- The residential sewer rate is set by the Board of Directors. The rates for Gold Hill is set by the City Council. Shady Cove rates were set by the City Council prior to annexation. Starting in FY 2020 the rate will be set by the RVSS Board of Directors.
- The median household income is shown to assess the affordability of the sewer bill. EPA guidance is that sewer bills less than 2% of median household income are considered "affordable". There are more sophisticated methods to assess affordability that focus on lower income households and include factors for essential household expenses and the number of people per house. The data for this analysis is not easily available and is not presented.
- Complaints come to RVSS from customers for a variety of reasons. Each complaint is investigated to determine what, if any, action is needed.
- Insurance claims provide an indication of instances where RVSS actions have caused some sort of harm to an individual.

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12. Level of Service	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
12.1 Staff Levels (FTE)	29	30	32	36	37
O&M	16	17	18	20	17
Engineering	5	5	4.5	6.5	4
Stormwater					2.5
Treatment					4
Admin/Finance/IT/Customer Service	8	8	9.5	9.5	9.5
12.2 Residential Sewer Rate					
RVSS Core	\$ 15.90	\$ 18.30	\$ 19.00	\$ 19.60	\$ 20.50
RVSS - Shady Cove			\$ 46.00	\$ 46.00	\$ 46.00
Gold Hill (not RVSS)					\$ 58.86
Residential Stormwater Rate (MS4 area)	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00
12.3 Median Household Income by City					
Medford	\$ 41,931	\$ 44,130	\$ 45,361	\$ 45,361	\$ 45,361
Central Point	\$ 48,984	\$ 48,813	\$ 48,409	\$ 48,409	\$ 48,409
Talent	\$ 36,528	\$ 35,664	\$ 31,484	\$ 31,484	\$ 31,484
Phoenix	\$ 32,035	\$ 35,683	\$ 39,543	\$ 39,543	\$ 39,543
Jacksonville	\$ 46,901	\$ 53,970	\$ 60,625	\$ 60,625	\$ 60,625
White City	\$ 48,144	\$ 44,940	\$ 50,957	\$ 50,957	\$ 50,957
Eagle Point	\$ 55,474	\$ 59,205	\$ 60,806	\$ 60,806	\$ 60,806
Shady Cove	\$ 31,058	\$ 31,005	\$ 31,193	\$ 31,193	\$ 31,193
Gold Hill			\$ 50,833	\$ 50,833	\$ 50,833
12.4 % of income to pay sewer					
Medford	0.46%	0.50%	0.50%	0.52%	0.54%
Central Point	0.39%	0.47%	0.49%	0.51%	0.53%
Talent	0.52%	0.62%	0.72%	0.75%	0.78%
Phoenix	0.63%	0.65%	0.61%	0.62%	0.65%
Jacksonville	0.41%	0.41%	0.38%	0.39%	0.41%
White City	0.40%	0.49%	0.45%	0.46%	0.48%
Eagle Point	0.34%	0.37%	0.40%	0.41%	0.43%
Shady Cove			1.77%	1.77%	1.77%
Gold Hill					1.39%
12.5A Complaints - RVSS Core	53	27	72	68	34
Clogged line	22	8	25	27	19
Flusher Mishap					2
Odors	4	2	9	7	2
Sinkhole	1				
STEP/STEG	11	11	27	13	5
Surface Water	2	3	1	5	5
Other	13	3	10	16	1

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12.5B Complaints - RVSS Shady Cove		0	0	0	0
Clogged line					
Flusher Mishap					
Odors					
Sinkhole					
STEP/STEG					
Surface Water					
Other					
12.5C Complaints - Gold Hill (Contract)		0	0	0	0
Clogged line					
Flusher Mishap					
Odors					
Sinkhole					
STEP/STEG					
Surface Water					
Other					
12.6 Insurance Claims (# of claims)	2	0	0	2	2
General Liability	1			2	1
Auto Physical Damage					1
Auto Liability					
Workers Comp	1				
Property					
Incurring Loss (insurance)	\$ 90,382	\$ -	\$ -	\$ 900	\$ -
Collection (RVSS)	\$ 40,000	\$ -	\$ -	\$ 11,258	\$ -

13. Financial: RVSS is subject to Oregon Budget Law. The budget is prepared annually and approved by the Board of Directors each June. End of year financial statements are audited by an independent auditor. All of the figures on this page are extracted from the budget.

- The annual revenue shows all of the money that comes in to RVSS from various sources.
- The annual expenses are separated to show the primary functions of RVSS.
- Personnel expenses is a subset of expenses. This shows all personnel costs from all functions.
- Training expenditure is a measure of the investment RVSS makes to train employees.
- The operating cost gives a measure of the cost to operate the collection system, based on the miles of pipe in the system and based on the number of residential equivalents.
- The treatment expense detail provides an measure of the cost per residential equivalent to operate the various treatment plants.
- The infrastructure expense detail shows where capital expenses are made.
 - The cost of privately funded projects is typically the labor expended during the plan review and inspection of private projects, but it also includes the cost of construction for projects build through the local improvement district process or through a reimbursement district sponsored by RVSS. RVSS expects to recoup these costs through plan review fees and assessments.
 - The 'other' costs are typically reimbursable costs associated with sewer repairs or contracted work. RVSS expects to recoup most of these costs through contract provisions or invoices for damages.
- The reinvestment rate is the amount of money spent on capital improvements divided by the total value of the system.

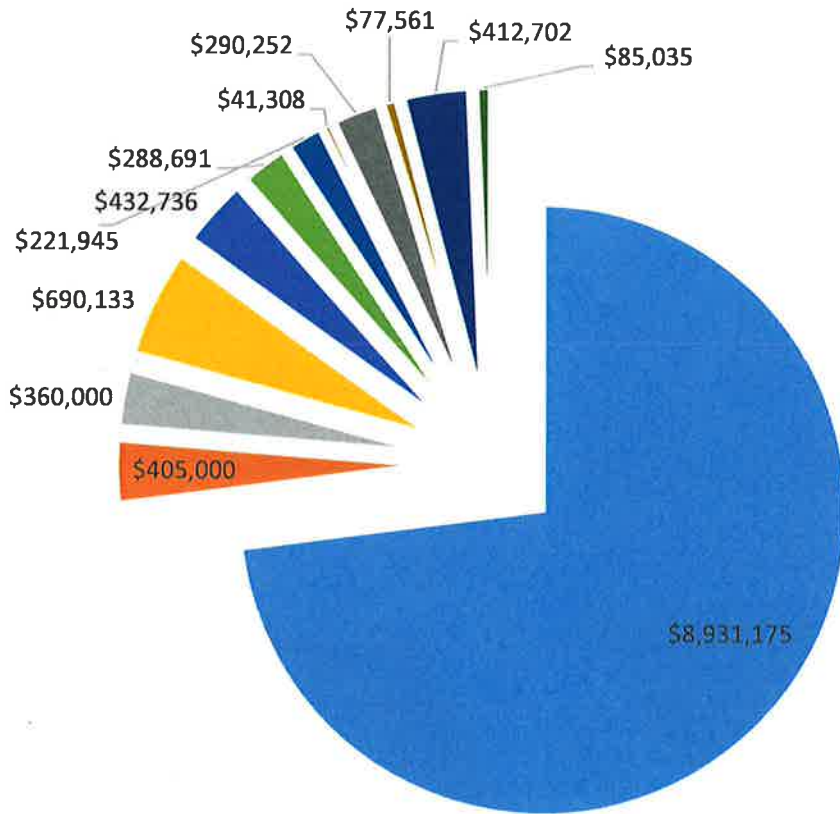
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13. Financial					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
13.1 Annual Revenue					
Sewer Service Charges (RVSS Core)	\$ 6,778,998	\$ 7,508,587	\$ 8,069,963	\$ 8,675,117	\$ 8,931,175
Sewer Service Charges (Shady Cove)	\$ 335,036	\$ 303,889	\$ 405,000	\$ 405,000	\$ 405,000
Sewer Service Charges (Gold Hill)				\$ 360,000	\$ 360,000
System Development Charges	\$ 328,157	\$ 606,851	\$ 494,577	\$ 494,263	\$ 690,133
Hauled Waste Fees	\$ 122,985	\$ 195,268	\$ 340,364	\$ 422,650	\$ 432,736
Regional Fees	\$ 409,284	\$ 409,821	\$ 444,011	\$ 484,009	\$ 288,691
Interest	\$ 22,515	\$ 28,506	\$ 71,172	\$ 144,520	\$ 221,945
Contracted Services	\$ 15,892	\$ 38,150	\$ 9,366	\$ 18,589	\$ 41,308
Other Sewer Fees	\$ 510,142	\$ 520,182	\$ 342,728	\$ 764,624	\$ 290,252
White City Storm Drain	\$ 74,811	\$ 68,942	\$ 76,497	\$ 76,375	\$ 77,561
Stormwater Quality Fee (MS4)	\$ 224,868	\$ 203,947	\$ 422,007	\$ 419,457	\$ 412,702
Stormwater Permit Fees	\$ 10,564	\$ 16,870	\$ 35,636	\$ 33,924	\$ 85,035
	8,833,252	9,901,013	10,711,321	12,298,528	12,236,538
13.2 Annual Expenses					
Collections	\$ 3,406,422	\$ 2,452,760	\$ 2,411,668	\$ 2,950,958	\$ 2,748,902
Treatment	\$ 2,948,684	\$ 3,149,014	\$ 3,490,822	\$ 3,594,495	\$ 3,978,566
Stormwater	\$ 138,121	\$ 155,617	\$ 244,414	\$ 348,504	\$ 361,879
Administration	\$ 1,410,306	\$ 1,501,327	\$ 1,620,783	\$ 1,956,584	\$ 1,934,593
Infrastructure Capital	\$ 2,204,059	\$ 812,609	\$ 1,450,078	\$ 2,202,104	\$ 2,508,558
Debt Service	\$ 568,928	\$ 576,344	\$ 510,570	\$ 440,072	\$ 394,150
	\$ 10,676,520	\$ 8,647,671	\$ 9,728,335	\$ 11,492,717	\$ 11,926,648
% of Expenses for Collections	31.9%	28.4%	24.8%	25.7%	23.0%
% of Expenses for Treatment	27.6%	36.4%	35.9%	31.3%	33.4%
% of Expenses for Stormwater	1.3%	1.8%	2.5%	3.0%	3.0%
% of Expenses for Administration	13.2%	17.4%	16.7%	17.0%	16.2%
% of Expenses for Capital Improvements	20.6%	9.4%	14.9%	19.2%	21.0%
% of Expenses for Debt	5.3%	6.7%	5.2%	3.8%	3.3%
13.3 Annual Personnel Expenditure					
Wages	\$ 1,927,228	\$ 1,943,286	\$ 2,077,803	\$ 2,356,607	\$ 2,495,525
Benefits	\$ 732,677	\$ 768,212	\$ 849,987	\$ 1,232,224	\$ 1,350,277
Benefits as % of total personnel expense	28%	28%	29%	34%	35%
% of Revenue for Personnel	24.9%	31.4%	30.1%	31.2%	32.2%
Annual Training Expenditure	\$ 39,973	\$ 60,459	\$ 49,629	\$ 64,973	\$ 46,017
13.4 Operating Costs					
Collection System Operating Cost per Mile	\$ 8,640	\$ 6,195	\$ 6,117	\$ 7,372	\$ 6,498
Collection System operating Cost per ERL	\$ 96.19	\$ 68.34	\$ 65.12	\$ 80.45	\$ 74.16

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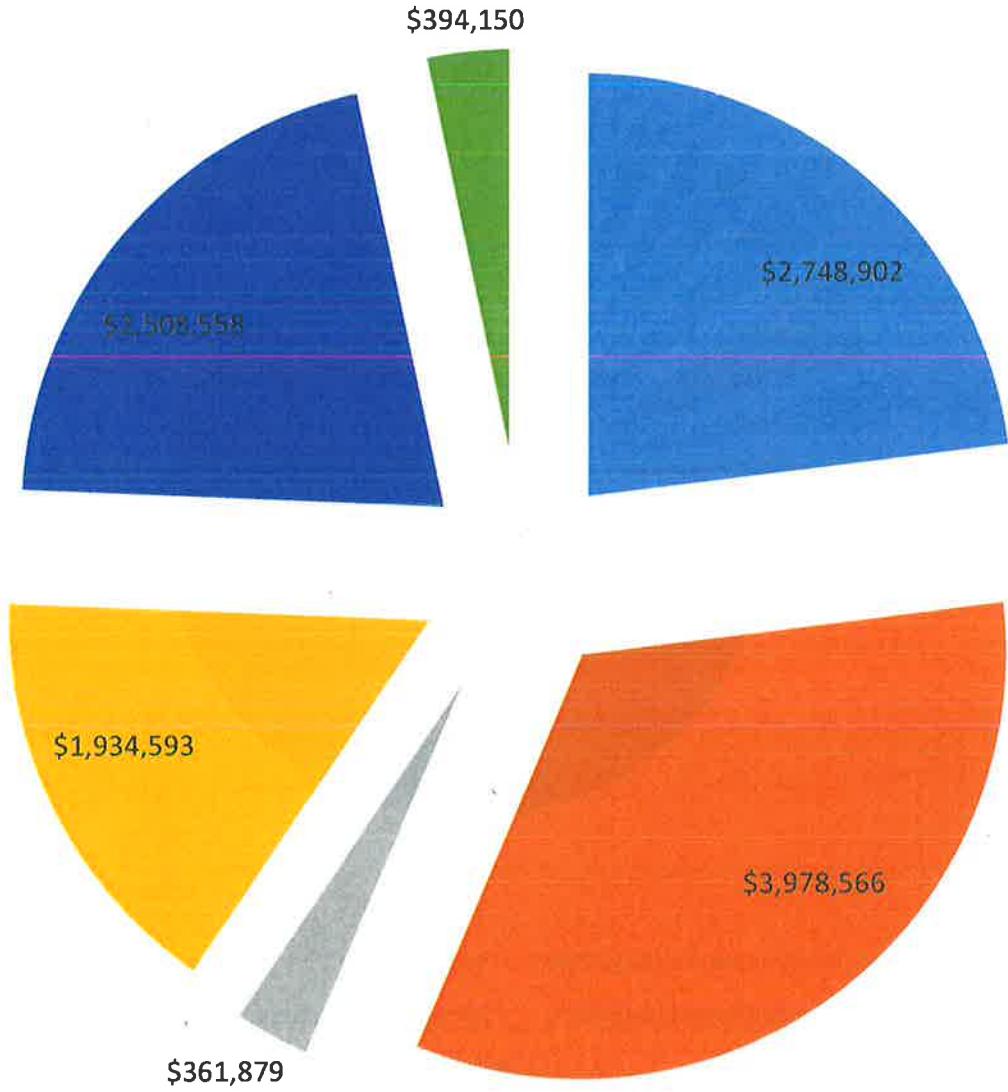
13.5 Treatment Expense Detail					
RVSS Core	\$ 2,497,440	\$ 2,748,900	\$ 3,001,448	\$ 3,226,022	\$ 3,475,736
Shady Cove	\$ 451,244	\$ 400,114	\$ 489,374	\$ 298,952	\$ 320,755
Gold Hill				\$ 215,320	\$ 226,816
Treatment Cost per ERU					
RVSS Core	\$ 70.52	\$ 76.60	\$ 81.05	\$ 87.95	\$ 93.76
Shady Cove		\$ 273.20	\$ 303.30	\$ 194.37	\$ 204.69
Gold Hill				#DIV/0!	\$ 294.95
13.6 Infrastructure Expense Detail					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Privately Funded Projects	\$ 20,138	\$ 181,982	\$ 61,675	\$ 465,141	\$ 113,958
Collection System	\$ 1,853,913	\$ 518,442	\$ 980,162	\$ 1,470,356	\$ 1,955,735
Interceptor System	\$ 42,133	\$ 43,626	\$ 290,176	\$ 71,555	\$ 145,203
Shady Cove Treatment Plant	\$ 140,961	\$ (14,481)	\$ -	\$ -	\$ 17,099
White City Lagoons	\$ -	\$ -	\$ 101,623	\$ 24,681	\$ 295,586
Storm Drainage	\$ 51,440	\$ -	\$ -	\$ -	\$ 74
Stormwater Quality	\$ 30,398	\$ 69,582	\$ 1,742	\$ 6,750	\$ 36,840
Building & Grounds	\$ 63,769	\$ 477	\$ -	\$ 148,028	\$ (56,070)
Other	\$ -	\$ -	\$ 14,700	\$ 15,593	\$ 133
	\$ 2,202,752	\$ 799,628	\$ 1,450,078	\$ 2,202,104	\$ 2,508,558
Current Value of System	\$ 83,610,896	\$ 82,970,000	\$ 83,611,000	\$ 85,916,000	
Re-investment Rate	2.63%	0.96%	1.73%	2.56%	#DIV/0!

Total Revenues, FY 2019



- Sewer Service Charges (RVSS Core)
- Sewer Service Charges (Shady Cove)
- Sewer Service Charges (Gold Hill)
- System Development Charges
- Hauled Waste Fees
- Regional Fees
- Interest
- Contracted Services
- Other Sewer Fees
- White City Storm Drain
- Stormwater Quality Fee (MS4)
- Stormwater Permit Fees

Total Expenses, FY 2019



- Collections
- Treatment
- Stormwater
- Administration
- Infrastructure Capital
- Debt Service

14. Safety: RVSS files an annual report with OSHA detailing the number of labor hours worked and the number of safety incidents at each of our work locations.

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14. Safety					
14.1 RVSS Main Office	2015	2016	2017	2018	2019
Total Labor Hours	47,001	51,325	61,510	64,697	
Number of Incidents	1	0	0	0	
Number of Lost Time Incidents	0	0	0	0	
14.2 Shady Cove Treatment Plant					
Total Labor Hours	5,099	4,486	3,224	4,066	
Number of Incidents	0	0	0	0	
Number of Lost Time Incidents	0	0	0	0	
14.3 Gold Hill Cove Treatment Plant					
Total Labor Hours				2,743	
Number of Incidents				0	
Number of Lost Time Incidents				0	
*Note: OSHA Form 300A filed based on calendar year.					

15. Environmental Impact: The environmental impact of RVSS operations is measured by the consumption of natural resources, specifically energy, and by the emission of carbon dioxide.

To provide a common basis for comparison, all energy consumed is converted into kilowatt-hours.

Carbon dioxide emissions are based on direct emissions from the use of energy. Indirect emissions, i.e. the carbon emitted during the manufacture and delivery of pipe, is not measured.

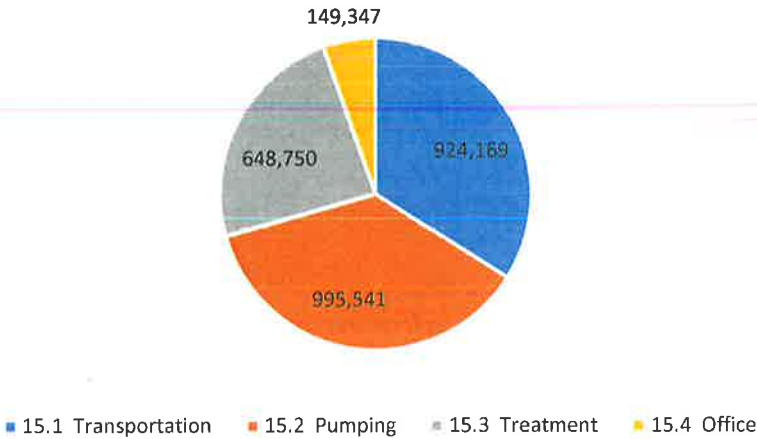
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15. Environmental Impact					
Energy Use (all energy converted to kw-hr)					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
15.1 Transportation					
Gasoline	241,585	333,773	324,049	322,294	266,483
Diesel	334,604	391,681	388,771	520,030	561,921
Natural Gas	43,847	6,646	13,749	11,632	13,573
Propane					82,193
Total Transportation	620,035	732,100	726,569	853,956	924,169
15.2 Pumping					
RVSS Core (utility power)	901,514	917,282	988,579	840,237	878,860
RVSS Core (solar power)					67,108
Shady Cove	48,256	49,235	53,223	37,110	49,573
Total Pumping	949,770	966,517	1,041,802	877,347	995,541
15.3 Treatment					
Shady Cove Electricity	536,960	498,480	462,880	444,675	440,000
Gold Hill Electricity				180,145	208,750
Total Treatment	536,960	498,480	462,880	624,820	648,750
15.4 Office					
Electricity (utility)	100,330	98,672	96,212	84,475	(7,482)
Electricity (solar)				159	90,461
Natural Gas	52,552	48,251	79,331	88,908	66,368
Total Office	152,882	146,923	175,543	173,541	149,347
RVSS Operations (Total)	2,259,647	2,344,020	2,406,793	2,529,664	2,717,807
RVSS Operations (Purchased)	2,259,647	2,344,020	2,406,793	2,529,505	2,560,238

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Carbon Emissions (tons of CO2)					
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
15.5 Transportation					
Gasoline	66	91	88	87	72
Diesel	99	116	115	154	166
Natural Gas Vehicle	13	2	4	3	3
Propane Vehicle					20
Total Transportation	177	208	207	245	261
15.6 Pumping					
RVSS Core	252	257	276	235	246
Shady Cove	14	14	15	10	14
Total Pumping	266	271	291	245	260
15.7 Treatment					
Shady Cove	150	140	130	125	123
Gold Hill				50	58
Total Treatment	150	140	130	175	182
15.8 Office					
Electricity	28.09	27.63	26.94	23.65	(2.09)
Natural Gas	9.73	8.93	14.69	16.46	12.29
Total Office	37.82	36.56	41.62	40.11	10.19
Total RVSS Operations	631.59	655.09	668.87	704.62	712.95

Energy Use by Function - FY 19 KW-hr



Energy Use by Source KW-hr

