



REMOTE MEETING

Board Attendance by Zoom Video/Telephone

Public Attendance by Telephone Only

April 21, 2020 at 6:00 p.m.

1. Call to Order and Meeting Facilitation Protocols
2. Call for Public Comment

Members of the public are welcome to testify for a maximum of three minutes on each agenda item.
3. Consent Agenda
 - a. March 2020 Financial Report
 - b. March 17, 2020 Board Regular Meeting Minutes
 - c. March 26, 2020 Board Special Meeting Minutes
4. Non-Revenue Water Audit Update – Phase III & IV
5. Consideration of Declaration of State of Emergency Extension
6. Consideration of Resolution 2020-04 Approving a Line of Succession of Authority Among Directors of the Board in the Event of a Director's Unavailability
7. Consideration of Risk and Resiliency Assessment and Emergency Response Plan Contract
8. COVID-19 Temporary Emergency Rate Relief Program
9. Department Reports
 - a. Human Resources/Payroll
 - b. Finance
 - c. Plant Operations
 - d. Technical Services
 - e. Field Operations
10. Call for Public Comment
11. Business from the Board
12. Recess to Executive Session

Convene Executive Session under ORS 192.660(2)(d) to conduct deliberations with persons designated by the governing body to carry on labor negotiations.
13. Adjourn Executive Session

If necessary, Board may take action on items discussed in Executive Session.

14. Adjourn Regular Meeting

AGENDA ITEM

Title	Call for Public Comment
Item No.	2
Date	April 21, 2020

Summary

The Board of Directors welcomes comment from members of the public.

Written comments may not be read out loud or addressed during the meeting, but all public comments will be entered into the record.

The Board of Directors may elect to limit the total time available for public comment or for any single speaker depending on meeting length.

CONSENT AGENDA

To Board of Directors
From Sarah Jo Chaplen, General Manager
Title Consent Agenda
Item No. 3
Date April 21, 2020

Summary

The Board of Directors has a standing item on the regular monthly meeting agenda called "Consent Agenda." This subset of the regular agenda provides for the Board to relegate routine business functions not requiring discussion to a consent agenda where all included items can be acted upon by a single act.

The Consent Agenda includes:

- a. **March 2020 Financial Reports**
- b. **March 17, 2020 Board Regular Meeting Minutes**
- c. **March 26, 2020 Board Special Meeting Minutes**

Options for Consideration

1. Approve the Consent Agenda as listed on the meeting agenda.
2. Request one or more items listed on the Consent Agenda be pulled from the Consent Agenda for discussion.

Recommendation

Staff requests that the Board approve the items listed under the Consent Agenda.

Suggested Board Motion

"I move to approve the Consent Agenda."

Approved By _____

Date _____



MONTHLY FINANCIAL REPORT

To	Board of Directors
From	Rob Moody, Financial Consultant
Title	March 2020 Financial Reports
Item No.	3a
Date	April 21, 2020

Reports

- March 2020 Monthly Overview
- March 2020 Monthly Cash and Investment Balances Report
- March 2020 Budget to Actual Report
- March 2020 Budget Account Roll Up Report

**Oak Lodge Water Services
Monthly Overview
March 2020**

This report summarizes the revenues and expenditures for March 2020. Also incorporated in this report are account balances, including all cash and investment activity as well as checks and withdrawals.

The District’s liquid cash and investment assets equal \$14.50 million as of the end of March 2020; consisting of \$1.24 million in checking, and \$13.26 million in the State Local Government Investment Pool (LGIP).

The District’s checks, electronic withdrawals and bank drafts total \$723 thousand for March 2020.

Below is a table identifying the District’s three principal sources of service charges in each fund with a comparison between annual budget estimates and year-to-date service charge fees.

<u>GL Account</u>	<u>Service Charge</u>	<u>Budget Estimate</u>	<u>Period Amount</u>	<u>Year-to-Date Amount</u>	<u>Percentage of Budget</u>
10-00-4210	Water sales-CRW	\$ 32,000	\$ 2,877	\$ 22,986	71.83%
10-00-4211	Water sales	4,265,000	290,712	2,998,440	70.30%
20-00-4212	Wastewater charges	8,200,000	626,708	6,086,727	74.23%
30-00-4213	Watershed protection	1,530,000	127,987	1,160,587	75.86%
	Subtotal	\$ 14,027,000	\$ 1,048,284	\$10,268,740	73.21%

The percentage of budget is calculated by taking the ending balance and dividing it by the budget. With respect to revenues above, the percentage of budget is affected by seasonal variations. The expectation is that the District would recognize a greater percentage of revenue in the first half of the fiscal year than in the second half.

The numbers above indicate a shortfall in water sales revenue versus budget for the current fiscal year. This shortfall appears to be the result of a combination of factors.

- It appears that the budget projections for FY 2019-20 may have been a bit aggressive.
- Non-revenue water considerations as identified in the Water Audit – many of which are still in play as we work through field verification of meter data and review of the billing system.
- Impacts of COVID-19 – while not quantifiable at this time, we expect that there will be impacts on commercial and residential accounts through the end of this fiscal year. We are monitoring cash receipts weekly in comparison to prior months and last year to determine early warning signs of further revenue challenges.

With respect to expenditures, at the end of March, the percentage of budget spent or billed should be around 75.00%. Certain line items are spent all at once, such as Worker’s Compensation, which we pay once a year in July.

Low Income Rate Relief Program Overview

The District allows eligible customers to obtain a discounted rate on a portion of their bill. The District budgets a reduction in resources related to the program. A rate of 0.50% of service charge revenue is adjusted to the budget for expected participants. The budgeted

amount serves as a cap to the program's cost which can only be exceed with approval from the District's Board of Directors.

Below is a table identifying the number of accounts in the program and an estimated monthly discount and year-to-date value based on a single-family residential account with a standard 20 GPM Water Meter and 6 CCF of water consumption per month.

Total Number of Accounts	Discount	Budget	Estimated Monthly Discount	Estimated Year-to-Date Discount	Estimated Percentage of Budget
139	Low Income Rate Relief	\$ 70,135	\$ 5,494	\$ 47,989	68.42%

Staff will be considering a restructure to the Low Income Relief Program with the proposed budget for 2020-21 in strengthening the Program's impact in the community and to provide more meaningful statistics and measurements of Program impacts and costs.

GL Account	Service Charge	Budget Estimate	Period Amount	Year-to-Date Amount	Percentage of Budget
10-00-4210	Water sales-CRW	\$ 32,000	\$ 2,877	\$ 22,986	71.83%
10-00-4211	Water sales	4,265,000	290,712	2,998,440	70.30%
20-00-4212	Wastewater charges	8,200,000	626,708	6,086,727	74.23%
30-00-4213	Watershed protection	1,530,000	127,987	1,160,587	75.86%
	Subtotal	\$ 14,027,000	\$ 1,048,284	\$ 10,268,740	73.21%
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Oak Lodge Water Services District

Account Balances As of:		
March 31, 2020	Interest Rate	Balance
Account		
Wells Fargo Bank Checking-3552	0.25%	\$ 1,243,429.15
LGIP	2.08%	\$ 13,258,021.07
Total		\$ 14,501,450.22

General Ledger
Budget to Actual



User: jeff
Printed: 4/7/2020 2:59:54 PM
Period 09 - 09
Fiscal Year 2020

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
05	Administrative Services					
	NonDivisional Revenue					
05-00-4610	Investment revenue	0.00	664.36	3,222.85	0.00	0.00
05-00-4630	Miscellaneous revenues	2,500.00	300.93	338.20	0.00	13.53
05-00-4640	Proceeds - sale of cap assets	0.00	0.00	2,042.00	0.00	0.00
	<i>Revenue</i>	<i>2,500.00</i>	<i>965.29</i>	<i>5,603.05</i>	<i>0.00</i>	<i>224.12</i>
	NonDivisional	2,500.00	965.29	5,603.05	0.00	224.12
	AdminFinance					
	<i>Personnel Services</i>					
05-01-5110	Regular employees	638,000.00	35,917.54	465,739.24	0.00	73.00
05-01-5120	Temporaryseasonal employees	10,000.00	4,204.34	9,812.73	0.00	98.13
05-01-5130	Overtime	5,000.00	687.19	5,755.54	0.00	115.11
05-01-5210	Healthdental insurance	94,000.00	5,213.19	62,444.43	0.00	66.43
05-01-5230	Social security	50,000.00	2,742.63	32,709.93	0.00	65.42
05-01-5240	Retirement	134,000.00	7,642.32	92,527.88	0.00	69.05
05-01-5250	TrimetWBF	6,000.00	285.27	3,627.01	0.00	60.45
05-01-5260	Unemployment	6,000.00	0.00	0.00	0.00	0.00
05-01-5270	Workers compensation	9,000.00	0.00	7,698.20	0.00	85.54
05-01-5290	Other employee benefits	4,000.00	39.35	78.70	0.00	1.97
	<i>Personnel Services</i>	<i>956,000.00</i>	<i>56,731.83</i>	<i>680,393.66</i>	<i>0.00</i>	<i>71.17</i>
	<i>Materials & Services</i>					
05-01-6110	Legal services	400,000.00	-2,320.42	171,961.84	0.00	42.99
05-01-6120	Accounting and audit services	40,000.00	28,177.29	105,273.14	0.00	263.18
05-01-6155	Contracted services	150,000.00	78,090.52	189,196.16	15,750.00	126.13
05-01-6180	Dues and subscriptions	38,000.00	107.88	29,017.07	0.00	76.36
05-01-6220	Electricity	8,000.00	37.13	6,668.84	0.00	83.36
05-01-6240	Natural gas	2,000.00	-559.14	1,300.59	0.00	65.03
05-01-6290	Other utilities	16,000.00	1,952.77	12,122.25	0.00	75.76
05-01-6310	Janitorial services	25,000.00	1,190.40	9,630.36	0.00	38.52
05-01-6320	Buildings and grounds maint	6,000.00	-3,738.65	7,773.10	0.00	129.55
05-01-6410	Mileage	2,000.00	0.00	0.00	0.00	0.00
05-01-6420	Staff training	23,000.00	1,592.21	14,950.35	0.00	65.00
05-01-6440	Board expense	5,000.00	1,660.69	3,130.88	0.00	62.62
05-01-6510	Office supplies	15,000.00	-158.66	15,872.29	0.00	105.82
05-01-6530	Small tools and equipment	1,000.00	0.00	287.37	0.00	28.74
05-01-6560	Uniforms	1,000.00	0.00	45.68	0.00	4.57
05-01-6610	Board compensation	1,000.00	200.00	550.00	0.00	55.00
05-01-6730	Communications	5,000.00	0.00	492.60	0.00	9.85
05-01-6740	Advertising	1,000.00	173.15	335.75	0.00	33.58
05-01-6760	Equipment rental	3,000.00	2,777.51	2,997.51	0.00	99.92
05-01-6770	Bank charges	125,000.00	8,747.57	98,431.06	0.00	78.74
05-01-6780	Taxes, fees, and other charges	1,000.00	100.00	558.00	0.00	55.80
05-01-6900	Miscellaneous expense	1,000.00	327.10	327.10	0.00	32.71

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
	<i>Materials & Services</i>	869,000.00	118,357.35	670,921.94	15,750.00	77.21
	AdminFinance	1,825,000.00	175,089.18	1,351,315.60	15,750.00	74.04
	Human Resources					
	<i>Personnel Services</i>					
05-02-5110	Regular employees	154,000.00	15,189.08	85,054.84	0.00	55.23
05-02-5210	Healthdental insurance	35,000.00	1,564.88	3,582.59	0.00	10.24
05-02-5230	Social security	12,000.00	1,146.09	6,449.03	0.00	53.74
05-02-5240	Retirement	31,000.00	2,571.41	14,807.06	0.00	47.76
05-02-5250	TrimetWBF	2,000.00	119.66	668.09	0.00	33.40
05-02-5260	Unemployment	2,000.00	0.00	0.00	0.00	0.00
05-02-5270	Workers compensation	3,000.00	0.00	2,581.43	0.00	86.05
05-02-5290	Other employee benefits	2,000.00	0.00	303.40	0.00	15.17
	<i>Personnel Services</i>	<i>241,000.00</i>	<i>20,591.12</i>	<i>113,446.44</i>	<i>0.00</i>	<i>47.07</i>
	<i>Materials & Services</i>					
05-02-6155	Contract Services	0.00	0.00	2,330.00	0.00	0.00
05-02-6180	Dues and subscriptions	1,000.00	83.00	419.00	0.00	41.90
05-02-6230	Telephone	56,100.00	4,551.86	39,901.79	0.00	71.13
05-02-6410	Mileage	1,000.00	494.73	494.73	0.00	49.47
05-02-6420	Staff training	14,000.00	11,480.92	14,213.16	0.00	101.52
05-02-6510	Office supplies	1,000.00	844.79	1,481.50	0.00	148.15
05-02-6720	Insurance-General	173,000.00	0.00	160,379.58	0.00	92.70
05-02-6740	Advertising	5,000.00	436.75	2,645.25	0.00	52.91
	<i>Materials & Services</i>	<i>251,100.00</i>	<i>17,892.05</i>	<i>221,865.01</i>	<i>0.00</i>	<i>88.36</i>
	Human Resources	492,100.00	38,483.17	335,311.45	0.00	68.14
	Technical Services					
	<i>Personnel Services</i>					
05-03-5110	Regular employees	583,000.00	40,537.77	367,177.24	0.00	62.98
05-03-5130	Overtime	5,000.00	0.00	906.56	0.00	18.13
05-03-5210	Healthdental Insurance	119,000.00	7,255.77	67,359.87	0.00	56.60
05-03-5230	Social security	45,000.00	3,042.02	26,403.46	0.00	58.67
05-03-5240	Retirement	115,000.00	7,292.69	68,239.51	0.00	59.34
05-03-5250	TrimetWBF	5,000.00	316.90	2,845.95	0.00	56.92
05-03-5260	Unemployment	6,000.00	0.00	0.00	0.00	0.00
05-03-5270	Workers compensation	9,000.00	0.00	7,698.20	0.00	85.54
05-03-5290	Other employee benefits	4,000.00	0.00	0.00	0.00	0.00
	<i>Personnel Services</i>	<i>891,000.00</i>	<i>58,445.15</i>	<i>540,630.79</i>	<i>0.00</i>	<i>60.68</i>
	<i>Materials & Services</i>					
05-03-6155	Contracted services	212,000.00	22,040.93	89,804.58	101,158.56	42.36
05-03-6180	Dues and subscriptions	3,000.00	0.00	6,576.00	0.00	219.20
05-03-6350	Computer maintenance	291,300.00	6,645.10	207,670.89	8,900.00	71.29
05-03-6390	Other repairs and maintenance	4,000.00	0.00	245.00	0.00	6.13
05-03-6410	Mileage	1,000.00	2.00	313.72	0.00	31.37
05-03-6420	Staff training	16,000.00	1,091.23	5,912.18	0.00	36.95
05-03-6430	Certifications	500.00	0.00	0.00	0.00	0.00
05-03-6510	Office supplies	13,000.00	2,130.86	4,657.16	0.00	35.82
05-03-6540	Safety supplies	1,000.00	0.00	1,137.64	0.00	113.76
05-03-6560	Uniforms	500.00	0.00	0.00	0.00	0.00
05-03-6730	Communications	117,100.00	11,530.08	30,482.92	9,012.50	26.03
	<i>Materials & Services</i>	<i>659,400.00</i>	<i>43,440.20</i>	<i>346,800.09</i>	<i>119,071.06</i>	<i>52.59</i>
	Technical Services	1,550,400.00	101,885.35	887,430.88	119,071.06	57.24
	Vehicle Services					
	<i>Materials & Services</i>					
05-04-6330	Vehicleequipment maintenance	61,500.00	6,878.27	30,873.78	4,219.68	50.20
05-04-6520	Fuels and oils	70,800.00	2,244.15	32,967.75	0.00	46.56
	<i>Materials & Services</i>	<i>132,300.00</i>	<i>9,122.42</i>	<i>63,841.53</i>	<i>4,219.68</i>	<i>48.26</i>
	Vehicle Services	132,300.00	9,122.42	63,841.53	4,219.68	48.26

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
	Special Payments					
	<i>Special Payments</i>					
05-25-6990	Special Payments - PERS	300,000.00	0.00	300,000.00	0.00	100.00
	<i>Special Payments</i>	<i>300,000.00</i>	<i>0.00</i>	<i>300,000.00</i>	<i>0.00</i>	<i>100.00</i>
	Special Payments	300,000.00	0.00	300,000.00	0.00	100.00
	Transfers & Contingencies					
	<i>Revenue</i>					
05-29-4910	Transfer in from Fund 10	1,444,000.00	120,333.33	1,082,999.97	0.00	75.00
05-29-4920	Transfer in from Fund 20	2,028,000.00	169,000.00	1,521,000.00	0.00	75.00
05-29-4930	Transfer in from Fund 30	1,029,000.00	85,750.00	771,750.00	0.00	75.00
	<i>Revenue</i>	<i>4,501,000.00</i>	<i>375,083.33</i>	<i>3,375,749.97</i>	<i>0.00</i>	<i>75.00</i>
	<i>Transfers & Contingencies</i>					
05-29-9000	Contingency	203,700.00	0.00	0.00	0.00	0.00
	<i>Transfers & Contingencies</i>	<i>203,700.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
	Transfers & Contingencies	4,297,300.00	375,083.33	3,375,749.97	0.00	78.56
05	Administrative Services	0.00	51,468.50	443,453.56	-139,040.74	0.00
10	Drinking Water NonDivisional					
	<i>Beginning Fund Balance</i>					
10-00-3500	Fund balance	-1,801,651.00	0.00	-2,430,386.60	0.00	134.90
	<i>Beginning Fund Balance</i>	<i>-1,801,651.00</i>	<i>0.00</i>	<i>-2,430,386.60</i>	<i>0.00</i>	<i>134.90</i>
	<i>Revenue</i>					
10-00-4210	Water Sales - CRW	32,000.00	2,877.11	22,986.17	0.00	71.83
10-00-4211	Water sales	4,265,000.00	290,712.28	2,998,440.06	0.00	70.30
10-00-4215	Penalties and late charges	25,000.00	-46.21	14,388.59	0.00	57.55
10-00-4220	System development charges	100,000.00	17,280.00	321,650.00	0.00	321.65
10-00-4230	Contract services	53,000.00	0.00	32,000.00	0.00	60.38
10-00-4240	Service installations	15,000.00	1,017.63	19,090.19	0.00	127.27
10-00-4280	Rents & leases	160,000.00	9,584.32	146,881.97	0.00	91.80
10-00-4290	Other charges for services	20,000.00	200.00	6,030.00	0.00	30.15
10-00-4610	Investment revenue	500.00	1,413.95	12,068.11	0.00	2,413.62
10-00-4630	Miscellaneous revenues	15,000.00	1,477.08	52,135.97	0.00	347.57
	<i>Revenue</i>	<i>4,685,500.00</i>	<i>324,516.16</i>	<i>3,625,671.06</i>	<i>0.00</i>	<i>77.38</i>
	NonDivisional	6,487,151.00	324,516.16	6,056,057.66	0.00	93.35
	Drinking Water Personnel Services					
10-20-5110	Regular employees	599,000.00	52,356.32	438,426.42	0.00	73.19
10-20-5120	Temporaryseasonal employees	30,000.00	0.00	0.00	0.00	0.00
10-20-5130	Overtime	42,000.00	1,666.22	16,968.20	0.00	40.40
10-20-5210	Healthdental insurance	147,000.00	10,324.28	83,593.87	0.00	56.87
10-20-5230	Social Security	52,000.00	4,046.80	42,396.36	0.00	81.53
10-20-5240	Retirement	144,000.00	9,926.05	91,336.75	0.00	63.43
10-20-5250	TrimetWBF	6,000.00	422.33	3,528.87	0.00	58.81
10-20-5260	Unemployment	8,000.00	0.00	5,141.76	0.00	64.27
10-20-5270	Workers compensation	11,000.00	0.00	9,403.78	0.00	85.49
10-20-5290	Other employee benefits	5,000.00	0.00	160.70	0.00	3.21

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
	<i>Personnel Services</i>	1,044,000.00	78,742.00	690,956.71	0.00	66.18
	<i>Materials & Services</i>					
10-20-6110	Legal services	0.00	0.00	0.00	0.00	0.00
10-20-6155	Contracted Services	0.00	0.00	155.00	0.00	0.00
10-20-6180	Dues & subscriptions	0.00	75.00	193.25	0.00	0.00
10-20-6220	Electricity	40,000.00	0.00	18,672.75	0.00	46.68
10-20-6230	Telephone	4,200.00	0.00	947.80	0.00	22.57
10-20-6240	Natural gas	2,000.00	1,152.72	3,188.94	0.00	159.45
10-20-6290	Other utilities	2,000.00	329.66	1,542.36	0.00	77.12
10-20-6310	Janitorial services	1,000.00	78.47	167.44	0.00	16.74
10-20-6320	Buildings & grounds	10,000.00	2,493.00	7,816.43	0.00	78.16
10-20-6340	Distribution system maint	220,000.00	16,727.12	158,198.91	14,485.34	71.91
10-20-6350	Computer maintenance	0.00	0.00	0.00	0.00	0.00
10-20-6390	Other repairs & maintenance	50,000.00	-4,500.00	31,038.88	3,217.00	62.08
10-20-6410	Mileage	1,000.00	0.00	111.94	0.00	11.19
10-20-6420	Staff training	8,000.00	740.87	6,201.84	0.00	77.52
10-20-6430	Certifications	1,000.00	0.00	1,405.00	0.00	140.50
10-20-6510	Office supplies	0.00	0.00	522.71	0.00	0.00
10-20-6520	Fuel & oils	0.00	0.00	0.00	0.00	0.00
10-20-6530	Small tools & equipment	22,000.00	350.33	1,312.02	0.00	5.96
10-20-6540	Safety supplies	16,000.00	421.11	5,658.03	0.00	35.36
10-20-6550	Operational Supplies	2,000.00	315.88	1,118.06	0.00	55.90
10-20-6560	Uniforms	0.00	161.52	1,282.96	0.00	0.00
10-20-6710	Purchased water	1,150,000.00	75,979.16	736,778.11	0.00	64.07
10-20-6715	Water quality program	0.00	510.00	10,561.00	0.00	0.00
10-20-6730	Communications	0.00	0.00	38.35	0.00	0.00
10-20-6740	Advertising	0.00	0.00	0.00	0.00	0.00
10-20-6760	Equipment Rental	5,000.00	0.00	0.00	0.00	0.00
10-20-6770	Bank charges	0.00	0.00	0.00	0.00	0.00
10-20-6780	Taxes & fees	20,000.00	403.77	15,513.42	0.00	77.57
10-20-6900	Miscellaneous expense	1,000.00	0.00	0.00	0.00	0.00
	<i>Materials & Services</i>	1,555,200.00	95,238.61	1,002,425.20	17,702.34	64.46
	Drinking Water	2,599,200.00	173,980.61	1,693,381.91	17,702.34	65.15
	Debt Service					
	<i>Materials & Services</i>					
10-24-6815	Zions Bank loan-principal	175,000.00	0.00	175,000.00	0.00	100.00
10-24-6825	Zions Bank loan-interest	34,522.00	0.00	34,521.66	0.00	100.00
	<i>Materials & Services</i>	209,522.00	0.00	209,521.66	0.00	100.00
	Debt Service	209,522.00	0.00	209,521.66	0.00	100.00
	Transfers & Contingencies					
	<i>Transfers & Contingencies</i>					
10-29-8105	Transfer out - Fund 05	1,444,000.00	120,333.33	1,082,999.97	0.00	75.00
10-29-8171	Transfers out to Fund 71	1,675,000.00	0.00	1,475,000.00	0.00	88.06
10-29-9000	Contingency	559,429.00	0.00	0.00	0.00	0.00
	<i>Transfers & Contingencies</i>	3,678,429.00	120,333.33	2,557,999.97	0.00	69.54
	Transfers & Contingencies	3,678,429.00	120,333.33	2,557,999.97	0.00	69.54
10	Drinking Water	0.00	30,202.22	1,595,154.12	-17,702.34	0.00
20	Wastewater Reclam. NonDivisional					
	<i>Beginning Fund Balance</i>					
20-00-3500	Fund balance	-789,178.00	0.00	-1,315,554.60	0.00	166.70

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
	<i>Beginning Fund Balance</i>	-789,178.00	0.00	-1,315,554.60	0.00	166.70
	<i>Revenue</i>					
20-00-4212	Wastewater charges	8,200,000.00	626,708.19	6,086,726.73	0.00	74.23
20-00-4215	Penalties & late charges	25,000.00	-2.98	6,818.59	0.00	27.27
20-00-4220	System development charges	125,000.00	20,660.00	406,322.60	0.00	325.06
20-00-4240	Service installations	40,000.00	0.00	12,105.75	0.00	30.26
20-00-4290	Other charges for services	15,000.00	910.00	8,080.00	0.00	53.87
20-00-4610	Investment revenue	0.00	669.87	7,128.15	0.00	0.00
20-00-4630	Miscellaneous revenues	15,000.00	4,352.16	12,623.91	0.00	84.16
	<i>Revenue</i>	8,420,000.00	653,297.24	6,539,805.73	0.00	77.67
	NonDivisional	9,209,178.00	653,297.24	7,855,360.33	0.00	85.30
	Wastewater-Plant					
	<i>Personnel Services</i>					
20-21-5110	Regular employees	622,000.00	45,869.62	479,578.47	0.00	77.10
20-21-5120	Temporaryseasonal employees	35,000.00	0.00	0.00	0.00	0.00
20-21-5130	Overtime	49,000.00	4,128.45	48,579.75	0.00	99.14
20-21-5210	Healthdental insurance	155,000.00	11,122.10	106,224.97	0.00	68.53
20-21-5230	Social security	54,000.00	3,720.22	39,448.91	0.00	73.05
20-21-5240	Retirement	134,000.00	8,464.66	96,763.81	0.00	72.21
20-21-5250	TrimetWBF	6,000.00	389.30	4,082.78	0.00	68.05
20-21-5260	Unemployment	9,000.00	0.00	0.00	0.00	0.00
20-21-5270	Workers compensation	12,000.00	0.00	10,233.53	0.00	85.28
20-21-5290	Other employee benefits	4,000.00	0.00	39.55	0.00	0.99
	<i>Personnel Services</i>	1,080,000.00	73,694.35	784,951.77	0.00	72.68
	<i>Materials & Services</i>					
20-21-6155	Contracted services	5,000.00	9,169.80	46,292.18	0.00	925.84
20-21-6180	Dues & subscriptions	15,000.00	0.00	285.00	0.00	1.90
20-21-6220	Electricity	250,000.00	22,246.33	149,306.15	0.00	59.72
20-21-6230	Telephone	2,400.00	0.00	225.12	0.00	9.38
20-21-6240	Natural gas	1,000.00	362.85	792.45	0.00	79.25
20-21-6250	Solid waste disposal	75,000.00	17,015.04	76,510.29	5,668.59	102.01
20-21-6290	Other utilities	1,000.00	105.49	940.09	0.00	94.01
20-21-6310	Janitorial services	10,000.00	891.29	5,807.12	0.00	58.07
20-21-6320	Buildings & grounds	20,000.00	5,343.48	28,299.64	4,459.07	141.50
20-21-6342	WRF system maintenance	240,000.00	64,054.56	167,095.36	5,544.68	69.62
20-21-6350	Computer maintenance	0.00	0.00	79.99	0.00	0.00
20-21-6410	Mileage	2,000.00	0.00	0.00	0.00	0.00
20-21-6420	Staff training	7,000.00	1,700.00	5,589.64	0.00	79.85
20-21-6430	Certifications	3,000.00	0.00	100.00	0.00	3.33
20-21-6510	Office supplies	3,000.00	244.35	643.38	0.00	21.45
20-21-6520	Fuel & oils	0.00	0.00	730.47	0.00	0.00
20-21-6525	Chemicals	25,000.00	1,106.75	13,196.03	8,741.90	52.78
20-21-6530	Small tools & equipment	20,200.00	2,257.94	7,957.08	641.43	39.39
20-21-6540	Safety supplies	20,100.00	4,340.80	8,835.67	0.00	43.96
20-21-6550	Operational supplies	20,000.00	975.12	5,791.88	2,482.66	28.96
20-21-6560	Uniforms	15,000.00	2,220.08	15,629.34	0.00	104.20
20-21-6590	Other supplies	20,000.00	248.12	5,027.11	260.00	25.14
20-21-6730	Communications	0.00	0.00	-2,500.00	0.00	0.00
20-21-6750	Other purchased services	15,000.00	0.00	9,981.23	0.00	66.54
20-21-6770	Bank charges	0.00	0.00	0.00	0.00	0.00
20-21-6780	Taxes & fees	71,000.00	3,951.69	38,415.64	0.00	54.11
20-21-6900	Miscellaneous expense	1,000.00	0.00	0.00	0.00	0.00
	<i>Materials & Services</i>	841,700.00	136,233.69	585,030.86	27,798.33	69.51
	Wastewater-Plant	1,921,700.00	209,928.04	1,369,982.63	27,798.33	71.29
	Wastewater-Collections					
	<i>Personnel Services</i>					
20-22-5110	Regular employees	427,000.00	41,996.52	338,597.67	0.00	79.30

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
20-22-5120	Temporaryseasonal employees	35,000.00	0.00	0.00	0.00	0.00
20-22-5130	Overtime	49,000.00	353.99	7,115.18	0.00	14.52
20-22-5210	Healthdental insurance	110,000.00	7,156.29	63,661.16	0.00	57.87
20-22-5230	Social security	40,000.00	3,233.88	26,401.56	0.00	66.00
20-22-5240	Retirement	112,000.00	7,058.88	62,411.52	0.00	55.72
20-22-5250	TrimetWBF	5,000.00	339.60	2,742.16	0.00	54.84
20-22-5260	Unemployment	6,000.00	0.00	0.00	0.00	0.00
20-22-5270	Workers compensation	8,000.00	0.00	6,822.35	0.00	85.28
20-22-5290	Other employee benefits	4,000.00	0.00	0.00	0.00	0.00
	<i>Personnel Services</i>	<i>796,000.00</i>	<i>60,139.16</i>	<i>507,751.60</i>	<i>0.00</i>	<i>63.79</i>
	<i>Materials & Services</i>					
20-22-6180	Dues & subscriptions	0.00	75.00	965.00	0.00	0.00
20-22-6230	Telephone	10,000.00	0.00	155.18	0.00	1.55
20-22-6240	Natural gas	0.00	-165.35	0.00	0.00	0.00
20-22-6290	Other utilities	0.00	0.00	67.78	0.00	0.00
20-22-6310	Janitorial services	2,000.00	0.00	0.00	0.00	0.00
20-22-6320	Buildings & grounds	3,000.00	0.00	548.94	0.00	18.30
20-22-6342	Collection system maint.	50,000.00	210.00	20,467.86	5,200.00	40.94
20-22-6390	Other repairs & maintenance	6,000.00	0.00	917.75	0.00	15.30
20-22-6410	Mileage	2,000.00	93.15	465.75	0.00	23.29
20-22-6420	Staff training	4,000.00	133.00	4,086.00	0.00	102.15
20-22-6430	Certifications	1,000.00	0.00	480.00	0.00	48.00
20-22-6510	Office supplies	6,000.00	730.32	1,001.87	0.00	16.70
20-22-6530	Small tools & equipment	28,000.00	0.00	5,011.06	1,081.45	17.90
20-22-6540	Safety supplies	4,000.00	177.80	2,359.57	0.00	58.99
20-22-6550	Operational supplies	6,000.00	310.80	1,125.07	0.00	18.75
20-22-6560	Uniforms	8,000.00	0.00	4,039.89	0.00	50.50
20-22-6590	Other supplies	0.00	0.00	90.00	0.00	0.00
20-22-6750	Other purchased services	4,000.00	0.00	2,273.19	0.00	56.83
20-22-6770	Bank charges	0.00	0.00	0.00	0.00	0.00
20-22-6780	Taxes & fees	6,000.00	914.60	3,656.98	0.00	60.95
20-22-6900	Miscellaneous expense	1,000.00	0.00	0.00	0.00	0.00
	<i>Materials & Services</i>	<i>141,000.00</i>	<i>2,479.32</i>	<i>47,711.89</i>	<i>6,281.45</i>	<i>33.84</i>
	Wastewater-Collections	937,000.00	62,618.48	555,463.49	6,281.45	59.28
	Transfers & Contingencies					
	<i>Transfers & Contingencies</i>					
20-29-8105	Transfers out to Fund 05	2,028,000.00	169,000.00	1,521,000.00	0.00	75.00
20-29-8140	Transfers out to Fund 40	1,350,500.00	0.00	667,447.40	0.00	49.42
20-29-8150	Transfers out to Fund 50	1,100,000.00	0.00	489,662.50	0.00	44.51
20-29-8172	Transfers out to Fund 72	1,300,000.00	108,333.33	974,999.98	0.00	75.00
20-29-9000	Contingency	571,978.00	0.00	0.00	0.00	0.00
	<i>Transfers & Contingencies</i>	<i>6,350,478.00</i>	<i>277,333.33</i>	<i>3,653,109.88</i>	<i>0.00</i>	<i>57.52</i>
	Transfers & Contingencies	6,350,478.00	277,333.33	3,653,109.88	0.00	57.52
20	Wastewater Reclam.	0.00	103,417.39	2,276,804.33	-34,079.78	0.00
30	Watershed Protection NonDivisional					
	<i>Beginning Fund Balance</i>					
30-00-3500	Fund balance	-307,986.00	0.00	-465,068.02	0.00	151.00
	<i>Beginning Fund Balance</i>	<i>-307,986.00</i>	<i>0.00</i>	<i>-465,068.02</i>	<i>0.00</i>	<i>151.00</i>
	<i>Revenue</i>					
30-00-4213	Watershed protection fees	1,530,000.00	127,986.59	1,160,587.00	0.00	75.86
30-00-4215	Penalties & late charges	2,000.00	-0.38	1,849.61	0.00	92.48

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
30-00-4240	Service installations	20,000.00	0.00	24,684.05	0.00	123.42
30-00-4290	Other charges for services	5,000.00	4,290.00	15,710.00	0.00	314.20
30-00-4610	Investment revenue	0.00	81.29	605.28	0.00	0.00
30-00-4630	Miscellaneous revenues	2,000.00	249.67	1,282.79	0.00	64.14
	<i>Revenue</i>	<i>1,559,000.00</i>	<i>132,607.17</i>	<i>1,204,718.73</i>	<i>0.00</i>	<i>77.28</i>
	NonDivisional	1,866,986.00	132,607.17	1,669,786.75	0.00	89.44
	Watershed Protection					
	<i>Personnel Services</i>					
30-23-5110	Regular employees	108,000.00	1,830.52	28,012.98	0.00	25.94
30-23-5210	Healthdental insurance	30,000.00	266.56	3,511.57	0.00	11.71
30-23-5230	Social Security	9,000.00	134.79	2,148.24	0.00	23.87
30-23-5240	Retirement	26,000.00	309.90	3,594.20	0.00	13.82
30-23-5250	TrimetWBF	1,000.00	14.23	219.96	0.00	22.00
30-23-5260	Unemployment	1,000.00	0.00	0.00	0.00	0.00
30-23-5270	Workers compensation	2,000.00	0.00	1,659.49	0.00	82.97
30-23-5290	Other employee benefits	1,000.00	0.00	0.00	0.00	0.00
	<i>Personnel Services</i>	<i>178,000.00</i>	<i>2,556.00</i>	<i>39,146.44</i>	<i>0.00</i>	<i>21.99</i>
	<i>Materials & Services</i>					
30-23-6155	Contracted Services	40,000.00	3,895.50	14,061.50	0.00	35.15
30-23-6180	Dues & subscriptions	0.00	0.00	660.00	0.00	0.00
30-23-6230	Telephone	0.00	0.00	73.18	0.00	0.00
30-23-6320	Buildings & grounds	0.00	0.00	0.00	0.00	0.00
30-23-6340	System maintenance	0.00	0.00	0.00	0.00	0.00
30-23-6390	Other repairs & maintenance	0.00	0.00	0.00	0.00	0.00
30-23-6410	Mileage	0.00	0.00	0.00	0.00	0.00
30-23-6420	Staff training	1,000.00	0.00	2,367.05	0.00	236.71
30-23-6510	Office supplies	0.00	0.00	104.74	0.00	0.00
30-23-6540	Safety supplies	0.00	0.00	569.34	0.00	0.00
30-23-6560	Uniforms	500.00	0.00	1,081.83	0.00	216.37
30-23-6730	Communications	42,000.00	0.00	12,882.95	0.00	30.67
30-23-6750	Other purchased services	0.00	0.00	14.35	0.00	0.00
30-23-6770	Bank charges	0.00	0.00	0.00	0.00	0.00
30-23-6780	Taxes & fees	0.00	0.00	0.00	0.00	0.00
	<i>Materials & Services</i>	<i>83,500.00</i>	<i>3,895.50</i>	<i>31,814.94</i>	<i>0.00</i>	<i>38.10</i>
	Watershed Protection	261,500.00	6,451.50	70,961.38	0.00	27.14
	Debt Service					
	<i>Materials & Services</i>					
30-24-6814	Principal Payment-KS Statebank	52,308.00	0.00	52,308.38	0.00	100.00
30-24-6824	Interest Paid-KS Statebank	10,249.00	0.00	10,249.23	0.00	100.00
	<i>Materials & Services</i>	<i>62,557.00</i>	<i>0.00</i>	<i>62,557.61</i>	<i>0.00</i>	<i>100.00</i>
	Debt Service	62,557.00	0.00	62,557.61	0.00	100.00
	Transfers & Contingencies					
	<i>Transfers & Contingencies</i>					
30-29-8105	Transfers out to Fund 05	1,029,000.00	85,750.00	771,750.00	0.00	75.00
30-29-8173	Transfers out to Fund 73	430,000.00	35,833.33	322,499.98	0.00	75.00
30-29-9000	Contingency	83,928.00	0.00	0.00	0.00	0.00
	<i>Transfers & Contingencies</i>	<i>1,542,928.00</i>	<i>121,583.33</i>	<i>1,094,249.98</i>	<i>0.00</i>	<i>70.92</i>
	Transfers & Contingencies	1,542,928.00	121,583.33	1,094,249.98	0.00	70.92
30	Watershed Protection	1.00	4,572.34	442,017.78	0.00	44,201,778.00

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
40	WW GO Debt Service					
	NonDivisional					
	<i>Beginning Fund Balance</i>					
40-00-3500	Fund balance	-644,112.00	0.00	-660,960.09	0.00	102.62
	<i>Beginning Fund Balance</i>	-644,112.00	0.00	-660,960.09	0.00	102.62
	<i>Revenue</i>					
40-00-4610	Investment revenue	8,500.00	1,392.05	13,089.55	0.00	153.99
40-00-4701	Interest Subsidy	115,000.00	0.00	117,300.48	0.00	102.00
	<i>Revenue</i>	123,500.00	1,392.05	130,390.03	0.00	105.58
	NonDivisional	767,612.00	1,392.05	791,350.12	0.00	103.09
	Debt Service					
	<i>Materials & Services</i>					
40-24-6811	2010 IFA Loan Principal	368,036.00	0.00	368,036.00	0.00	100.00
40-24-6812	2010 GO Bond Principal	1,120,000.00	0.00	0.00	0.00	0.00
40-24-6821	2010 GO Bond Interest	44,800.00	0.00	22,400.00	0.00	50.00
40-24-6822	2010 IFA Loan Interest	277,012.00	0.00	277,011.40	0.00	100.00
	<i>Materials & Services</i>	1,809,848.00	0.00	667,447.40	0.00	36.88
	Debt Service	1,809,848.00	0.00	667,447.40	0.00	36.88
	Transfers & Contingencies					
	<i>Revenue</i>					
40-29-4920	Transfers in from Fund 20	1,350,500.00	0.00	667,447.40	0.00	49.42
	<i>Revenue</i>	1,350,500.00	0.00	667,447.40	0.00	49.42
	Transfers & Contingencies	1,350,500.00	0.00	667,447.40	0.00	49.42
40	WW GO Debt Service	308,264.00	1,392.05	791,350.12	0.00	256.71
50	WW Revenue Bond					
	Debt Service					
	NonDivisional					
	<i>Beginning Fund Balance</i>					
50-00-3500	Fund balance	-1,354,323.00	0.00	-1,374,166.52	0.00	101.47
	<i>Beginning Fund Balance</i>	-1,354,323.00	0.00	-1,374,166.52	0.00	101.47
	<i>Revenue</i>					
50-00-4610	Investment revenue	16,300.00	783.97	14,519.76	0.00	89.08
	<i>Revenue</i>	16,300.00	783.97	14,519.76	0.00	89.08
	NonDivisional	1,370,623.00	783.97	1,388,686.28	0.00	101.32
	Debt Service					
	<i>Materials & Services</i>					
50-24-6810	2010 SRF Loan Principal	893,387.00	0.00	893,387.00	0.00	100.00
50-24-6813	JPM Bank Loan Principal	190,000.00	0.00	0.00	0.00	0.00
50-24-6820	2010 SRF Loan Interest	349,630.00	0.00	349,630.00	0.00	100.00
50-24-6823	JPM Bank Loan Interest	379,326.00	0.00	189,662.50	0.00	50.00
	<i>Materials & Services</i>	1,812,343.00	0.00	1,432,679.50	0.00	79.05
	Debt Service	1,812,343.00	0.00	1,432,679.50	0.00	79.05
	Transfers & Contingencies					
	<i>Revenue</i>					
50-29-4920	Transfer in from Fund 20	1,100,000.00	0.00	489,662.50	0.00	44.51
	<i>Revenue</i>	1,100,000.00	0.00	489,662.50	0.00	44.51

<u>Account Number</u>	<u>Description</u>	<u>Budget</u>	<u>Period Amt</u>	<u>End Bal</u>	<u>Encumbered</u>	<u>% of Budget</u>
	Transfers & Contingencies	1,100,000.00	0.00	489,662.50	0.00	44.51
50	WW Revenue Bond Debt Service	658,280.00	783.97	445,669.28	0.00	67.70
71	Drinking Water Capital NonDivisional					
	<i>Beginning Fund Balance</i>					
71-00-3500	Fund balance	-2,703,013.00	0.00	-3,236,047.66	0.00	119.72
	<i>Beginning Fund Balance</i>	-2,703,013.00	0.00	-3,236,047.66	0.00	119.72
	<i>Revenue</i>					
71-00-4610	Investment revenue	50,000.00	7,399.89	77,701.98	0.00	155.40
	<i>Revenue</i>	50,000.00	7,399.89	77,701.98	0.00	155.40
	NonDivisional	2,753,013.00	7,399.89	3,313,749.64	0.00	120.37
	Drinking Water Capital Outlay					
71-20-7200	Infrastructure	0.00	0.00	259,066.50	0.00	0.00
71-20-7300	Buildings & improvements	330,000.00	0.00	6,958.30	0.00	2.11
71-20-7600	Capital Improvement Projects	4,098,013.00	25,134.70	336,685.55	0.00	8.22
	<i>Capital Outlay</i>	4,428,013.00	25,134.70	602,710.35	0.00	13.61
	Drinking Water	4,428,013.00	25,134.70	602,710.35	0.00	13.61
	Transfers & Contingencies					
	<i>Revenue</i>					
71-29-4910	Transfer in from Fund 10	1,675,000.00	0.00	1,475,000.00	0.00	88.06
	<i>Revenue</i>	1,675,000.00	0.00	1,475,000.00	0.00	88.06
	Transfers & Contingencies	1,675,000.00	0.00	1,475,000.00	0.00	88.06
71	Drinking Water Capital	0.00	-17,734.81	4,186,039.29	0.00	0.00
72	Wastewater Reclamation Capital NonDivisional					
	<i>Beginning Fund Balance</i>					
72-00-3500	Fund balance	-3,754,027.00	0.00	-4,220,098.11	0.00	112.42
	<i>Beginning Fund Balance</i>	-3,754,027.00	0.00	-4,220,098.11	0.00	112.42
	<i>Revenue</i>					
72-00-4610	Investment revenue	75,000.00	8,457.64	80,556.02	0.00	107.41
	<i>Revenue</i>	75,000.00	8,457.64	80,556.02	0.00	107.41
	NonDivisional	3,829,027.00	8,457.64	4,300,654.13	0.00	112.32
	Wastewater-Plant Capital Outlay					
72-21-7300	Buildings & improvements	75,000.00	0.00	27,906.33	0.00	37.21
72-21-7520	Equipment	60,000.00	30,956.16	30,956.16	19,574.60	51.59
72-21-7600	Capital Improvement Projects	4,784,027.00	38,223.73	475,036.82	111,332.14	9.93
	<i>Capital Outlay</i>	4,919,027.00	69,179.89	533,899.31	130,906.74	10.85
	Wastewater-Plant	4,919,027.00	69,179.89	533,899.31	130,906.74	10.85

Account Number	Description	Budget	Period Amt	End Bal	Encumbered	% of Budget
	Wastewater-Collections					
	<i>Capital Outlay</i>					
72-22-7300	Buildings and improvements	210,000.00	0.00	2,971.86	0.00	1.42
72-22-7600	Capital Improvement Projects	0.00	0.00	0.00	0.00	0.00
	<i>Capital Outlay</i>	<i>210,000.00</i>	<i>0.00</i>	<i>2,971.86</i>	<i>0.00</i>	<i>1.42</i>
	Wastewater-Collections	210,000.00	0.00	2,971.86	0.00	1.42
	Transfers & Contingencies					
	<i>Revenue</i>					
72-29-4920	Transfer in from Fund 20	1,300,000.00	108,333.33	974,999.98	0.00	75.00
	<i>Revenue</i>	<i>1,300,000.00</i>	<i>108,333.33</i>	<i>974,999.98</i>	<i>0.00</i>	<i>75.00</i>
	Transfers & Contingencies	1,300,000.00	108,333.33	974,999.98	0.00	75.00
72	Wastewater Reclamation Capital	0.00	47,611.08	4,738,782.94	-130,906.74	0.00
73	Watershed Protection Capital NonDivisional					
	<i>Beginning Fund Balance</i>					
73-00-3500	Fund balance	-1,681,715.00	0.00	-1,816,319.98	0.00	108.00
	<i>Beginning Fund Balance</i>	<i>-1,681,715.00</i>	<i>0.00</i>	<i>-1,816,319.98</i>	<i>0.00</i>	<i>108.00</i>
	<i>Revenue</i>					
73-00-4610	Investment revenue	40,000.00	2,458.92	30,925.37	0.00	77.31
	<i>Revenue</i>	<i>40,000.00</i>	<i>2,458.92</i>	<i>30,925.37</i>	<i>0.00</i>	<i>77.31</i>
	NonDivisional	1,721,715.00	2,458.92	1,847,245.35	0.00	107.29
	Watershed Protection					
	<i>Capital Outlay</i>					
73-23-7300	Buildings & improvements	135,000.00	0.00	4,630.70	0.00	3.43
73-23-7540	Vehicles	30,000.00	0.00	0.00	0.00	0.00
73-23-7600	Capital Improvement Projects	1,986,715.00	0.00	767,274.94	0.00	38.62
	<i>Capital Outlay</i>	<i>2,151,715.00</i>	<i>0.00</i>	<i>771,905.64</i>	<i>0.00</i>	<i>35.87</i>
	Watershed Protection	2,151,715.00	0.00	771,905.64	0.00	35.87
	Transfers & Contingencies					
	<i>Revenue</i>					
73-29-4930	Transfer in from Fund 30	430,000.00	35,833.33	322,499.98	0.00	75.00
	<i>Revenue</i>	<i>430,000.00</i>	<i>35,833.33</i>	<i>322,499.98</i>	<i>0.00</i>	<i>75.00</i>
	Transfers & Contingencies	430,000.00	35,833.33	322,499.98	0.00	75.00
73	Watershed Protection Capital	0.00	38,292.25	1,397,839.69	0.00	0.00
Revenue Total		25,328,300.00	1,651,128.32	19,015,251.56	0.00	0.7508
Expense Total		37,397,760.00	1,391,123.33	18,216,742.03	321,729.60	0.4871

General Ledger
Account Roll up



User: jeff
Printed: 4/3/2020 4:08:02 PM
Period 09 - 09
Fiscal Year 2020

Sort Level	Description	Budget	Period Amt	End Bal	% ExpendCollect
Revenue	Revenue				
4210	Water Sales - CRW	32,000.00	2,877.11	22,986.17	71.83
4211	Water sales	4,265,000.00	290,712.28	2,998,440.06	70.30
4212	Wastewater Charges	8,200,000.00	626,708.19	6,086,726.73	74.23
4213	Watershed protection fees	1,530,000.00	127,986.59	1,160,587.00	75.86
4215	Penalties & late charges	52,000.00	-49.57	23,056.79	44.34
4220	System development charges	225,000.00	37,940.00	727,972.60	323.54
4230	Contract services	53,000.00	0.00	32,000.00	60.38
4240	Service installations	75,000.00	1,017.63	55,879.99	74.51
4280	Rents & leases	160,000.00	9,584.32	146,881.97	91.80
4290	Other charges for services	40,000.00	5,400.00	29,820.00	74.55
4610	Investment revenue	190,300.00	23,321.94	239,817.07	126.02
4630	Miscellaneous revenues	34,500.00	6,379.84	66,380.87	192.41
4640	Proceeds from sale of capital	0.00	0.00	2,042.00	0.00
4701	Interest Subsidy	115,000.00	0.00	117,300.48	102.00
4910	Transfer in from Fund 10	3,119,000.00	120,333.33	2,557,999.97	82.01
4920	Transfer in from Fund 20	5,778,500.00	277,333.33	3,653,109.88	63.22
4930	Transfer in from Fund 30	1,459,000.00	121,583.33	1,094,249.98	75.00
Revenue	Revenue	25,328,300.00	1,651,128.32	19,015,251.56	75.08
Expense	Expense				
5110	Regular employees	3,131,000.00	233,697.37	2,202,586.86	70.35
5120	Temporary/Seasonal employees	110,000.00	4,204.34	9,812.73	8.92
5130	Overtime	150,000.00	6,835.85	79,325.23	52.88
5210	Employee Ins	690,000.00	42,903.07	390,378.46	56.58
5230	Social Security	262,000.00	18,066.43	175,957.49	67.16
5240	Retirement	696,000.00	43,265.91	429,680.73	61.74
5250	Trimet	31,000.00	1,887.29	17,714.82	57.14
5260	Unemployment	38,000.00	0.00	5,141.76	13.53
5270	Workers compensation	54,000.00	0.00	46,096.98	85.36
5290	Other employee benefits	24,000.00	39.35	582.35	2.43
6110	Legal services	400,000.00	-2,320.42	171,961.84	42.99
6120	Accounting & audit services	40,000.00	28,177.29	105,273.14	263.18
6155	Contracted Services	407,000.00	113,196.75	341,839.42	83.99
6180	Dues & subscriptions	57,000.00	340.88	38,115.32	66.87
6220	Electricity	298,000.00	22,283.46	174,647.74	58.61
6230	Telephone	72,700.00	4,551.86	41,303.07	56.81
6240	Natural gas	5,000.00	791.08	5,281.98	105.64
6250	Solid waste disposal	75,000.00	17,015.04	76,510.29	102.01
6290	Other utilities	19,000.00	2,387.92	14,672.48	77.22
6310	Janitorial services	38,000.00	2,160.16	15,604.92	41.07
6320	Buildings & grounds	39,000.00	4,097.83	44,438.11	113.94
6330	Vehicle & equipment maint.	61,500.00	6,878.27	30,873.78	50.20
6340	Distribution system maint	220,000.00	16,727.12	158,198.91	71.91
6342	Collection system maint.	290,000.00	64,264.56	187,563.22	64.68
6350	Computer maintenance	291,300.00	6,645.10	207,750.88	71.32
6390	Other repairs & maintenance	60,000.00	-4,500.00	32,201.63	53.67
6410	Mileage	9,000.00	589.88	1,386.14	15.40
6420	Staff training	73,000.00	16,738.23	53,320.22	73.04
6430	Certifications	5,500.00	0.00	1,985.00	36.09
6440	Board travel & training	5,000.00	1,660.69	3,130.88	62.62
6510	Office supplies	38,000.00	3,791.66	24,283.65	63.90
6520	Fuel & oils	70,800.00	2,244.15	33,698.22	47.60

Sort Level	Description	Budget	Period Amt	End Bal	% ExpendCollect
6525	Chemicals	25,000.00	1,106.75	13,196.03	52.78
6530	Small tools & equipment	71,200.00	2,608.27	14,567.53	20.46
6540	Safety supplies	41,100.00	4,939.71	18,560.25	45.16
6550	Operational Supplies	28,000.00	1,601.80	8,035.01	28.70
6560	Uniforms	25,000.00	2,381.60	22,079.70	88.32
6590	Other supplies	20,000.00	248.12	5,117.11	25.59
6610	Board compensation	1,000.00	200.00	550.00	55.00
6710	Purchased water	1,150,000.00	75,979.16	736,778.11	64.07
6715	Water quality program	0.00	510.00	10,561.00	0.00
6720	Insurance	173,000.00	0.00	160,379.58	92.70
6730	Communications	164,100.00	11,530.08	41,396.82	25.23
6740	Advertising	6,000.00	609.90	2,981.00	49.68
6750	Other purchased services	19,000.00	0.00	12,268.77	64.57
6760	Equipment Rental	8,000.00	2,777.51	2,997.51	37.47
6770	Bank charges	125,000.00	8,747.57	98,431.06	78.74
6780	Taxes & fees	98,000.00	5,370.06	58,144.04	59.33
6810	2010 SRF Loan Principal	893,387.00	0.00	893,387.00	100.00
6811	2010 IFA Loan Principal	368,036.00	0.00	368,036.00	100.00
6812	2010 GO Bond Principal	1,120,000.00	0.00	0.00	0.00
6813	JPM Bank Loan Principal	190,000.00	0.00	0.00	0.00
6814	Principal Payment-KS Statebank	52,308.00	0.00	52,308.38	100.00
6815	Zions Bank loan-principal	175,000.00	0.00	175,000.00	100.00
6820	2010 SRF Loan Interest	349,630.00	0.00	349,630.00	100.00
6821	2010 GO Bond Interest	44,800.00	0.00	22,400.00	50.00
6822	2010 IFA Loan Interest	277,012.00	0.00	277,011.40	100.00
6823	JPM Bank Loan Interest	379,326.00	0.00	189,662.50	50.00
6824	Interest Paid-KS Statebank	10,249.00	0.00	10,249.23	100.00
6825	Zions Bank loan-interest	34,522.00	0.00	34,521.66	100.00
6900	Miscellaneous expense	4,000.00	327.10	327.10	8.18
6910	Cash overshort	0.00	0.00	-0.51	0.00
6990	Special Payments	300,000.00	0.00	300,000.00	100.00
7200	Infrastructure	0.00	0.00	259,066.50	0.00
7300	Buildings & improvements	750,000.00	0.00	42,467.19	5.66
7520	Equipment	60,000.00	30,956.16	30,956.16	51.59
7540	Vehicles	30,000.00	0.00	0.00	0.00
7600	Capital Improvement Projects	10,868,755.00	63,358.43	1,578,997.31	14.53
8105	Transfers out to Fund 05	4,501,000.00	375,083.33	3,375,749.97	75.00
8140	Transfers out - Fund 40	1,350,500.00	0.00	667,447.40	49.42
8150	Transfers out - Fund 50	1,100,000.00	0.00	489,662.50	44.51
8171	Transfers out - Fund 71	1,675,000.00	0.00	1,475,000.00	88.06
8172	Transfers out - Fund 72	1,300,000.00	108,333.33	974,999.98	75.00
8173	Transfers out - Fund 73	430,000.00	35,833.33	322,499.98	75.00
9000	Contingency	1,419,035.00	0.00	0.00	0.00
Expense	Expense	37,397,760.00	1,391,123.33	18,216,741.52	48.71
Grand Total		-12,069,460.00	260,004.99	798,510.04	-0.0662
Fund Balance		0.00	0.00	0.00	0
Total					
Revenue Total		25,328,300.00	1,651,128.32	19,015,251.56	0.7508
Expense Total		37,397,760.00	1,391,123.33	18,216,741.52	0.4871



**BOARD OF DIRECTORS
REGULAR MEETING MINUTES – 6:00 P.M.
MARCH 17, 2020**

Board of Directors – Members Present:

Kevin Williams	President
Paul Gornick	Secretary/Vice President
Mark Knudson	Treasurer
Susan Keil	Director
Ginny Van Loo	Director

Board of Directors – Members Absent:

None

Oak Lodge Water Services Staff – Present:

Sarah Jo Chaplen	General Manager
Todd Knapp	Field Operations Manager
Aleah Binkowski-Burk	Human Resources and Payroll Manager
Laural Casey	District Recorder
Markus Mead	Development Review Specialist

Oak Lodge Water Services Staff – Present by Phone:

Jason Rice	District Engineer
David Mendenhall	Plant Superintendent

Visitors and Consultants - Present:

Rob Moody	Merina & Company, LLP
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Visitors and Consultants – Present by Phone:

Tommy Brooks	Cable Huston, LLP
Laura Westmeyer	Cable Huston, LLP
Chris Duckworth	CDR Labor Law, LLC

1. Call to Order and Flag Salute

President Williams called the meeting to order at 6:00 p.m. and welcomed the public attending by phone. Director Van Loo led the pledge of allegiance.

2. Call for Public Comment

President Williams requested public comment. There was none.

3. Consent Agenda

- February 2020 Monthly Financial Report

- February 18, 2020 Board Regular Meeting Minutes
- February 19, 2020 Board Special Meeting Minutes
- March 5, 2020 Board Special Meeting Minutes

Treasurer Knudson noted a clerical error in the overview of the monthly financial report. Consultant Rob Moody agreed that “at the end of December” should read “at the end of February.”

Treasurer Knudson moved to accept the Consent Agenda with changes. Director Keil seconded.

Secretary/Vice President Gornick noted that the District revenue is low in two different funds: water and operating expenditures. Consultant Rob Moody responded that the water revenue is low but is showing improvement and is being monitored. Mr. Moody stated that expenditures are also being monitored and there are no corrective actions needed at this time.

Director Van Loo noted that the staff training budget is close to ninety-eight percent and asked if staff training is complete for the fiscal year. Mr. Moody confirmed that most of the training has already occurred. District Engineer Rice noted that staff training is divided by departments and there are several departments under budget.

President Williams noted a clerical error in the minutes of the February 18, 2020 regular Board meeting clarifying that the City of Happy Valley is no longer part of the “North Clackamas Parks and Recreation District.” District Recorder Casey confirmed the change on page seven.

President Williams also noted a clerical error in the minutes of the March 5, 2020 special Board meeting stating that the first motion should read “bonus” instead of “salary increase.” District Recorder Casey confirmed.

President Williams called for a vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

4. Design and Construction Standards Update

Development Review Specialist Mead overviewed the current year’s updates to the District Design and Construction Standards highlighting one public comment from Clackamas County regarding surface water treatment during construction projects.

President Williams and Treasurer Knudson asked clarifying questions regarding the stormwater treatment regulations. Development Review Specialist Mead reviewed the current District thresholds.

President Williams discussed the differences between different paving techniques. Director Keil questioned what constituted an overlay. President Williams and District Engineer Rice clarified

the stormwater treatment requirements of paving projects. President Williams inquired as to the responsible party for the curb cuts near Candy Cane Elementary School on Portland Avenue. District Engineer Rice reported that specific facility is managed by Clackamas County Department of Transportation and Development (CCDTD), while others are handled on a case-by-case basis.

Director Keil clarified the difference between federal law and District standards regarding ADA ramps. Secretary/Vice President Gornick and District Engineer Rice responded that there are variations in interpretations to the ADA Guidance issued by the Federal Government. One such interpretation is that overlays and grind-inlays do not required upgrading ADA ramps to current standards. The other issue is that when a ramp is non-existent, those guiding documents do not require for them to be created when overlays and grind-inlays are performed, and the District has performed road improvements. District Engineer Rice explained that the proposed road maintenance projects in question do not include ADA ramps that need to be upgraded. However, the CCDTD proposed Capital Improvement projects do include ADA ramp upgrades and those areas are being accounted for in the stormwater management.

Development Review Specialist Mead noted that Clackamas County road maintenance project notification to Oak Lodge has been lacking in the past. President Williams queried as to why the County does not notify utilities of upcoming projects. District Engineer Rice responded that Clackamas County is working to start this level of dialog and that conversation is advancing nicely.

Director Keil discussed the opportunity that a paving plan gives engineers to open the project up and have all the work done at once.

Director Van Loo asked if the District notifies Clackamas County of upcoming projects. Secretary/Vice President Gornick believes the notification burden is at the County level.

Director Keil inquired as to whether the mention of driveways in the Staff Report applied to residential or commercial. Development Review Specialist Mead replied that the water quality and detention only applied to residential driveways because the public comment was specific to House Bill 2001.

Secretary/Vice President Gornick asked about the Clackamas County restrictions of developed impervious area and the effect of House Bill 2001. Development Review Specialist Mead responded with proposed detention requirements.

Secretary/Vice President Gornick inquired about the service laterals proposal and the use of high-density polyethylene pipe (HDPE). Development Review Specialist Mead explained the restrictions and authority relating to private property. President Williams clarified the responsible party for inspections. Secretary/Vice President Gornick reviewed the property maintenance responsibilities of the District. Treasurer Knudson interpreted that there would not be a cleanout at the property line and that the District does not regulate or maintain past the property line.

Secretary/Vice President Gornick noted a clerical error on page 1-18. Development Review Specialist Mead noted the change regarding the abbreviation of the word corporation.

Secretary/Vice President Gornick inquired on the requirement of steel casings to be coated in regard to Water Standard Drawing 401. Field Operations Manager Knapp responded that the District does not work with steel casing often, noting that it is used in work primarily done by contractors. General Manager Chaplen queried whether the District should set that standard. Treasurer Knudson stated that steel casing may not apply to the class of projects in the District and offered a modification to the language of note 20 of "casings shall be appropriately protected steel or HDPE." District Engineer Rice agreed.

Secretary/Vice President Gornick noted the meter box locations on Standard Drawing 423 citing the fourth reference and queried whether the District provides the meter box. Field Operations Manager Knapp replied that historically it was the District's practice, but the District does not currently provide the meter box. Secretary/Vice President Gornick inquired if someone could drive over the meter box and whether a traffic rated meter box should be used. Field Operations Manager Knapp agreed that it is a probable occurrence and that a traffic rated box should be used. Secretary/Vice President Gornick and Field Operations Manager Knapp agreed that installation could be evaluated on a case-by-case basis.

Development Review Specialist Mead noted the Design and Construction Standards had been reviewed by operations staff, the District Engineer, and the General Manager; noting that the standards have also been posted for 29 days of public comment.

Director Keil remarked that this second year's version of the Design and Construction Standards is a big improvement. President Williams thanked Development Review Specialist Mead for his work.

Treasurer Knudson moved to approve Resolution No. 2020-02 adopting the Design and Construction Standards for the Oak Lodge Water Services District effective April 17, 2020. Secretary/Vice President Gornick seconded. President Williams called for a vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

5. Budget Committee Appointment

General Manager Chaplen informed the Board of the open position within the Budget Committee and updated them on the current applicant.

Director Keil briefed the Board on the applicant's resume and hoped for inclusivity of the Alternate as a member of the Budget Committee.

Secretary/Vice President Gornick moved to appoint Budget Committee Alternate, Robert Weber, to the Oak Lodge Water Services Budget Committee Position No. 3 serving until June

30, 2021 and to designate Ann-Marie Cordova as the Oak Lodge Water Services Budget Committee Alternate for fiscal year 2020/2021. Director Keil seconded. President Williams called for the vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

6. Oregon Water/Wastewater Agency Response Network Membership Agreement

General Manager Chaplen reported on the Oregon Water/Wastewater Agency Response Network (ORWARN) and requested authority to enter into a mutual aid agreement for emergency preparedness; both for equipment and skilled labor.

Treasurer Knudson clarified that the mutual aid agreement is a standard agreement signed by all ORWARN members. General Manager Chaplen confirmed and stated that the agreement has been reviewed by the District's legal counsel.

President Williams inquired as to the number of member agencies and requested a list of the agencies be presented to the Board. General Manager Chaplen agreed.

Director Keil moved to authorize the General Manager to sign the Mutual Aid Agreement with Oregon Water/Wastewater Agency Response Network and name the General Manager and District Engineer as District contacts. Treasurer Knudson seconded. President Williams called for the vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

Field Operations Manager Knapp informed the Board that there are currently 113 member agencies in ORWARN.

7. Resolution 2020-03 Authorizing Declarations of a State of Emergency and Certain Actions During a State of Emergency

General Manager Chaplen reported on the rapidly changing environment in which the District is operating to protect staff and continue to deliver service to ratepayers. She highlighted the governance preparations made by Human Resources and Payroll Manager Binkowski-Burk and District legal counsel Tommy Brooks and District legal counsel Laura Westmeyer.

General Manager Chaplen apprised the Board of President Williams approval to close District offices to the public. She requested approval of Resolution 2020-03 (Resolution) as a general process for emergency management and approval of the Declaration of State of Emergency (Declaration) as a specific response to the current emergency.

District legal counsel Tommy Brooks outlined the Resolution and Declaration before the Board. General Manager Chaplen discussed the General Manager succession line and possible amendments to future declarations if the need should arise.

General Manager Chaplen relayed the process of deciding on a specific effective end date for

the State of Emergency. Director Keil asked about extending the effective end date of the Declaration of State of Emergency at a later time. General Manager Chaplen confirmed the ability to modify any portion of the Declaration as the State of Emergency progresses.

District legal counsel Tommy Brooks added that the State of Oregon statutes are still in effect and must be followed by the District. However, the Declaration allows for flexibility in the District's daily operations within the State statutes.

General Manager Chaplen recommended that the Board begin with approving Resolution 2020-03.

Director Van Loo inquired whether the District had developed a protocol in the case that a staff member tested positive for COVID-19. General Manager Chaplen conveyed the various messages and directives that have been given to District staff noting that the issue of this emergency is not infrastructure, but staffing. Director Van Loo mentioned several organizations that have closed to the public. General Manager Chaplen relayed the most recent League of Oregon Cities and Special Districts Association of Oregon update on the various organizations that have closed or limited interaction with the public. President Williams discussed the many customer service options available to customers that do not require interpersonal contact.

Treasurer Knudson commended General Manager Chaplen for work on emergency planning and suggested that the Board cultivate a succession similar to the staff succession plan.

Secretary/Vice President Gornick asked District legal counsel Tommy Brooks about waiving statutory requirements like public notification in the case of an emergency meeting. District legal counsel Tommy Brooks elaborated on the public meeting laws including the permitted flexibility to call an emergency meeting with less than 24-hour notice.

General Manager Chaplen clarified the proposed Board succession line order as President, Secretary/Vice President, Treasurer, most tenured remaining Director, least tenured remaining Director.

District legal counsel Tommy Brooks pointed out that the Board may want a succession line regardless of an emergency. Director Keil inquired to whether the succession line should be constructed by name or by office. District legal counsel Tommy Brooks suggested that by office would be a longer lasting approach and the Board could make a motion to accept the succession line without revising the Resolution. General Manager Chaplen noted that the most senior or tenured Director could be named first in the succession line after the officers.

Treasurer Knudson stated that the next item of business would be to acknowledge the succession of the General Manager and the officers of the Board. General Manager Chaplen asked the District legal counsel to write the revised motions.

Director Keil clarified length of time for which the Resolution is valid. Secretary/Vice President Gornick explained that the Resolution stands forever, while the Declaration will only be valid for the length of the emergency. Director Keil agreed that naming positions over names in the succession line is better for the Resolution.

Treasurer Knudson noted Authorized Action H and suggested that the Resolution allow the

General Manager to enter into agreements as well. President Williams agreed. General Manager Chaplen confirmed with District legal counsel the ability to include that change in the Declaration.

General Manager Chaplen requested questions regarding the Declaration of State of Emergency.

Secretary/Vice President Gornick discussed the option to enact an effective end date of 60 days from adoption for all Declarations. Treasurer Knudson offered to conform to the time set out by the Governor's State of Emergency. District legal counsel Tommy Brooks noted that while the District's emergency is currently in line with the State emergency, it is possible for the Governor to extend the State emergency in a limited capacity that does not concern the District's State of Emergency. Secretary/Vice President Gornick offered to leave the effective end date clause of the Declaration stating, "unless extended or earlier terminated." General Manager Chaplen agreed that the Declaration could always be rescinded or modified. Treasurer Knudson and Secretary/Vice President Gornick agreed.

Director Keil stressed the importance of keeping the focus on District customers and the ability to explain the reason behind the Declaration. General Manager Chaplen explained the nexus of the Declaration as employee illness and childcare issues. President Williams agreed and noted the potential financial impacts of the emergency as well. District legal counsel Tommy Brooks described the Governor's order is to limit face-to-face interaction regardless of health.

President Williams noted the impact this emergency is having on District customers and the potential financial impact on the District. Director Van Loo remarked on the projected Federal Government stimulus check. Director Keil remarked upon the ability to extend the length of time customers have to pay a bill. President Williams stated that another important part of declaring an emergency is for Federal Emergency Management Agency (FEMA) reimbursement.

Director Van Loo inquired about Authorized Action E of the Declaration waiving the right to shut off water services as well as Authorized Action F to restore water services to properties that have had water services shut off. General Manager Chaplen noted that the Declaration gives the District the potential to do many things. Her research has shown that the City of Milwaukee and the City of Portland have already enacted these measures. General Manager Chaplen asked for Board input on waiving future shut offs and reconnecting services. Director Van Loo agreed.

District legal counsel Tommy Brooks outlined the suggested changes to Resolution 2020-03. Treasurer Knudson and General Manager Chaplen offered additional modifications.

Director Keil stressed that the main benefit of the Declaration be for District customers. General Manager Chaplen agreed and clarified that the focus has been on continued services regardless of current events. Director Keil requested that the customers receive communications regarding the District's continued service plan. General Manager Chaplen agreed and confirmed that many other utilities and organizations across the state are enacting similar resolutions.

District legal counsel Tommy Brooks wrote a motion to adopt Resolution 2020-03 with modifications. District Recorder Casey read the motion aloud.

I move to adopt Resolution 2020-03 with the following modifications: in section 2 and section 4, references to the “President of the Board” should refer to the “President or the President’s then designated successor”; in section 4, reference to the “District Manager should be General Manager”; section 3H should be modified to add “entering into agreements” after the phrase “including by”; and further move to direct the District’s legal counsel and General Manager to make those edits.

Director Van Loo moved, Director Keil seconded. President Williams called for a vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

Treasurer Knudson voiced how impressed he was by staff efforts to research and write the Resolution and Declaration. General Manager Chaplen thanked District legal counsel Tommy Brooks and Laura Westmeyer for their work through the weekend in order to have everything ready for the Board meeting.

8. Declaration of State of Emergency

General Manager Chaplen reviewed the proposed modifications to the Declaration.

Treasurer Knudson inquired about the effective end date. Director Keil asked when the Governor’s order to close schools ended. Human Resources and Payroll Manager Binkowski-Burk confirmed the date as April 28, 2020.

District legal counsel Tommy Brooks clarified modifications to the Declaration.

Director Keil and General Manager Chaplen discussed possible effective end dates. Secretary/Vice President Gornick suggested modifying the effective end date to the next Board meeting at which time the Board could discuss extending the State of Emergency. There was unanimous agreement.

General Manager Chaplen discussed the District Backflow Program and the Board’s request for continued updates on the progression of non-compliance noticing. She stated that while non-payment shut offs have been terminated during the State of Emergency, backflow non-compliance violation shut offs are still being considered for endangering the water supply.

Consultant Rob Moody inquired to the value of law enforcement presence during the shut off. General Manager Chaplen responded that the District is seeking civil resolution to the matter.

President Williams asked for the geographic area in which the backflow violation is located. Field Operations Manager Knapp responded.

General Manager Chaplen discussed the postponed plaque dedication for Lynn Fischer due to current social distancing measures.

Treasurer Knudson directed General Manager Chaplen to make a decision on continued shut

offs due to backflow violations noting that it is for the good of the whole. Secretary/Vice President Gornick inquired if the violator was behind on payments. Field Operations Manager Knapp and General Manager Chaplen confirmed that is not the case.

Treasurer Knudson discussed the need to take care of employees that are exposed to the virus or are self-quarantining. Human Resources and Payroll Manager Binkowski-Burk discussed the many options available to staff at this time. Director Van Loo and Human Resources and Payroll Manager Binkowski-Burk discussed the Oregon Bureau of Labor and Industries (BOLI) clarifications on how to use sick leave in accordance with the Oregon sick leave law.

Treasurer Knudson confirmed expectations for General Manager Chaplen and Human Resources and Payroll Manager Binkowski-Burk to create policies and inform staff.

Director Van Loo inquired about the District sick leave donation policy. Human Resources and Payroll Manager Binkowski-Burk confirmed the policy but voiced concern that staff may not donate in a time of uncertainty. However, she reported that the proposed Federal and State house bills will certainly cover employees.

Director Keil inquired how many staff are currently working from home. Human Resources and Payroll Manager Binkowski-Burk provided an update on the staff eligible and participating in a work-from-home setting. General Manager Chaplen reiterated the fluidity of the situation that could continue to change throughout the week and month.

District legal counsel Tommy Brooks wrote a motion to adopt the Declaration of State of Emergency with modifications. District Recorder Casey read the motion aloud.

I move to adopt the declaration with the following modifications: section 2H should be modified to add "entering into agreements and" after the phrase "including by"; in section 4, the reference to "Board Member" should refer to the "President or the President's then designated successor"; in section 4, reference to the "District Manager" should be "General Manager"; in section 5, the date should be April 21, 2020; and further move to direct the District's legal counsel and General Manager to make those edits; and for the General Manager to return to us on April 21, 2020 to determine if the State of Emergency can be concluded or needs to be extended.

Director Keil moved, Director Van Loo seconded. President Williams called for a vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer Knudson; Directors Keil and Van Loo.

MOTION CARRIED

District legal counsel Tommy Brooks wrote a motion to appoint a Board succession line. District Recorder Casey read the motion aloud.

I move to appoint the following positions as the temporary successor to the President of the Board if the President is unavailable: Secretary/Vice President, Treasurer, most tenured remaining Board member, and least tenured remaining board member.

Secretary/Vice President Gornick moved, Treasurer Knudson seconded. President Williams called for a vote. Voting Aye: President Williams; Secretary/Vice President Gornick; Treasurer

Knudson; Directors Keil and Van Loo.

MOTION CARRIED

District legal counsel Tommy Brooks clarified that the Board succession line needed to be approved tonight, but that a more formal Resolution can be passed by the Board at a later date. General Manager Chaplen slated that Resolution to be on the next meeting's agenda.

9. Department Reports

- **Finance Report**

Consultant Rob Moody summarized the Finance Department Board Report highlighting continued work for the upcoming Budget Committee meeting as well as recruitment for the open Junior Accounting Specialist position. Human Resources and Payroll Manager Binkowski-Burk noted that there are over 100 applicants and that the current temporary Accounts Payable Specialist has applied for the position and is a strong candidate. Treasurer Knudson inquired to whether there would be a finder fee if the temporary staff was hired. Human Resources and Payroll Manager Binkowski-Burk confirmed and added that recruitment would close on Wednesday, March 18, 2020 with interviews and hiring to take place over the next few weeks. General Manager Chaplen noted that conducting interviews during a State of Emergency would be a challenge.

President Williams inquired to the scheduled Budget Committee meeting on March 31, 2020 and whether it would take place due to the current State of Emergency. General Manager Chaplen stated that staff had been working on alternative methods by which the Board could engage public comment during the budgeting process. Consultant Rob Moody discussed the perceived conflicts between Oregon Local Budget Law, Public Meeting Law, and current Governor directives.

Director Keil inquired about video broadcasting Board meetings during this time. General Manager Chaplen stated that the public must be able to give input in the budget process and a one-way broadcast would not meet those requirements. Treasurer Knudson offered online meeting software as a possibility.

District legal counsel Tommy Brooks responded that the use of alternative means of communication is acceptable for regular meetings if there are accommodations for public that do not have access to the technology being used. He noted that the Budget Committee meetings are a much different process because there must be interaction with the governing body during the process and that the Special Districts Association of Oregon is working on relieving pressure at the state level.

Treasurer Knudson asked about the difference between the scheduled work sessions and the budget meetings on the Budget Committee calendar. Consultant Rob Moody confirmed that the first meeting scheduled is an orientation. Director Keil clarified that the first meeting is for context and not to discuss the budget. General Manager Chaplen agreed that the logistics of the Budget Committee meetings still need to be refined and that staff are focused on facilitating the upcoming Board Retreat.

Consultant Rob Moody reported on the financial audit corrective action plan that satisfies the legal requirements of a response to the Secretary of State. He reported that the specific action plan will be outlined for the Board at the next meeting.

Consultant Rob Moody discussed the non-revenue water report of which staff is still verifying meter information in the billing system and highlighted issues surrounding meter sampling.

Treasurer Knudson offered for the focus to be on the largest meters and the highest revenue customers. Consultant Rob Moody agreed for the first sample to be large meters but noted that the largest volume of District meters are small meters.

Director Keil inquired about the reasoning behind the different sets of data on District meters. Consultant Rob Moody explained that historically there have been various sets of data on meters collected throughout the years by different departments including a handwritten card system, a GIS system, a permitting database, as well as an old billing system.

President Williams asked if there would be a point in time that there is a better data set than handwritten index cards. Consultant Rob Moody stated that need is what is driving the current staff response. Field Operations Manager Knapp added that the District also has a work order system. General Manager Chaplen noted that the District is very focused on asset management and truing up databases.

Director Keil emphasized that perfect asset management may be an aspiration but knowing if the District has been charging incorrectly takes precedence. Director Keil agreed with Treasurer Knudson to begin with large meters and stressed the importance of correctly coding the billing system. Consultant Rob Moody agreed and noted staff effort to be efficient and effective simultaneously.

President Williams stressed the importance of this project to fix the revenue hole noting that it is a problem created by past Boards and could have been prevented. Consultant Rob Moody provided context for the lengthy process and assured timely implementation of a solution. President Williams stated that he would not be comfortable with a rate increase until this problem is solved. Director Keil agreed that more information on non-revenue water was needed.

General Manager Chaplen and President Williams discussed the great efforts staff make on a daily basis to provide excellent customer service. They concurred that District priority should be to give staff the resources they need to continue closing revenue holes.

Director Keil noted no opposition to sampling if a strong sample can be found.

- **Plant Operations Report**

Plant Superintendent Mendenhall detailed the Plant Operations Board Report commenting on rainfall, plant performance, and detailing the new Treatment Plant Work Order Summary graph. He also reported on possible causes of the fungus and/or filament in the basins and the remedy of strategic hosing.

Director Keil inquired about the Hazardous Materials Annual Report, specifically where the hazardous materials are located. Plant Superintendent Mendenhall replied that while there are not many, the hazardous materials are located at the treatment plant.

Director Keil commended the preventative work shown on the Treatment Plant Work Order Summary graph.

- **Technical Services Report**

District Engineer Rice overviewed the Technical Services Board Report detailing updates to the Capital Project Tracker.

Director Keil inquired about EcoBiz. District Engineer Rice replied that the Technical Services team is assessing the non-profit organization as an opportunity for education and environmentally friendly business certification. He noted that the organization promotes good businesses within the community. Director Keil spoke to the historical value of rewarding businesses that work to exceed permitting standards and noted that the aggregate result is substantial and well worth the effort.

District Engineer Rice mentioned the public requests for business information and the District cost savings if EcoBiz were to mitigate the use of harmful chemicals through education. Director Keil remarked that the District may find a business champion of the program.

- **Field Operations Report**

Field Operations Manager Knapp outlined the Field Operations Board Report commenting on the heightened service request numbers due to the new detection capabilities of the water meters.

President Williams inquired about the number of customers who have fixed leaks due to the new detection measures. Field Operations Manager Knapp responded that leak detection is a good feature for the customer.

Director Keil asked about the elimination of the 1200Z permit testing requirements. Field Operations Manager Knapp replied that the change is in the DEQ testing requirements of the industrial water leaving the treatment plant, which is now being routed back into the plant and does not leave the site. Director Keil clarified that the testing is a result of the industrial water being treated by the plant

Secretary/Vice President Gornick inquired about the contracting process for biosolids hauling. General Manager Chaplen replied that further exploration of the process will be included in the budget process.

10. Call for Public Comment

There was no public present.

11. Business from the Board

Director Keil reported on the North Clackamas Chamber Public Policy meeting highlighting topics regarding the homeless housing measure and the Clackamas County Sheriff's presentation on drugs, crime, the homeless population, and mental health funding.

Secretary/Vice President Gornick noted that many Mayors are requesting to remove the "Here Together" measure from the May ballot. Director Keil confirmed. Director Van Loo stated that no one at the state or local level had dealt with mental health issues. Treasurer Knudson conjectured on how the COVID-19 pandemic will affect the upcoming election cycle.

Treasurer Knudson reported on the Oak Grove Community Council meeting highlighting a discussion regarding giving charitable donations to the community and a visioning conversation surrounding community services.

Secretary/Vice President Gornick mentioned that Ernie Platt, Sunrise Water Authority Board of Directors member, had passed away. Director Keil talked about attending the celebration of life event before he died.

Secretary/Vice President Gornick reported on the Clackamas County C4 Coordinating Committee meeting which included an Oregon Department of Transportation presentation on the Interstate 5/Interstate 205 Tolling Project.

President Williams reported on the Jennings Lodge Community Planning Organization meeting which included a presentation by Clackamas Federal Credit Union noting their new location in the old Safeway building will include a large public meeting room.

Secretary/Vice President Gornick inquired to whether Michael Besner gave an update regarding the Jennings Avenue project. President Williams confirmed and updated the Board on the status of the project with construction slated for 2021.

President Williams stated that the Oak Lodge Water Services District Board of Directors was complimented during the Jennings Lodge Community Planning Organization meeting for listening to citizen concerns regarding the Jennings Lodge Wetlands Nature Park.

Director Van Loo gave a verbal report on the North Clackamas Chamber of Commerce State of the Cities on March 12, 2020. She relayed the Mayors of the City of Gladstone and the City of Milwaukie reports on new projects and City Hall buildings. Director Van Loo commented that she was impressed by the City of Gladstone Mayor's presentation and that the entire event was more positive than the North Clackamas Chamber of Commerce State of the Counties.

Director Keil mentioned that she, Director Van Loo, and Treasurer Knudson all attended the North Clackamas Chamber of Commerce State of the Counties. Treasurer Knudson

commented that the presenting County Commissioners seemed to be passionate on the subjects they presented.

There was no further Board business.

9. Recess to Executive Session

President Williams recessed the Regular Board Meeting at 8:51 p.m.

President Williams convened the Executive Session at 8:58 p.m. under ORS 192.660(2)(f) to consider information or records that are exempt by law from public inspection and ORS 192.660(2)(d) to conduct deliberations with persons designated by the governing body to carry on labor negotiations.

General Manager Chaplen gave a brief overview of the purpose of the executive session, which was to consider information exempt from public disclosure. Specifically, the Board received a presentation from the District's legal counsel based on a memorandum the District's legal counsel prepared. The Board members generally discussed their thoughts on the memorandum and asked clarifying questions of the District's attorney.

Human Resources Manager Binkowski-Burk and District legal counsel Chris Duckworth gave an update on the first two collective bargaining sessions with AFSCME. Mr. Duckworth gave advice and recommendations regarding the District's bargaining strategy moving forward.

10. Adjourned Executive Session

President Williams adjourned the Executive Session at 10:30 p.m.

No decisions were made as a result of the Executive Session.

11. Adjourn Regular Board Meeting

President Williams adjourned the Regular Board meeting at 10:30 p.m.

Respectfully submitted,

Kevin Williams
President, Board of Directors

Date: _____

Paul Gornick
Secretary/Vice President, Board of Directors

Date: _____



**BOARD OF DIRECTORS
[REMOTE] SPECIAL MEETING MINUTES – 1:00 P.M.
MARCH 26, 2020**

Board of Directors – Members Present via Zoom:

Kevin Williams	President
Paul Gornick	Secretary/Vice President
Mark Knudson	Treasurer
Susan Keil	Director
Ginny Van Loo	Director

Board of Directors – Members Absent:

None

Oak Lodge Water Services Staff – Present via Zoom:

Sarah Jo Chaplen	General Manager
Laural Casey	District Recorder
Jason Rice	District Engineer

Visitors and Consultants – Present via Zoom:

Rob Moody	Merina & Company, LLP
Tommy Brooks	Cable Huston, LLP

1. Call to Order

President Williams called the meeting to order at 1:00 p.m.

2. Meeting Facilitation Protocols

General Manager Chaplen asked District Recorder Casey to facilitate a roll call. District Recorder Casey facilitated the roll call of Board members, staff, and consultants; confirming a Board quorum.

General Manager Chaplen overviewed the general protocols of a virtual meeting due to the current COVID-19 pandemic. She asked Secretary/Vice President Gornick to share his experience attending a virtual meeting as the Board Liaison for Sunrise Water Authority. Secretary/Vice President Gornick relayed the events of the virtual meeting and lessons learned to address the potential for participants to talk over each other.

General Manager Chaplen requested questions and comments from the Board regarding the general protocols. Director Keil asked about muting oneself during the meeting. General Manager Chaplen explained the process of muting the microphone in the Zoom application and District Recorder Casey's ability to mute participants should the need arise.

3. Call for Public Comment

President Williams asked District Recorder Casey if there were any members of the public in attendance. District Recorder Casey confirmed there were none. President Williams reserved the right for members of the public to speak at the end of the meeting.

4. Audit Review

Financial Consultant Moody overviewed the purpose for the Corrective Action Plan Matrix stating that the fiscal year 2018/2019 audit report was positive overall. He noted the opportunities given by the auditors to improve internal processes as the items within the Corrective Action Plan Matrix.

President Williams asked if the presentation materials were understood. Directors Van Loo and Keil replied affirmatively. Treasurer Knudson replied affirmatively and asked if the Corrective Action Plan Matrix was consistent with the letter sent to the Secretary of State. Financial Consultant Moody replied that the letter was less detailed but addressed the same items. Secretary/Vice President Gornick Paul replied that the Corrective Action Plan Matrix was understood.

President Williams asked General Manager Chaplen, District Engineer Rice, and District legal counsel if the materials were understood. All replied affirmatively.

President Williams also understood the materials and inquired about the potential for these items to be included in the next financial audit and the effect it would have on the District's position with the Secretary of State. Financial Consultant Moody explained that the Corrective Action Plan Matrix includes dates that allowed for most of the items to be completed before the next financial audit.

Financial Consultant Moody continued a general overview of the items addressed on the Corrective Action Plan Matrix before requesting questions from the Board regarding specific items.

Director Van Loo inquired about the Labor and Overhead Costs and asked for proper identification of internal labor. Financial Consultant Moody explained how internal labor costs are calculated and spoke to the inclusion of such in the Corrective Action Plan to correctly and efficiently account for those costs in the future.

Director Van Loo inquired about the Physical Inventory of Wastewater Inventory asking why a report would only be generated annually. Financial Consultant Moody stated that the report need only be generated once a year for the purpose of the financial audit but confirmed that internal staff could generate reports on a more frequent basis should they be necessary.

Director Van Loo inquired about Inventory Costs stating that most businesses update inventory instantaneously. Financial Consultant Moody agreed emphasizing the auditor's concern specifically in how the District valued the inventory at the end of the year. Historically the methodology for capturing costs was not consistent and the Corrective Action Plan would

resolve the issue.

Director Van Loo inquired about Obsolete Inventory reporting on the procedures followed by the General Manager during the Director's time on Sanitary Board of Directors. Financial Consultant Moody clarified that this item is regarding materials and not capital assets, all of which are tracked and reported in various ways.

Director Van Loo inquired about Listing of Public Procurement Contracts and whether there was a current tracking system. Financial Consultant Moody confirmed that the District is currently tracking contracts and procurement in each department but stated that there is no standardized system or central location. Director Van Loo asked how staff manages the varied completion dates of District contracts. Financial Consultant Moody explained the auditor's concerns regarding District contracts and relayed District Recorder Casey's responsibility to manage and retain documents based on the state retention schedule.

Director Van Loo inquired about Purchase Orders, specifically why the District only maintains purchase orders for inventory items over \$500. Financial Consultant Moody stated that the balance between time and effort is key in the reasoning behind not requiring purchase orders for items under \$500. He explained that financial best practice usually does not require an approval process for purchases under \$500 and therefore the audit does not review them.

Director Keil inquired about Exceptions and whether there were indications that the District may have currently unknown problems. Financial Consultant Moody explained an auditor's perspective on documentation, that if it is not documented, the action did not occur, and the proposed process that will align District procedures with audit documentation requirements. Director Keil commented that split control is what results in process inaccuracy. She asked if the current software has the capability to route documents through the sign-off process. Financial Consultant Moody detailed the capabilities of Springbrook, the current financial software noting that many of the issues the District has had are due to quick implementation and inadequate training. He stated that the District has several policy and procedures in place, but that they have not been enforced. Financial Consultant Moody also indicated that the item is on the Corrective Action Plan for process clarity and that there is no evidence of mispending or wrongdoing.

Director Keil commented that she is interested in monitoring the District's progression through these items. Financial Consultant Moody agreed.

Treasurer Knudson remarked on the astounding number of items that have not been addressed by past audits and Boards. He acknowledged Financial Consultant Moody's effort to construct the Corrective Action Plan. Treasurer Knudson spoke to the overall District improvement needed. He suggested another column be added to the Corrective Action Plan Matrix to indicate the status of each item in a simple red, yellow, green pattern for monthly or quarterly Board reports.

Secretary/Vice President Gornick inquired to the reporting capabilities of Springbrook. Financial

Consultant Moody explained how workflows were routed through Springbrook. He overviewed the different types of controls within Springbrook and necessary financial reporting from a Finance Director. Secretary/Vice President Gornick noted his preference would be for reporting to be done automatically.

Secretary/Vice President Gornick asked whether manual adjustments would be accounted for in exception reporting. Financial Consultant Moody affirmed. Secretary/Vice President Gornick stated his belief that the proposed Corrective Action Plan will work.

President Williams commented on the robust financial audit delivered by the new audit firm noting Financial Consultant Moody's detailed report.

Director Keil remarked on the unfortunate lack of automatic reporting capabilities with the current financial software and suggested researching additional modules. Financial Consultant Moody agreed and explained that staff will certainly be expanding the scope of use within the Springbrook modules utilized at the District.

General Manager Chaplen also noted appreciation for Moss Adams and updated the Board on the Junior Accounting Specialist position, which has been offered to the temporary employee. She stated that there has been preparation to maintain forward momentum in the financial department as the new Finance Director is hired, noting that Financial Consultant Moody will continue to facilitate the completion of the Corrective Action Plan.

5. Utility Billing System

Financial Consultant Moody detailed the staff report and outlined the current efforts to gather water meter data for cross referencing with the billing system. He proceeded to define the next steps in the non-revenue water verification plan.

Director Van Loo asked what testing one hundred percent of the District water meters would cost in time and resources. Financial Consultant Moody and General Manager Chaplen answered that the process would take a dedicated team of two staff one calendar year to complete.

Director Keil asked why the water meter testing was not conducted based on class of service. Financial Consultant Moody confirmed the current plan is to start with field verification of large water meters before moving on to verification of the billing system.

Treasurer Knudson verified the method by which the district is testing the physical performance of the water meters noting concern regarding the testing of the large water meters. Financial Consultant Moody stated that flow testing of the large water meters is outside of the current approach. District Engineer Rice confirmed discussion surrounding the testing of large water meters noting that General Manager Chaplen and Field Operations Manager Knapp would supervise the implementation of a plan. He stated that there have been reports of large water meters needing to be taken offline in order to be tested. Treasurer Knudson noted having received inconclusive responses from Field Operations Manager Knapp and reiterated the importance of regular testing of large water meters.

Treasurer Knudson requested that the Board receive regular updates on the status of projects pertaining to water meter testing.

General Manager Chaplen confirmed that Tory Wagoner, the non-revenue water auditor from Cavanaugh and Associates, believes the large water meters need to be tested regularly. She stated that the plan to do so is two-fold: how to begin testing as a regular practice and how to test what has been previously neglected. General Manager Chaplen discussed the decision process surrounding which large water meters are “testable” and “not testable.” District Engineer Rice clarified that even the “not testable” water meters are able to be tested, but they must be taken out of service to do so. Treasurer Knudson agreed and does not see a problem in coordinating and implementing a large water meter testing process.

Secretary/Vice President Gornick asked about the new standards making some water meters able to be tested and inquired if there was a bypass being used. District Engineer Rice confirmed.

Secretary/Vice President Gornick inquired about the costs of approving the staff suggested approach to mitigating the non-revenue water. General Manager Chaplen explained that a full analysis of cost has not been obtained but stated that there are staff suggestions that will need to be corrected even if there is no effect on non-revenue water. She cited verification of the billing system and District assets as examples of said staff suggestions. Secretary/Vice President Gornick outlined the advantages of knowing the cost-benefit analysis regarding staff suggestions and recuperated non-revenue water.

President Williams commented that the cost of a dedicated team of two to test water meters for one calendar year would be well over two-hundred thousand dollars noting that it would be worth the time and money if the outcome is recuperation of non-revenue water.

Director Keil stated that there is nothing that is a larger issue for the District than narrowing the revenue gap as we begin the budget process. She indicated that the non-revenue water will never disappear but that the District needs to focus on returning to the median range regardless of whether every residential water meter is tested or not. Director Keil placed an emphasis on understanding the non-revenue water before deliberating any rate increases in the budget process. Financial Consultant Moody conveyed staff awareness of Board concerns and noted the preliminary status of any budgetary rate impacts. Director Keil stated that the District has not addressed an issue that may have impacted the customer financially and hoped the District would not project a substantial rate increase before implementing a more robust financial model.

District Engineer Rice added that Tory Wagoner, from Cavanaugh and Associates, is currently developing a plan to minimize non-revenue water and identify the small amount of leakage that will always exist. Meanwhile staff are working on water meter projects to not duplicate the work that will be done upon the finalization of Tory Wagoner’s report.

President Williams commented that field staff have knowledge of problematic water mains and could potentially identify what areas in which to spend time and money. District Engineer Rice confirmed the inclusion of field staff during the planning process and the areas identified have been accounted for.

6. Sewer Lateral Ownership

District Engineer Rice began his report regarding sanitary sewer lateral maintenance using a PowerPoint presentation.

Director Keil experienced technical difficulties. President Williams paused the meeting until Director Keil had reconnected to the meeting.

Secretary/Vice President Gornick inquired about the purpose of the sewer cleanout that is located closer to the sewer main line and whether it was for District benefit. District Engineer Rice confirmed. Secretary/Vice President Gornick asked who is responsible for the sewer cleanout. District Engineer Rice stated that the District is responsible for the sewer cleanouts between the property line and the sewer main.

Director Van Loo asked if every home has a sewer cleanout at the property line. District Engineer Rice answered that it is not common and is generally found on sewer laterals installed after the 1980s. He noted the arguments for and against mandating the construction of sewer cleanouts at the property line.

President Williams inquired about the inflow and infiltration opportunities between the different types of pipe materials. District Engineer noted the various cases of inflow and infiltration at a sewer clean out regardless of pipe material.

Secretary/Vice President Gornick inquired about the process of the lateral inspection asking if entry would be made from the sewer cleanout or from the sewer main. District Engineer Rice stated that the preference would be to use the sewer cleanout but reiterated that not every property has a sewer cleanout. He also discussed the various obstacles concerning TVing a sewer lateral from the sewer main.

Treasurer Knudson verified that sewer laterals could be replaced while replacing connecting sewer main lines at a significant cost reduction. District Engineer Rice confirmed and explained the current operating plan versus the proposed plan.

Director Keil asked how much money is currently spent per year on failed lateral repair. District Engineer Rice replied that the District currently budgets about one-hundred thousand dollars each year for lateral repair. He noted that the budget had been recently increased and that before fiscal year 2019/2020 there was only about thirty thousand dollars appropriated for sewer lateral repair or replacement.

President Williams inquired to whether other alternatives to dig and replace have been researched noting cure in place liners as an option. District Engineer Rice confirmed current and historical research of other alternatives and each would be addressed on a case-by-case basis.

Secretary/Vice President Gornick inquired about the number of municipalities that maintain the entire sewer lateral and whether there are any municipalities requiring the property owner to maintain the sewer lateral. District Engineer Rice confirmed that across Oregon there is about fifty percent of collections providers that maintained the sewer lateral all the way to the sewer main and fifty percent that required the property owner to do so.

Director Keil noted that this is the same issue as before but that the bigger priorities are currently emergency water interties and the non-revenue water audit. She stated that the District cannot afford to begin a project like this. President Williams agreed noting that identification of this project was made before the water maintenance deferrals came to the Board's attention. Director Van Loo agreed. Treasurer Knudson agreed but inquired to how the District could gather information to populate the asset database and in turn make smarter decisions when this project does become a priority. Director Keil agreed. District Engineer Rice confirmed the need for continuing training and collaboration with the sewer crew to identify sewer lateral issues. Treasurer Knudson agreed for the need of simplified information gathering. Director Keil suggested a standard operating procedure for the process. District Engineer Rice offered a plan to extend sewer lateral maintenance opportunities to property owners while the District is completing sewer main repairs. Director Keil asked how many property owners know that their lateral needs to be replaced. District Engineer Rice replied that at least ninety-five percent do not know.

General Manager Chaplen asked District legal counsel Brooks and District Engineer Rice how the Board would revoke a previously made decision. District Engineer Rice stated that the Rules and regulations would need to be revised before presentation to the Board as an ordinance with a public hearing. District legal counsel Brooks framed the presentation as having two solutions: to programmatically address the issue or to respond to issues on an as-needed basis each year. He clarified that the decision is a separate discussion from whether to take on the maintenance of sewer laterals at all. District legal counsel Brooks outlined that historically the District has owned and maintained the sewer lateral within the public right-of-way. He stated that the question is whether the Board would like to shift the ownership and maintenance obligation to the adjacent property owner.

Director Keil clarified the options are to own and maintain the sewer lateral programmatically or to own and not address the maintenance. District Engineer Rice stated that the intent was for the District to either own and maintain the sewer laterals or to not own or maintain the sewer laterals at all. District legal counsel Brooks identified a third option in which the District owns the sewer laterals and maintains them on an as-needed basis.

Director Keil inquired whether the two hundred sewer laterals that have been replaced were owned by the District. District Engineer Rice confirmed that even before the District consolidation the District owned and maintained the sewer laterals in the right-of-way. He outlined the lifespan of a sewer lateral and reiterated the fact that some of the District's sewer laterals have reached the point of failure and the number will only continue to grow.

Director Keil inquired whether there could simply be a continuation of the current program to repair failed or problematic sewer laterals. District Engineer Rice confirmed that the District would continue to pay for conflicts created by the District that impacted a sewer lateral. Treasurer Knudson agreed with Director Keil to continue the ownership model with a possible increase in the budget and approach the situation from an asset management strategy.

Director Van Loo asked who installs the sewer laterals in new home connections. District Engineer Rice explained that each new home pays a System Development Charge and installs a sewer lateral that is inspected by District staff. Director Van Loo clarified that the District owns the laterals that the property owner installed. District Engineer Rice confirmed and explained the development process. Director Van Loo inquired about who maintains the forty-year-old sewer

laterals for established homes and properties. District Engineer Rice explained that the District claims ownership the sewer laterals within the right-of-way but that there is currently no asset management or robust maintenance plan for them. Director Van Loo voiced agreement to not take on a sewer lateral maintenance plan. She asked if the Sanitary District had always owned and maintained the sewer laterals. District Engineer Rice stated that the Sanitary District had always claimed ownership but had essentially ignored the sewer laterals and never maintained them.

General Manager Chaplen explained that if the District were to include the sewer laterals as an asset that there would be yearly rates and repairs. She added that the proposed plan is to not include the sewer laterals as an asset or repair them in a systematic manner noting that if the decision is made to keep the sewer laterals as an asset but not regularly maintain and repair them it could lead to higher rate increases in the future as there would be fewer years left to mitigate the problem.

President Williams proffered that payment on the Treatment Plant bonds will be complete in ten years at which time the District would be in a better financial standing to implement a project of this magnitude. He cautioned that if the sewer laterals are wearing out that the sewer mains are as well and stated that there should be a policy to replace sewer laterals when sewer mains are replaced under the same project expenditures. Director Keil agreed. District Engineer Rice stated that the District could potentially have mass failure of sewer laterals with no replacement mechanism in place if action is not taken early. He added that replacing any sewer laterals at the same time as the attached sewer mains were being replaced would cause project costs to rise and noted the need to standardize how information is gathered on the sewer laterals.

Secretary/Vice President Gornick inquired whether the recent sewer lateral failures are in certain topographical areas. District Engineer Rice had not seen a pattern to indicate that.

Secretary/Vice President Gornick asked if there are currently any funds being allocated to this project. District Engineer Rice confirmed that at least sixty thousand dollars has been allocated directly to capital planning noting that there is also some money set aside for emergency maintenance of sewer laterals. Secretary/Vice President Gornick supported allocating more than sixty thousand dollars and less than nine hundred thousand dollars to deal with possible sewer lateral issues.

Director Keil equated the issue to a homeowner's responsibilities noting that often not every project can be completed at the same time. She stated that if the project is not more important than another capital improvement project than it will need to be put on hold or split up into a multi-year solution. General Manager Chaplen clarified that projects will be budgeted for with a buffer for potentialities and that staff would keep the Board informed on an increase of sewer lateral issues. She agreed that sewer mains or other capital projects may be more important at this time and clarified that this presentation was in response to an earlier discussion on sewer laterals that needed more data information in the form of costs. District Engineer Rice explained the calculation behind a one hundred-year sewer lateral maintenance plan and the need for a discussion on what amount of money will fit District needs and ideologies.

7. Recess to Executive Session

President Williams convened the Executive Session at 3:35 p.m. under ORS 192.660(2)(e) to

conduct deliberations with persons designated by the governing body to negotiate real property transactions and ORS 192.660(2)(f) to consider information or records that are exempt by law from public inspection.

8. Adjourned Executive Session

President Williams adjourned the Executive Session at 3:43 p.m.

No decisions were made as a result of the Executive Session.

9. Adjourn Regular Board Meeting

Treasurer Knudson remarked on the success of the meeting and then noted that the format seemed to be a viable option for meetings during the COVID-19 pandemic. General Manager Chaplen thanked the Board for their patience and willingness to participate.

President Williams adjourned the meeting at 3:44 p.m.

Respectfully submitted,

Kevin Williams
President, Board of Directors

Paul Gornick
Secretary/Vice President, Board of Directors

Date: _____

Date: _____

STAFF REPORT

To Board of Directors
From Sarah Jo Chaplen, General Manager
Title Non-Revenue Water Audit Update – Phase III & IV
Item No. 4
Date April 13, 2020 for April 21, 2020

Summary

To update the Board of Directors on the M36 Non-Revenue Water Audit - Phase III: Economic Analysis and Phase IV: Cost Effectiveness of Intervention by Cavanaugh & Associates, P.A.

Background

Both Water Systems Consulting and Moss Adams, LLP identified a difference between the amount of water purchased by the District and sold to our customers. After examination of Oak Lodge Water Services District history through 2014, prior to consolidation in January 2017, this disparity appeared to have been present for multiple years.

It is important to understand that all water utility distribution systems incur leakage (real losses). Similarly, all water utilities fail to recover revenue from all the water that is (or should be) billed to customers (apparent losses). However, while every water system is unique, all water utilities should employ leakage control and revenue recovery programs that strive to keep losses contained to appropriate, economically justified levels.

The American Water/Wastewater Association (AWWA) recommends that water utilities should track the annual volumes of water they manage, measuring not only the amount of water supplied to their customers, but also water used for operational purposes and water lost. The foundation of a water loss control program is the annual water audit. An audit is a systematic examination of records and financial accounts to check their accuracy and ensure the viability of the district being audited. AWWA's water audit methodology is the best practice approach recommended for North American water utilities to employ, which provides consistent and reliable performance tracking and benchmarking for and among water utilities.

At this time, Phase I has been completed. During this phase the uncertainty in the benchmark water balance was assessed for further analysis. This provided a calibration point for continued improvement. Phase II then validated the source data from the originating data systems feeding the water balance inputs and established statistical confidence levels on the water balance inputs. It focused on the utility billing data.

Phase III of the Oak Lodge Water Services District Non-Revenue Water Audit assesses the magnitude of volumes and costs between the current and optimal non-revenue water at the component and aggregate levels and designs a comprehensive, dynamic model to assist the District reach the economic level of water loss. Phase IV focuses on identifying the best strategies for the District to manage and reduce non-revenue water and improve the system efficiency, benchmarking, and data validity. This will enable the District to attain the economic optimal level of water loss through a programmatic approach rather than individual one-time projects. The establishment of a comprehensive program and the resulting impacts will take time.

Past Board Actions

February 2018	The Board approved contract with Water Systems Consulting (WSC) to begin a water master plan update.
May 2019	The Board approved contract for new financial auditor services with Moss Adams, LLP. The Board expressed their support for the new auditor, their process, their commitment to transparency, and their interest in making sure the audit reveals new ways of organizing the District's systems effectively.
October 2019	Board approved contract with Cavanaugh & Associates, P.A. to perform an M36 American Water Works Association (AWWA) Non-Revenue Water Audit Phase I and Phase II.
January 2020	After an intermediate procurement process the General Manager signed a contract with Cavanaugh & Associates, P.A. to perform Phase III and Phase IV of the Non-Revenue Water Audit.

Recommendation

Staff seeks feed-back and questions from the Board on the preliminary report from Cavanaugh & Associates, P.A. prior to the production of the full report on Phase III and Phase IV.

Attachments

1. Non-Revenue Water Audit Update - Phase III & IV Presentation



Oak Lodge Water Services Non-Revenue Water Analysis

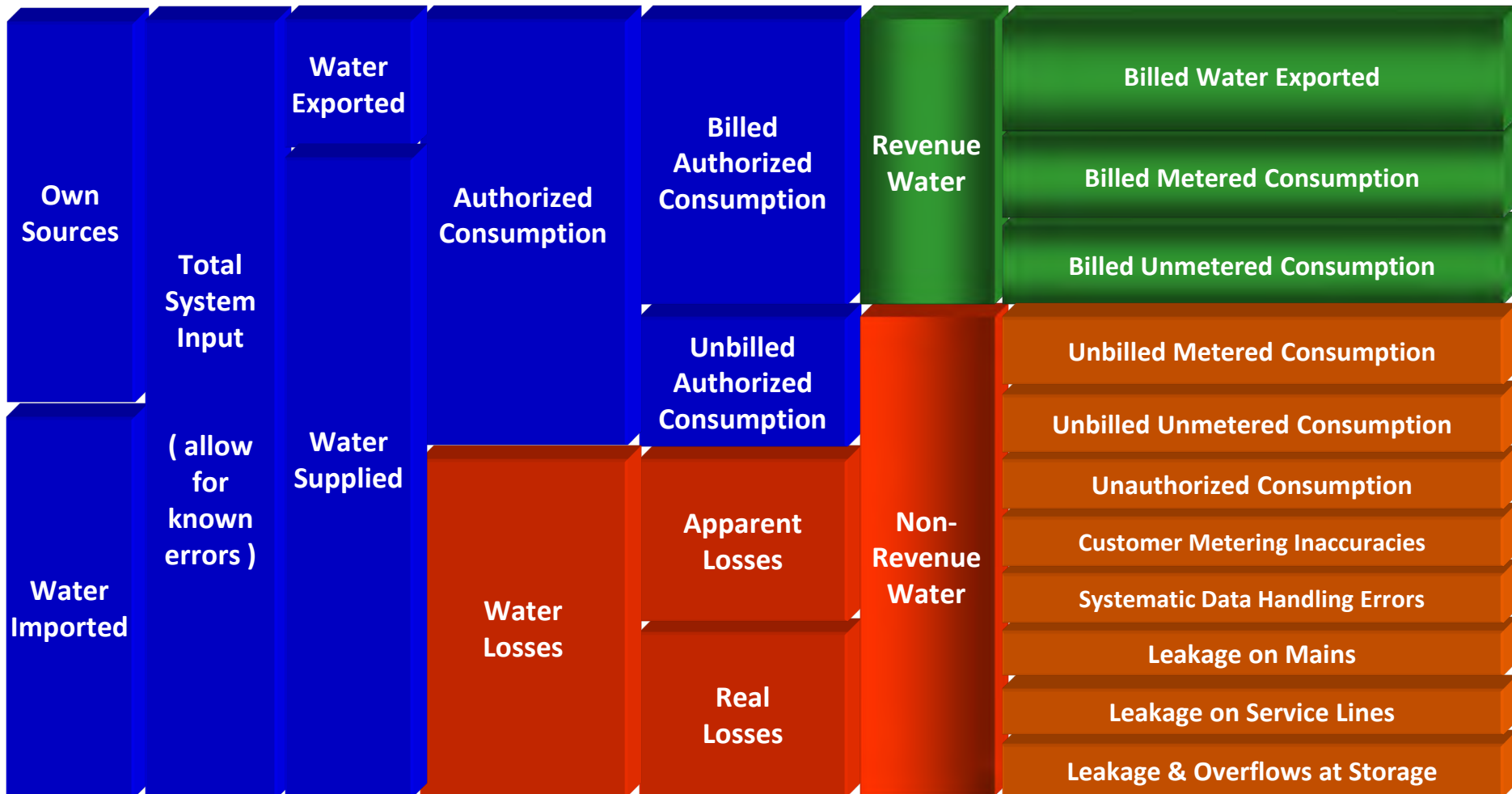
April Board Presentation

April 21, 2020

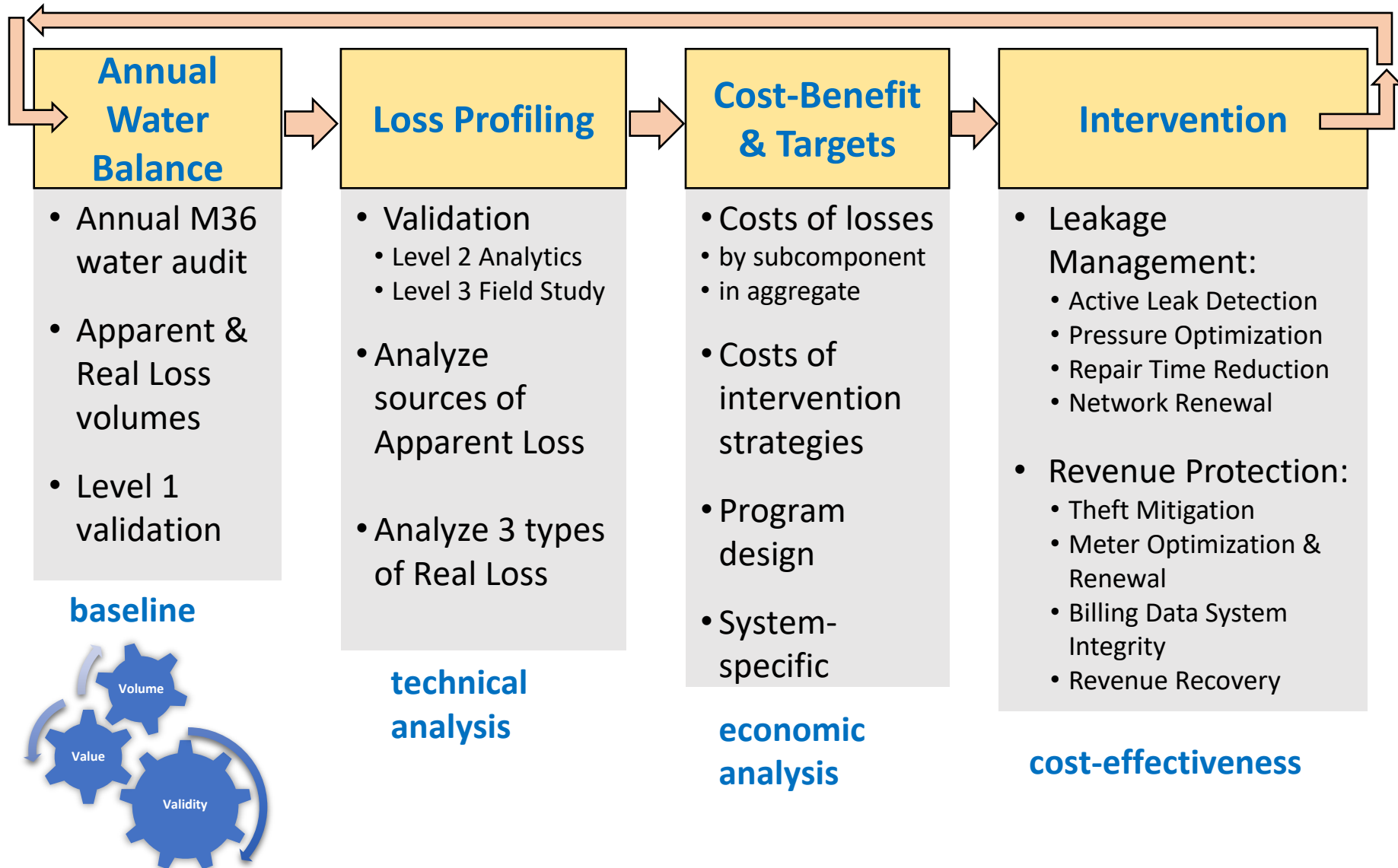


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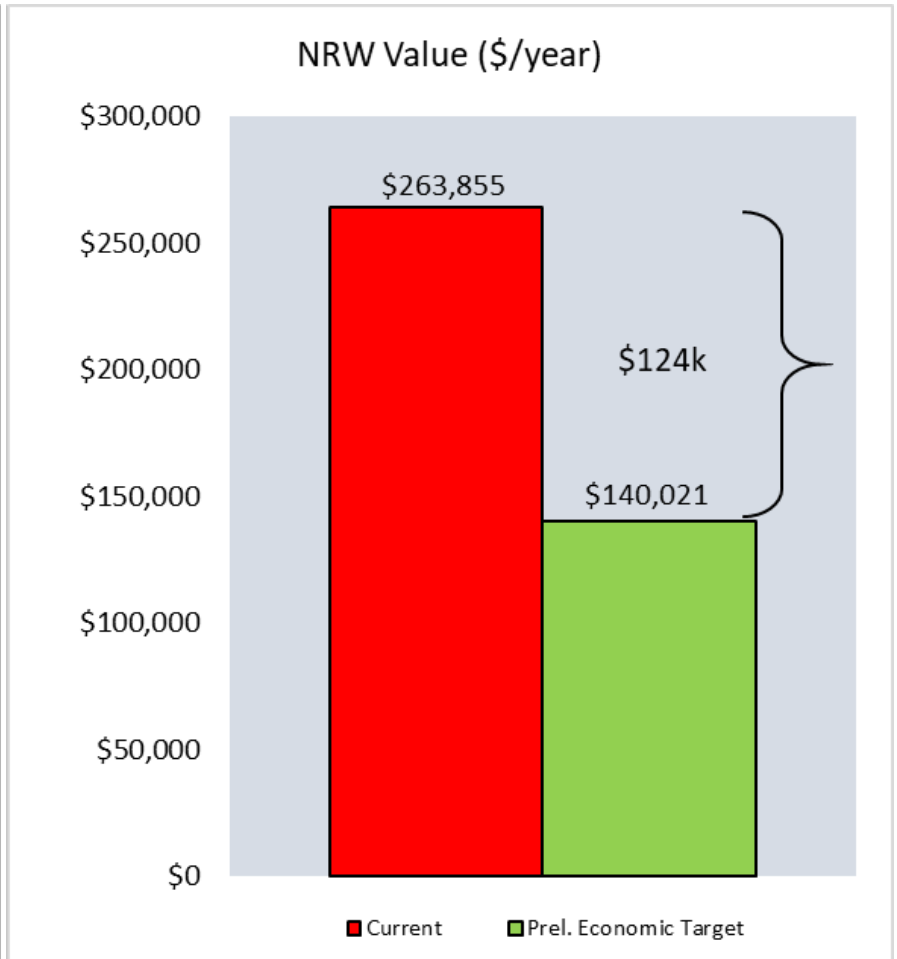
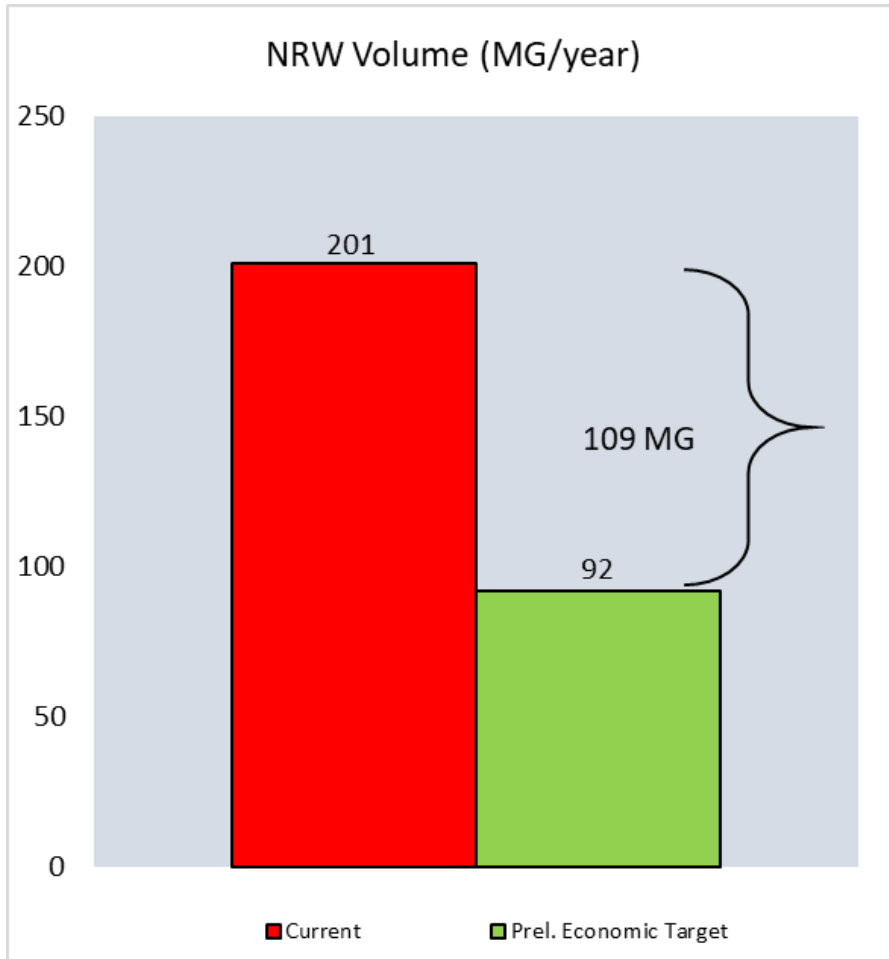
IWA/AWWA Standard Water Balance



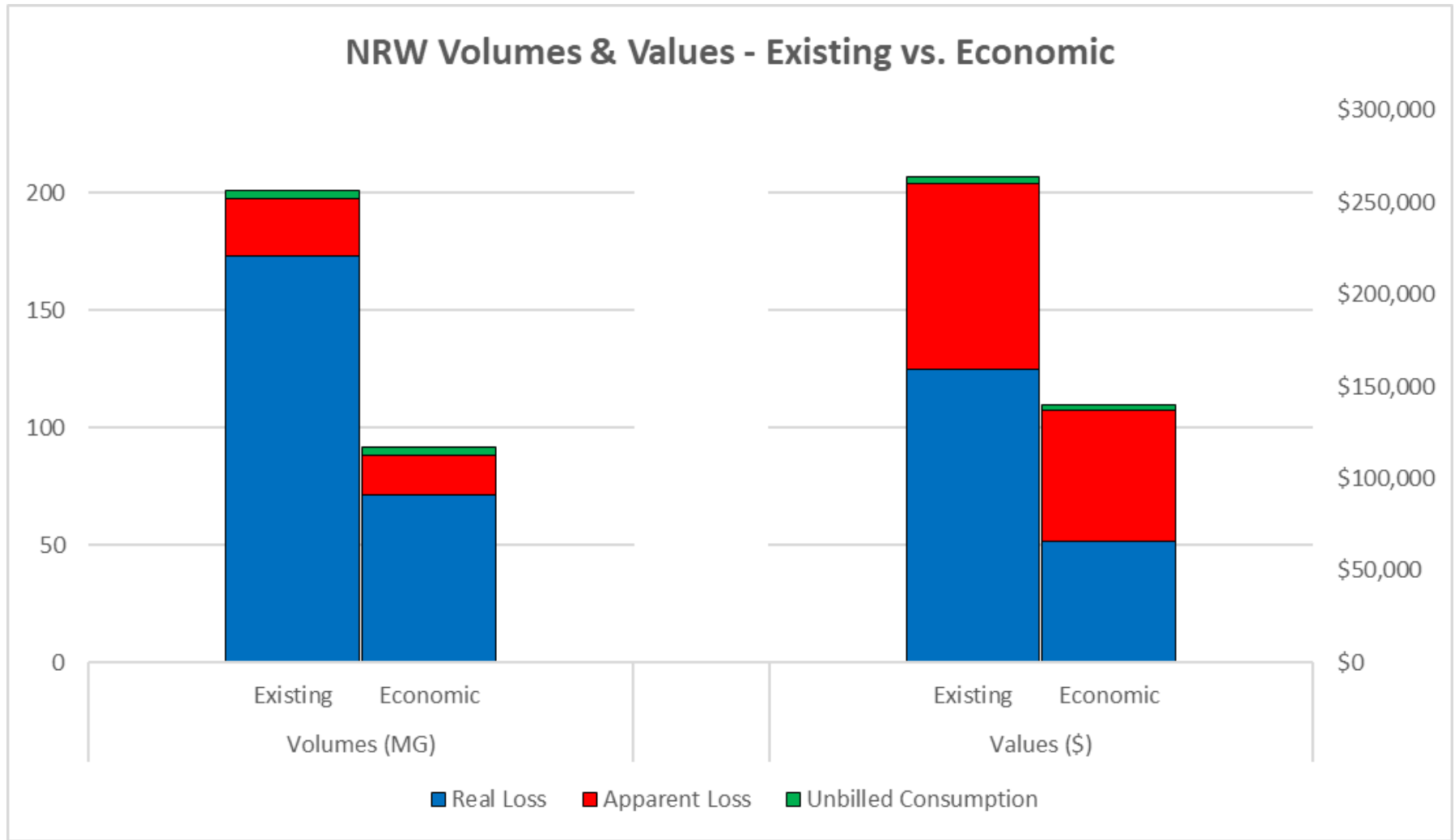
The Big Picture: Economic Intervention



Preliminary Economic Gap



Preliminary Economic Gap



Performance Indicators

- Volumes:

Volumes (MG)	Existing	Economic
Unbilled Consumption	3.7	3.7
Apparent Loss	24.1	17.0
Real Loss	173.2	71.2
Total	201.0	91.9

- Values:

Values (\$)	Existing	Economic
Unbilled Consumption	\$3,406	\$3,374
Apparent Loss	\$100,830	\$70,999
Real Loss	\$159,619	\$65,648
Total	\$263,855	\$140,021

Performance Indicators

- Operational Performance Indicators:

	Existing	Economic	
Normalized Water Losses	63.0	28.1	gal/conn/day
Normalized Apparent Losses	7.7	5.4	gal/conn/day
Normalized Real Losses	55.2	22.7	gal/conn/day
Infrastructure Leakage Index	2.9	1.2	

- Loss Cost Rates:

	Existing	Economic	
Normalized Water Losses	\$30.32	\$15.91	\$/conn/year
Normalized Apparent Losses	\$11.74	\$8.26	\$/conn/year
Normalized Real Losses	\$18.58	\$7.64	\$/conn/year

Establishing a Program

Program Components:

- Data Validity & Program Management
 - Regular Team Meetings
 - Monthly Data Tracking of Annualized Data
 - Alignment of Consumption & Production Data
 - Annual Top Down Water Audit
 - Supply Meter Verification
 - Annual
 - Billing Data Validation
 - Field Validation
 - Annual Account Analysis

Establishing a Program

Program Components:

- Unbilled Authorized Consumption:
 - Awareness and Tracking → Optimization
- Billing & Metering (Apparent Losses):
 - Unauthorized Consumption/Systematic Data Handling
 - Awareness → Optimization
 - Customer Metering Inaccuracies
 - Small Meters
 - Random Testing Program
 - Optimized Replacement
 - Large Meters
 - Targeted Testing Program
 - Optimized Replacement

Establishing a Program

Program Components:

- Leakage Management (Real Losses):
 - Immediate
 - Boundary Integrity
 - Proactive Acoustic Leak Detection
 - Existing Staff
 - Existing Equipment
 - Long Term
 - District Metered Areas
 - Upper & Lower Zone
 - Smaller Areas as applicable
 - Pressure Management

Recommended Implementation

	Year 1	Year 2	Year 3	Year 4	Year 5 to 10
Data Validity & Program Management					
Regular Team Meetings					
Monthly Data Tracking					
Annual Water Audit					
Supply Meter Verification					
Billing Data Validation					
Unbilled Consumption Management					
Regular Tracking & Estimation					
Billing & Metering					
Manual Meter Reading					
Large Meter Testing/Replacement					
Small Meter Testing/Replacement					
Leakage Management					
Boundary Integrity					
Acoustic Leak Detection					
Upper/Lower Zone - DMA					
Smaller DMAs					
Pressure Management					

STAFF REPORT

To Board of Directors
From Sarah Jo Chaplen, General Manager
Title Consideration of Declaration of State of Emergency Extension
Relating to COVID-19
Item No. 5
Date April 21, 2020

Summary

The Board of Directors holds the authority to declare and extend states of emergency for the Oak Lodge Water Services District.

Background

In response to the global pandemic and regional outbreak of COVID-19, the Oak Lodge Water Services District Board of Directors declared a State of Emergency relating to COVID-19 on March 17, 2020, to ensure that the District could perform all of its obligations and continue operating its systems.

The District initiated social distancing measures in March 2020. The goal of social distancing is to limit the number of interactions between people to reduce transmission of COVID-19. With or without such a reduction, the number of cases of COVID-19 is expected to dramatically increase. A significant number of cases could drastically limit the District's ability to maintain an adequate workforce and could even prevent the Board from fully performing its typical activities.

The Declaration, by its terms, currently ends the State of Emergency on April 21, 2020. At the time of the declaration, this timeline was consistent with Governor Brown's executive orders addressing the COVID-19 pandemic. Since that time the Governor issued an additional executive order that more comprehensively addresses the state's response to the pandemic and that encourages other units of local government to adhere to the executive order as much as possible. The Governor's new order will be in place indefinitely and until it is rescinded.

Past Board Actions

On March 17, 2020 the Board of Directors approved Resolution 2020-03 authorizing declarations of a state of emergency and certain actions during a state of emergency.

The Board of Directors subsequently declared a State of Emergency relating to COVID-19 with the intent to revisit the effective end date at the next regularly scheduled

meeting.

Concurrence

The General Manager and the District's legal counsel are prepared to explain the approach other entities have taken while declaring states of emergency and how the District would be affected by an extension of the Declaration.

Recommendation

Staff recommends the Board extend the Declaration of State of Emergency until the conclusion of one of the next Board meetings on either May 19 or June 16, 2020.

Alternatives to Recommendation

The Board can decline to extend the Declaration of State of Emergency.

Suggested Board Motion

"I move to approve Addendum No. 1 to the Board's March 17, 2020 Declaration of State of Emergency and extend the effective end date to _____, 2020."

Attachments

1. Addendum No. 1 to the Oak Lodge Water Services District March 17, 2020 Declaration of State of Emergency

OAK LODGE WATER SERVICES DISTRICT

**ADDENDUM NO. 1 TO THE
MARCH 17, 2020 DECLARATION OF STATE OF EMERGENCY**

WHEREAS, the Board of Directors (“Board”) of the Oak Lodge Water Services District (“District”) on March 17, 2020 declared a state of emergency due to the public health and financial threats posed by the highly infectious virus COVID-19 and authorized certain actions that may be taken during the emergency; and

WHEREAS, the March 17, 2020 *Declaration of State of Emergency* included an expiration date of April 21, 2020, upon which date the state of emergency would terminate; and

WHEREAS, the facts set forth in the March 17, 2020 declaration that gave rise to the state of emergency continue to exist and continue to constitute an emergency.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE OAK LODGE WATER SERVICES DISTRICT DECLARES:

Section 1. Continued State of Emergency. The Board finds that the facts set forth in the March 17, 2020 *Declaration of State of Emergency* continue to exist and continue to constitute an emergency and the Board hereby declares the District to be in a continued state of emergency.

Section 2. Effective Date. The expiration date of the March 17, 2020 *Declaration of State of Emergency* is hereby extended to _____, unless superseded or earlier terminated.

Section 3. Effect on Declaration. This Addendum No. 1 modifies Section 5 of the Board’s March 17, 2020 *Declaration of State of Emergency* replacing the date of April 21, 2020 with the date identified in Section 2 of this Addendum No. 1. All other terms of the March 17, 2020 *Declaration of State of Emergency* remain the same.

INTRODUCED AND ADOPTED THIS 21ST DAY OF APRIL 2020, EFFECTIVE AS OF THE DATE OF ADOPTION.

OAK LODGE WATER SERVICES DISTRICT

By _____
Kevin Williams, President

By _____
Paul Gornick, Secretary/Vice President

STAFF REPORT

To	Board of Directors
From	Sarah Jo Chaplen, General Manager
Title	Consideration of Resolution 2020-04 for Board Succession
Item No.	6
Date	April 21, 2020

Summary

The offices of the Board of Directors of the Oak Lodge Water Services District (“District Board”)—President, Secretary/Vice President, and Treasurer—are positions that exist to perform specific duties and functions. Pursuant to ORS 450.065 and ORS 264.430, the District Board chooses its officers each January. This resolution establishes a line of succession of authority for each of the offices in the event that an individual holding the position is temporarily unavailable to perform a needed function of that office.

Background

The District Board consists of five publicly elected officials who have appointed from among themselves a President, a Secretary/Vice-President, and a Treasurer. Each office has specific powers and duties assigned by law, as well as such powers and duties that typically accompany each position.

Prudent planning for the District includes being prepared for any scenario in which an officer is unavailable, and their function is required for a given action. This might occur during an emergency, or it might occur at any District Board meeting where an officer is absent. In such a situation, the proposed resolution identifies a line of succession for designated individuals to fulfill the officers’ duties and assume their function as required in each instance. Without this resolution, the Board would need to designate an individual to serve the function required by motion at each time of need.

Past Board Actions

On March 17, 2020 the Board of Directors approved a motion appointing a temporary succession line for the Board President for purposes of Resolution 2020-03 *Authorizing Declarations of a State of Emergency and Certain Actions During a State of Emergency*. The same line of succession for the Board President is reflected in this proposed resolution. If the resolution is adopted, that line of succession for a President pro tempore will apply indefinitely, even after the state of emergency has been lifted. In addition to a President pro tempore, this resolution designates a Secretary/Vice President pro tempore, and Treasurer pro tempore, for the same purposes.

Concurrence

The District's legal counsel has advised the General Manager in its formulation and approved it as to form.

Recommendation

Staff recommends the Board adopt the proposed resolution.

Alternatives to Recommendation

The Board can adopt the resolution by motion, either as presented or with modifications based on the Board's discussion. The Board can also decline to adopt the resolution.

Suggested Board Motion

"I move to adopt Resolution 2020-04 Approving a Line of Succession of Authority Among Directors of the Board in the Event of a Director's Unavailability."

Or

"I move to adopt Resolution 2020-04 as modified by _____."

Attachments

1. Resolution 2020-04

OAK LODGE WATER SERVICES

RESOLUTION NO. 2020-04

A RESOLUTION APPROVING A LINE OF SUCCESSION OF AUTHORITY AMONG DIRECTORS OF THE BOARD IN THE EVENT OF A DIRECTOR'S UNAVAILABILITY.

WHEREAS, the Board of Directors ("Board") of the Oak Lodge Water Services District ("District") is comprised of five publicly elected officials who form the governing body of the District; and

WHEREAS, pursuant to ORS Chapters 264, 450, and 198, the Board has appointed from among themselves a president, a secretary/vice president, and a treasurer; and

WHEREAS, the president, secretary/vice president, and treasurer have specific powers and duties assigned to each by law, as well as such powers and duties that typically accompany each position; and

WHEREAS, the Board wishes to designate a line of succession in the event that one or more of the individuals serving as president, secretary/vice president, or treasurer become temporarily unable or temporarily unavailable to perform their official duties.

NOW, THEREFORE, BE IT RESOLVED BY THE OAK LODGE WATER SERVICES BOARD OF DIRECTORS:

Section 1. Definitions. For purposes of this Resolution:

"Director" shall mean an individual holding an elected position on the Board that is not the President, the Secretary/Vice President, or the Treasurer.

"Unable" and **"unavailable"** shall have their ordinary dictionary meanings. The Board shall not be generally obliged to take any action to determine a member's inability or unavailability to perform an official duty, but if any member of the Board requests a vote of the Board to make such determination then the Board shall make the determination by motion.

Section 2. President Pro Tempore. The following individuals, in the below-listed line of succession, shall act as the president pro tempore in the event that the Board determines the President of the Board is unable or unavailable to perform an official duty, including acting as chairperson of the Board:

1. Secretary/Vice President
2. Treasurer
3. Director with the most tenure on the Board
4. Director with the least tenure on the Board

Section 3. Secretary/Vice President Pro Tempore. The following individuals, in the below-listed line of succession, shall act as the secretary/vice president pro tempore in the event that the Board determines the Secretary/Vice President of the Board is unable or unavailable to perform an official duty:

1. Treasurer
2. Director with the most tenure on the Board
3. Director with the least tenure on the Board

Section 4. Treasurer Pro Tempore. The following individuals, in the below-listed line of succession, shall act as the treasurer pro tempore in the event that the Board determines the Treasurer of the Board is unable or unavailable to perform an official duty:

1. Director with the most tenure on the Board
2. Director with the least tenure on the Board

INTRODUCED AND ADOPTED THIS 21st DAY OF APRIL 2020.

OAK LODGE WATER SERVICES DISTRICT

By _____ By _____
Kevin Williams, President Paul Gornick, Secretary/Vice President

STAFF REPORT

To Board of Directors
From Jason Rice, District Engineer
Title Consideration of Risk and Resiliency Assessment and Emergency Response Plan Contract
Item No. 7
Date April 7, 2020 for the April 21, 2020 Regular Meeting

Summary

Staff would like the Board of Directors to consider approving the General Manager to sign a contract for Engineering Services related to the completion of a Risk and Resiliency Assessment and Emergency Response Plan with Water Systems Consulting (WSC) in the amount of \$98,080.

Background

In January 2018, the Oregon Health Authority updated Chapter 333 Division 61 of the Oregon Administrative Rules (OARs) which covers Public Water Systems. The update included a new requirement in 333-061-0060.5.J for water system master plans to include a seismic risk assessment and mitigation plan for water systems located in high seismic risk areas (this includes Oak Lodge). The risk assessment must identify critical facilities, evaluate the likelihood and consequences of seismic failure, and provide a mitigation plan that may use a 50-year planning horizon for any capital improvements or additional studies. This update to the OARs was issued right after WSC was selected for the Water Master Plan but was included in the contract that was executed in March 2018.

On October 23, 2018, America's Water Infrastructure Act (AWIA) was passed, tasking the United States Environmental Protection Agency (EPA) with enforcing community water systems serving more than 3,300 people to conduct Risk and Resiliency Assessments and to develop an Emergency Response Plan. Although the law was passed in fall of 2018, it was not until the fall of 2019 that training and guidance documents were available on how to complete the self-certification process, which is why most utilities waited a bit before starting the process. The District's compliance deadline for completing the AWIA Risk and Resilience Assessment is June 30, 2021 and now it seems that there is little downside to proceeding and not waiting on better guidance.

The AWIA Risk and Resiliency Assessments are meant to help the District characterize our critical assets and the threats from both natural hazards and malevolent acts. Much of the work that WSC has done for the Water Master Plan overlaps with identifying

critical infrastructure and seismic hazards. The gap between the work that we have done so far and what AWIA requires, includes the following:

- Characterize non-water conveying assets that are still critical to operations, such as our IT system, the District office buildings, records, financials, etc.
- Characterize non-seismic or Clackamas River pollution/algae/curtailment risks, including malevolent acts (terrorism or vandalism), flooding, tornadoes, ice storms, etc.
- Follow the process and tools provided by AWWA and EPA to become eligible for FEMA protections
- Develop the Emergency Response Plan

The final report will be presented to the Board in Executive Session and stored in a manner as it will contain confidential guidance to best protect the District's assets.

Concurrence

While the District's Purchasing rules allows for direct appointment for Engineering Services under \$100,000, the District's legal counsel agrees that using Water Systems Consulting affords efficiencies that no other engineering firm can provide at this point.

Recommendation

Staff recommends awarding the contract to WSC as a Direct Appointment because:

1. They are qualified to do the work, and
2. They are already assisting other jurisdictions in meeting this requirement, and
3. Due to the Water Master Plan work, they are already familiar with many of the systems OLWSD has in place.

It should be noted there are a limited number of professionals doing this work at the level needed by Oak Lodge, in the timeframe required. There is a strict timeline which has been assigned by the EPA with a \$50,000 a day fine for being out of compliance.

Alternatives to Recommendation

The Board can choose not to award the contract and request that staff prepare a Request for Proposal, gather proposals, evaluate and select a preferred consultant to propose back to the Board. This process would take approximately 2 months.

Suggested Board Motion

"I move to authorize the General Manager to sign a contract with Water Systems Consulting to prepare a Risk and Resiliency Assessment and Emergency Response Plan for the District in the amount of \$98,080."

Attachments

1. WSC Proposal with Scope



3/24/2020

Mr. Jason Rice
Oak Lodge Water Services District
14611 SE River Road
Oak Grove, OR 97267

SUBJECT: PROPOSAL FOR PREPARATION OF RISK AND RESILIENCE ASSESSMENTS AND EMERGENCY RESPONSE PLAN FOR COMPLIANCE WITH AMERICA'S WATER INFRASTRUCTURE ACT

Dear Mr. Rice,

Water Systems Consulting (WSC) would like to sincerely thank the Oak Lodge Water Services District (District) for this opportunity to provide services for compliance with the America's Water Infrastructure Act (AWIA). To assist the District in compliance, WSC will facilitate a Risk and Resilience Assessment (RRA) and prepare an Emergency Response Plan (ERP). WSC is pleased to provide a proposal to build upon the work resilience work in the Water System Master Plan.

Our proposal is based on discussions with the District, a review of the vulnerability assessment and the existing ERP, both completed in 2003. The following is a summary of our understanding of the project followed by a proposed Scope of Services.

Project Understanding

The passing of AWIA in October 2018 requires water systems serving greater than 3,300 customers to complete an RRA and an ERP. Deadlines for completion are based on the number of customers served, and the District is required to complete an RRA by June 30, 2021 and an ERP by December 31, 2021. The District is aware of the need to complete these documents and has included budget in the 2020-2021 fiscal year for consultant support in compliance. WSC's familiarity with the District's system and previous work in determining the seismic resiliency measures results in a streamlined approach to AWIA compliance.

The attached items include a scope of work and WSC's estimated budget for the proposed scope of work. A budget of **\$98,080** has been estimated for the proposed scope of work and is provided attached for your review.

Thank you again for the opportunity to propose on this project. If you have any questions, please contact Scott Duren at sduren@wsc-inc.com and (503) 419-6336, ext. 400. You can also contact Kirsten Plonka at kplonka@wsc-inc.com and (858) 397-2617, ext. 304.

Sincerely,

Water Systems Consulting, Inc.

Handwritten signature of Scott Duren in black ink.

Scott Duren, PE
Principal in Charge & Vice President

Handwritten signature of Kirsten Plonka in black ink.

Kirsten Plonka
Project Manager

1. Attachments: Scope of Services & Fee Estimate

SCOPE OF WORK

TASK 0.0 PROJECT MANAGEMENT

0.1 Project Administration

- Provide project administration and management, including invoicing and preparation of monthly progress reports in a format that is acceptable to the District. The progress report should summarize the work performed during the period, work planned for next period, potential project issues, and the status of the project, including schedule and budget.
- Prepare a detailed work plan and project schedule to be updated as needed to reflect changes and District's direction. The work plan should include team member roles and responsibilities, project procedures, and project priorities.

0.2 Project Updates and Coordination

- Schedule and conduct at least three (3) meetings with District staff throughout the course of this project. The Consultant shall specify in the proposed scope of work the purpose, duration, attendees, and task-related timing of the meetings.
- Coordinate with District as needed throughout the duration of the project via email, phone and conference call. The purpose of this discussion will be to provide regular updates on work performed to date, discuss potential concerns for future work to be performed, review outstanding needs, and discuss action items. Provide an overall timeline as well as a rolling 3 week look ahead schedule.

0.3 QA/QC

- Perform comprehensive quality control reviews of all deliverables.

DELIVERABLES: *Work Plan, Project Schedule, Monthly Progress Reports.*

TASK 1.0 AWIA COMPLIANCE ANALYSIS

1.1 Data Collection

- Coordinate with the District to obtain relevant project information, data, and supporting documents. This may include scanning of hardcopy documents into a PDF format.

1.2 Gap Analysis

- Identify compliance gaps, if any, and prepare documentation that displays any potential gaps in completing the AWIA RRA.

1.3 Project Kickoff Meeting

- Plan, organize, and conduct one (1) workshop to address Project Team Breakdown, Performance Requirements, Information Protection, AWIA Requirements, and Compliance Gap Analysis

(1) Objectives:

- (a) Introduce core team to define roles and responsibilities
- (b) Review the District's performance criteria and requirements
- (c) Discuss how to protect work from any public record act (PRAs) requests
- (d) Review the results of the gap analysis

- (e) Recommend tools for the RRA assessment
- (f) Introduce the strategy to be utilized during the risk assessment phase

DELIVERABLES: *Compliance Gap Documentation. Workshop Agenda and Minutes.*

WORKSHOPS: *One (1) Workshop for Gap Analysis and Project Kickoff.*

TASK 2.0 RISK & RESILIENCE ASSESSMENT

2.1 RRA Phase #1 – Characterize

- Perform asset and threat characterization in order to develop a list of critical assets and threats.
- Plan, organize, and conduct one workshop to address Asset Characterization and Threat Characterization.
 - (1) **Objectives:**
 - (a) Define assets that could have negative impacts on the organization
 - (b) List applicable natural hazards and malevolent threats
 - (c) Screen threat-asset (T-A) pairs to using a quantitative analysis to determine credible threats
 - (d) Develop list of critical assets and identified threats

2.2 RRA Phase #2 – Analyze

- Perform consequences, vulnerabilities, and threat-likelihood analysis to prepare for risk calculation.
- Plan, organize, and conduct one workshop to address Consequence Analysis, Vulnerability Analysis, and Threat Likelihood Analysis.
 - (1) **Objectives:**
 - (a) Identify worse reasonable consequences by threat
 - (b) Analyze ability to withstand threat and likelihood of hazards
 - (c) Review consequences and vulnerabilities
 - (d) Identify proximity threats and dependencies
 - (e) Calculate risk likelihood for critical T-A Pairs.

2.3 RRA Phase #3 – Assess

- Calculate risk based upon the previous two (2) phases.
- Upon completion of the risk calculation, prepare a draft and final RRA report for District to review. Use existing agency documentation, approved tools and methods, and AWIA requirements to complete a draft RRA report. District will review and provide written comments for the draft RRA report. These comments shall be incorporated by the consultant into the final RRA report.
- At minimum, the RRA should incorporate the requirements of Section 2013 of the AWIA and any other subsequent updated requirements or guidance that the USEPA shall provide for conducting this assessment:
 - (1) Risk to the system from malevolent acts and natural hazards;

- (2) Resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system;
 - (3) Monitoring practices of the system;
 - (4) Financial infrastructure of the system;
 - (5) Use, storage, or handling of various chemicals by the system; and
 - (6) Operation and maintenance of the system.
- Ensure that the RRA is consistent with all existing submitted and approved documents and reports. Specify how District can use the data and analysis process to produce future updates on a 5-year basis.
 - Plan, organize, and conduct a at least one workshop to address the overall Risk and Resilience Assessment.
 - (1) **Objectives:**
 - (a) Review draft RRA report comments

DELIVERABLES: *Draft and Final RRA Reports*

WORKSHOPS: *Three (3) Workshops for the RRA Phases.*

TASK 3.0 EMERGENCY RESPONSE PLAN

3.1 ERP Phase #1 - Strategize

- Review discoveries made by the RRA and Gap Analysis to prepare ERP document.
- Plan, organize, and conduct a at workshop to address the ERP requirements and how the RRA informs that process.
 - (1) **Objectives:**
 - (a) Review results of RRA and how it informs the ERP
 - (b) Facilitate a discussion on existing plan strengths and areas for improvement
 - (c) Introduce the ERP template

3.2 ERP Phase #2 – Coordinate

- Confirm alignment with AWIA Requirements.
- Plan, organize, and conduct one workshop to address preparedness measures and alignment with other agencies' Emergency Response Plans.
 - (1) **Objectives:**
 - (a) Compare local and state government ERP requirements to confirm alignment with AWIA ERP requirements.
 - (b) Prepare a plan for coordination with Local Planning Committees and other response partners, as required by AWIA Section 2013(a)(c).
 - (c) Prepare a plan for resource typing: categorizing by capability the resources requested, deployed, and used in incidents.

3.3 ERP Phase #3 – Deliver

- Prepare a draft and final ERP document using the existing agency documents, approved tools and methods, and AWIA requirements. District will review and provide written comments for the draft ERP document. These comments shall be incorporated by the consultant into the final ERP document.
- Create a draft Emergency Response Plan based on existing materials and the RRA. The new ERP should meet the AWIA requirements by addressing:
 - (1) Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
 - (2) Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
 - (3) Actions, procedures and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and
 - (4) Strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.
- Prepare documentation on how the RRA and other existing relevant documents meet the AWIA and Safe Drinking Water Act (SDWA) requirements and AWWA standards. Address how the documents utilized throughout this planning process will be updated, cross referenced or otherwise incorporated into planning processes on an ongoing basis.
- Plan, organize, and conduct a at least one workshop to address the overall Emergency Response Plan
 - (1) **Objectives:**
 - (a) Review draft ERP report comments

DELIVERABLES: Draft and Final ERP Document

WORKSHOPS: Three (3) Workshops for the ERP Phases.

Fee Estimate

Task No.	Task Description	QA/QC	Principal In Charge	Project Manager	Project Engineer	Cybersecurity Lead	Admin	WSC Labor Fee	Total Labor Hours	Total Labor Fee	Total Fee
		Joshua Reynolds	Scott Duren	Kirsten Plonka	Susan Schlangen	Haley Lehman	Kay Merrill				
	Billing rates, \$/hr	\$225	\$215	\$215	\$150	\$130	\$0				
0	Project Management										
0.1	Project Administration		2	6			6	\$ 1,720	14	\$ 1,720	\$ 1,720
0.2	Project Updates & Coordination		2	12	12			\$ 4,810	26	\$ 4,810	\$ 4,810
0.3	QA/QC	8	2					\$ 2,230	10	\$ 2,230	\$ 2,230
	SUBTOTAL	8	6	18	12	0	6	\$ 8,760	50	\$ 8,760	\$ 8,760
1	AWIA Compliance Study										
1.1	Data Collection				10	8		\$ 2,540	18	\$ 2,540	\$ 2,540
1.2	Gap Analysis			14	24	6		\$ 7,390	44	\$ 7,390	\$ 7,390
1.3	Project Kickoff		4	8	6			\$ 3,480	18	\$ 3,480	\$ 3,480
	SUBTOTAL	0	4	22	40	14	0	\$ 13,410	80	\$ 13,410	\$ 13,410
2	Risk and Resilience Assessment										
2.1	RRA Phase #1 - Characterize			28	46	10		\$ 14,220	84	\$ 14,220	\$ 14,220
2.2	RRA Phase #2 - Analyze			22	46	10		\$ 12,930	78	\$ 12,930	\$ 12,930
2.3	RRA Phase #3 - Assess			22	70	10		\$ 16,530	102	\$ 16,530	\$ 16,530
	SUBTOTAL	0	0	72	162	30	0	\$ 43,680	264	\$ 43,680	\$ 43,680
3	Emergency Response Plan										
3.1	ERP Phase #1 - Strategize			14	26	8		\$ 7,950	48	\$ 7,950	\$ 7,950
3.2	ERP Phase #2 - Coordinate			16	30	8		\$ 8,980	54	\$ 8,980	\$ 8,980
3.3	ERP Phase #3 - Deliver			20	56	20		\$ 15,300	96	\$ 15,300	\$ 15,300
	SUBTOTAL	0	0	50	112	36	0	\$ 32,230	198	\$ 32,230	\$ 32,230
	COLUMN TOTALS	8	10	162	326	80	6	\$ 98,080	592	\$ 98,080	\$ 98,080

STAFF REPORT

To Board of Directors
From Jason Rice, District Engineer
Title COVID-19 Temporary Emergency Rate Relief Program
Item No. 8
Date April 14, 2020 for the April 21, 2020 Regular Meeting

Summary

As the COVID-19 Pandemic continues to evolve and shape our everyday life, Staff began to look at ways Oak Lodge Water Services District (OLWSD) could evolve its financial assistance programs.

Background

The District has a Low-Income Rate Relief Program embedded within its Rules and Regulations. Simply put, if a customer qualifies for this program, each of their bills from OLWSD is reduced by 50% for the Fiscal Year that they qualify. Customers are asked to re-apply each year by *providing* to the District documentation that they are still below the poverty line. The District recognizes this program is built for Residential Customers who are consistently living in poverty and it does not address issues Commercial Customers may be facing or short-term financial issues Residential Customers may be facing.

To address the issue of customers not being able to pay their utility bills for short periods of time, Staff will often offer payment plans to bridge financial gaps customers may be facing. This has worked in the past and very rarely results in meters being shut off due to the customers refusing to pay. However, because of COVID-19, Staff has begun to look at additional ways the District can help our customers through shorter-term financial gaps. For payment plans staff is proposing the District still use them and be even more generous. Each plan would be individual and may include a couple of months of no payment. However, staff would recommend payment plans be no longer than two years.

On March 18, 2020, rather than sending out Water Shut-off Notices, the District sent out letters announcing it will not be shutting off water meters due to lack of utility bill payment during this pandemic; nor would it be charging penalties or interest charges for the amount due nor reporting delinquent accounts to credit agencies. This information was also posted to the website.

Currently, businesses that are closed can request their water meter be shut off. This would prevent the continued accumulation of water and sanitary costs; however,

stormwater charges would continue to accumulate per District Rules.

While the District has yet to fully realize how this decision will impact its revenue, Financial Staff is anticipating lower than expected revenues for both the current Fiscal Year as well as next Fiscal Year within the Draft Proposed Budget.

Currently, the Low-Income Rate Relief Program is restricted to 0.5% of Budgeted District Rate Revenue (or \$70,135 for FY20) without additional Board approval. Staff anticipates the amount will cover this year’s Low-Income Rate Relief Program.

To summarize the assistance listed above and find the gaps, the table below was created:

Oak Lodge Water Services
Billing Assistance in Place
as of March 18, 2020

	Residential Customers		Business Customers	
	Temporary Need for Financial Assistance	Consistently Low-Income	Open for Business	Closed due to COVID-19
No turn-off of water for late, or non-payment ¹	✓	✓	✓	✓
No Interest charged for late, or non-payment ¹	✓	✓	✓	✓
No reporting to credit bureau for late, or non-payment ¹	✓	✓	✓	✓
Customer able to request switch off water meter so water and sanitary charges will not continue to accumulate ²	Not Helpful	Not Helpful	Not Helpful	✓
Low Income Rate Relief Program (relieves 50% of bill)		✓		
Negotiated Payment Plan	✓	✓	✓	✓

¹ Expires when Board sees fit

² Watershed Protection Fee is charged regardless of meter being shut off

As you can see, the District already has many assistance protocols in place. However, the areas identified in red are a gap in our assistance. Therefore, staff is recommending the creation of a Temporary Rate Relief Program that would effectively place check marks in the red highlighted cells.

Oak Lodge Water Services
Proposed Billing Assistance

	Residential Customers		Business Customers	
	Temporary Need for Financial Assistance	Consistently Low-Income	Open for Business	Closed due to COVID-19
No turn-off of water for late, or non-payment ¹	✓	✓	✓	✓
No Interest charged for late, or non-payment ¹	✓	✓	✓	✓
No reporting to credit bureau for late, or non-payment ¹	✓	✓	✓	✓
Customer able to request switch off water meter so water and sanitary charges will not continue to accumulate ²	Not Helpful	Not Helpful	Not Helpful	✓
Low Income Rate Relief Program (relieves 50% of bill)		✓		
Negotiated Payment Plan	✓	✓	✓	✓
Proposed Temporary Emergency Rate Relief Program	✓		✓	✓

¹ Expires when Board sees fit

² Watershed Protection Fee is charged regardless of meter being shut off

Past Board Actions

In February 2017 the Board adopted the District’s Rules and Regulations which contained the Low-Income Rate Relief Program

Concurrence

Financial, Engineering and Administrative Staff have worked together to produce this set of recommendations.

Recommendation

1. Create a Temporary Emergency Rate Relief Program with a cap of \$140,000 to assist our customers who do not fall into the Low-Income Rate Relief Program.
 - a. Staff recommends splitting this program’s benefits between residential and commercial customers 70 and 30 percent respectively.
 - b. Staff recommends this program be managed on a first-come first-serve basis.
 - c. Staff recommends residents may apply more than once and businesses may only apply once given the potential size of their bill.
 - d. Staff recommends that the benefit be set at 50% of their bill.

2. Staff recommends transferring both the Low-Income Rate Relief Program and

the Temporary Emergency Rate Relief Program to a contracted out third-party non-profit, or governmental program who could also package up other potential resources for the District's applicants.

- a. Staff recommends allowing the non-profit or governmental agency to approve a customer as able to apply to the Temporary Emergency Rate Relief Program simply by having an OLWS bill they cannot pay which would normally result in a water meter shut-off.
 - b. Potentially, depending upon the partner non-profit, or governmental agency Oak Lodge contracts with they could also take donations from other customers and businesses to support this program. The Board would direct staff to advertise this as an option to the District's residents.
3. Staff will make regular reports at each Board meeting as to the applications made to the Temporary Emergency Rate Relief Program.
 4. The Board based upon staff recommendation will officially start and end this program when it makes sense for OLWS.

Potential Next Steps

1. The Board authorizes the Finance Committee to finalize any of the criteria needed to implement the new Rate Relief Program.
2. The Board authorizes the state date of the new Rate Relief Program.
3. The Board authorizes the amount of monies to be used to start this new Program.
4. The Board authorizes the General Manager to move forward with a contract with a third party.

STAFF REPORT

To Board of Directors
From Aleah Binkowski, Human Resources Manager
Title Human Resources Monthly Report
Item No. 9a
Date April 21, 2020

Summary

The Board has requested updates at the Regular Meetings of the Board on the status of the District's Operations.

Highlights of the Month

- The District has stayed ahead of most COVID-19 orders.
- Staff work continues to be modified to ensure safety.
- The District continues tracking to prepare for financial aid applications.

Human Resources

This has been quite the month for Human Resources and our District Recorder. First off, I want to thank Laural Casey. Without all her hard work setting up Zoom for the District and figuring out how to conduct legal Board and Budget meetings we would have been lost. The transition to virtual meetings has gone smoothly because of Laural.

For a while it seemed as if there was a new order, mandate or law put in place every day and I am proud to say the District has been ahead of most orders. As soon as the 6 feet of distance was ordered we were ordering cell phones for all office staff so they could take calls and work from home. We arranged work teams to have an A team and a B team so if one team gets sick or is exposed and must quarantine, we can still function operationally.

Timesheets and pay codes have been updated so we can track work-from-home hours vs. regular hours vs. COVID-19 pay for when someone is ill, must quarantine or needs to be home taking care of children due to school closures. In case there is any aid we can apply for; we are tracking exactly how staff are spending their time.

We also set up an account with Linked-In learning (formerly Lynda.com) so staff whose positions are not as easily translated to remote work can still learn skills valuable to the District. For example, there are courses on everything from Word and Excel to customer service, project management, report writing, public speaking and effective communication. Other good training has been found and assigned to staff.

Daily updates are being sent to staff to keep them informed. Sometimes they do not contain much new information, but other days there is essential information. I never thought I would have to develop procedures on how to safely open mail, take deliveries and clean workstations every day.

On Monday we started asking staff to wear face coverings when in common areas and when 6 feet of social distancing cannot take place. We have outlined a comprehensive response and return to work plan for management and staff to ensure the safety of our valued team members to the largest extent possible.

Below you will find an example of some of the items we have been communicating to staff:

OBJECTIVE: *To maintain water, wastewater, and stormwater utility core functions and minimize the transmission of the virus across the divisions.*

PROTECTIVE MEASURES

- *Restrict public access to all buildings and locations.*
- *Hand washing regularly with soap and hot water regularly.*
- *Provide hand sanitizer for use between hand washing.*
- *Maintain minimum social distancing of 6' between all staff.*
- *Staggering lunches as much as practical.*
- *Sanitize work trucks and field equipment.*
- *Sanitize workstations and cell phones.*
- *Assign alternative reporting locations to each division.*
- *Direct staff to quarantine at home immediately if any signs or symptoms occur.*

Minimum Mandatory Cleaning Guidelines:

- 1) ***Mandatory immediately*** - *The project must ensure that adequate supplies of hand sanitizer, cleaning wipes, soap, and disposable gloves are readily accessible. Our supplies are low, but we will continue to search for supplies.*
- 2) ***Mandatory immediately*** - *At least once daily; all office surfaces, should be wiped down with disinfecting wipes (e.g. keyboards, mouse pointers, telephones, radios, copiers, etc.)*
- 3) ***Mandatory immediately*** - *No person to person contact (e.g. handshakes), Explain to the receiver, why you aren't shaking hands. They will understand our concerns.*
- 4) ***Mandatory immediately*** - *1x / daily - Wipe down all frequently used surfaces on normal employee's path with disinfecting wipes (kitchen appliances, railings, door handles and bathroom fixtures). The EPA has a list of Registered Disinfectant Products.*
- 5) ***Mandatory immediately*** – *Each work truck is to be wiped down at the end of the day and is to contain hand sanitizer and a container of disinfectant wipes.*

Attachments

1. Return to Work and District Response Guidelines



Return to Work and District Response Guidelines

Due to COVID-19 Related Symptoms

Return to Work

If you have been tested and are confirmed to have COVID-19

Please stay home from work until all the following have occurred:

- ✓ You are fever-free without the use of fever-reducing medications and
- ✓ Your symptoms have improved (e.g., cough, shortness of breath, fatigue, etc.), and
- ✓ You received TWO negative test results 24 hours apart.
- ✓ A licensed medical professional clearance is also acceptable to return to work.

If you have experienced flu-like symptoms (fever, cough, and shortness of breath) and have not been tested for COVID-19

Please stay home from work until all the following have occurred:

- ✓ At least 3 days (72 hours) have passed since recovery which is defined as fever-free without the use of fever-reducing medications and improvement in your symptoms (e.g., cough, shortness of breath, fatigue); and,
- ✓ At least 7 days have passed since symptoms first appeared.
- ✓ A licensed medical professional clearance is also acceptable to return to work.

If you have a known close contact to someone who has tested positive or is being monitored for COVID-19

You generally need to be in close contact with a sick person to get infected. Close contact includes:

- ✓ Living in the same household as a sick person with COVID-19,
- ✓ Caring for a sick person with COVID-19,
- ✓ Being within 6 feet of a sick person with COVID-19 for about 10 minutes, OR
- ✓ Being in direct contact with secretions from a sick person with COVID-19 (e.g., being coughed on, kissing, sharing utensils, etc.)

Please stay home from work until all the following have occurred:

- ✓ Minimum of 14 days have passed (or longer if recommended by CDC or healthcare providers) since exposure; and
- ✓ You have not had any symptoms of CV-19 during the 14 days.
- ✓ If you have had symptoms, you must follow requirements above before returning to work.

If you have traveled to/from a CDC-Level 3 Travel Health Notice Country within the last 14 Days

Please stay home from work until all the following have occurred:

- ✓ Minimum of 14 days have passed (or longer if recommended by CDC or healthcare providers) since exposure; and

- ✓ You have not had any symptoms of CV-19 during the 14 days.
- ✓ If you have had symptoms, you must follow requirements above before returning to work.

District Response Guidelines

Steps to ensure staff remains safe if a staff member is infected with COVID-19 or if someone close to a staff member is infected. The District is following all Center for Disease Control and World Health Organization guidelines. If a staff member tests positive for COVID-19, is showing symptoms of COVID-19 or has known close contact to someone who tested positive or is being monitored for the virus as soon as made aware the District will have the following response:

- ✓ If the staff member has been to the workplace in the prior 72 hours, the work area they reported to will be closed immediately for a deep cleaning. Please remember cleaning is being done daily.
- ✓ The District will interview the affected staff member to determine if any other staff members had close contact with the affected staff member within the last 14 days. Close contact is defined as contact closer than 6 feet for more than 10 minutes.
- ✓ The District may ask staff members who came into close contact with the affected staff member to self-quarantine for 14 days.

Reporting Absences

If you're calling in absent to your supervisor, please be aware that you will need to provide the specific reason for your absence, for example which category you're utilizing under the paid emergency leave policy or reason for accessing another leave bank. If you are ill, please be prepared to share with your supervisor whether you have symptoms related to COVID-19. It's important for your supervisor to know this information as it will dictate your timeline to return to work. For COVID-19, these include symptoms such as fever, chills, cough, fatigue, shortness of breath, or sore throat. Supervisors will maintain all information about your illness as confidential medical information; however supervisors may need to inform other staff members that they had close contact with someone testing positive for or showing symptoms of COVID-19. **In all cases, follow the guidance of your healthcare provider and local health department. The decision to stop home isolation and return to work should be made in consultation with your healthcare provider and state and local health departments.** If there are questions about these guidelines, please consult with your manager or supervisor who in turn may seek Human Resources consultation.

STAFF REPORT

To	Board of Directors
From	Rob Moody, Financial Consultant
Title	Finance Department Monthly Report
Item No.	9b
Date	April 13, 2020 for April 21, 2020

Summary

The Board has requested updates at the Regular Meetings of the Board on the status of the District's Operations.

Highlights of the Month

- A draft budget is nearly complete for presentation to the Budget Committee at our meeting on April 28.
- Staff continues to address audit findings with updated policies and procedures.
- Finance and Operations teams are working together on the non-revenue water audit project to verify large meter information from field to the billing system.
- Recruiting for the Finance Director position is ongoing. We have several candidates with responsive applications.

Budget

The Department has worked with the management team to generate estimates for personal services, materials and services, and capital for the upcoming fiscal year based on District and departmental goals and objectives. We have also considered appropriate reserves for all operating funds in accordance with the reserves policy previously adopted by the Board.

We are currently reviewing revenue projections for each of the operating funds (water, wastewater, and watershed protection) to ensure our budget estimates are realistic and as accurate as possible.

Audit Findings

Staff has begun to implement policies and procedures in accordance with the Corrective Action Plan communicated to the Board previously. Evidence of all procedures is being retained in a central folder on the District's shared drive. Below is a summary of recent progress:

1. With the April billings the Finance Team implemented a spot check on customer billings prior to the bills going out. This is a control procedure in response to item number 2 on the Corrective Action Plan Matrix (see attachment). The responsibility for this procedure was reassigned to the Jr. Accounting Specialist from the Sr. Accountant based on capacity within the Department.
2. Staff has addressed item number 3 on the Corrective Action Plan Matrix as of the beginning of April. A report was run from the system indicating all adjustments made to UB customer accounts. The report was reviewed by the Financial Consultant in place of the Finance Director, initialed and dated and filed for reference during the upcoming audit.
3. Customer refunds are being processed currently under District policies and procedures that require review of the Finance Director on the payment request, and through approval in the Utility Billing and Accounts Payable systems. Timely reviews are documented through date/time stamps on approvals in the system and on payment requests. These procedures indicate completion of Corrective Action item number 4.
4. Changes to customer accounts are now being reviewed in response to Corrective Action Plan item number 5. Monthly, a report is run and reviewed to source documents for accuracy. Any exceptions are reported to the Financial Consultant in place of the Finance Director for direction of a resolution.
5. All expenditures of the District go through a review process prior to issuing checks to vendors. A "proof list" along with the invoice/PO packets are provided to the Finance Director for review and approval. That review includes that items are charged to the correct accounting period/month depending on when the goods and services are received. That review is currently performed by the Financial Consultant. This procedure meets the requirements of Corrective Action Plan item number 18.
6. In response to Corrective Action Plan item number 19, the District has received a draft of procedures related to procurement and payment of vendors. These procedures are in review by the Financial Consultant who will then pass to District staff for review and input prior to finalization. We expect procedures to be in place by end of April.
7. Corrective Action Plan item number 22 calls for review of IT access by District staff to ensure appropriate segregation of duties. Originally that review was to be completed by the end of March, but due to capacity limitations will be completed by mid-May. The Financial Consultant will work directly with the District's IT specialist and HR Director to accomplish this review, and any changes made necessary.

Large Meter Verification

At the time of this writing the Operations team has captured and communicated field data on just over 250 of the large meters to the Finance team. The Finance team is going through data on each meter and verifying to the data in the utility billing software. Among the specific data points are:

- Meter make and model
- Meter size
- Current read (for reasonableness to prior read)
- Service address
- Meter location (on property)
- Meter condition
- Other relevant comments/notes

Any exceptions to the billing system are corrected and noted for consideration of impact. We intend to summarize all corrections to the billing system once all data is verified, and report back to the Board.

Recruiting

Jr. Accounting Specialist Jonathan East is on-board and full-time with AP and accounting support duties. Jonathan is also providing support as needed to back up the utility billing function when there is overflow of calls and customer needs.

The Finance Director recruitment will close on May 4 and we anticipate moving quickly to review applications and set up interviews. It is the goal to have someone on board by the end of June, allowing for interviews, reference checks, and notice to employers.

Attachments

1. Corrective Action Matrix
2. Checks by Date Report for March 2020

Oak Lodge Water Services District
 Corrective Action Plan - 2019 Audit
 2019 Audit recommendations

Identification							
Category	#	Audit Finding	Recommendation	Priority Level	Individual Responsible	Planned Action	Estimated Completion Date
Process	1	Review of new rates – During our current year control procedures over the revenue cycle, we noted no formal, documented process in place to evidence the review of rates input into the system. This is particularly important at the time of a Board-approved rate change to mitigate the risk that rates are input incorrectly or are not updated timely in accordance with the effective date of the new rates.	We recommend that a formal process be established to require someone other than the person responsible for making the rate changes to review those changes to verify the accuracy and timeliness.	B	Finance Director	Annually, when rates are entered to Springbrook, the Finance Director will print a report from the system, compare rates to the resolution adopted by the Board, and initial and date indicating their review and approval. The report will be retained until after audit.	July 2020, following the approval of new utility rates.
Process	2	Recalculation of customer bills – During our control procedures we noted no evidence of a recalculation of a sample of customer bills to determine if the bills were calculated accurately using appropriate rates. This is a key control that helps to mitigate the risk that bills are being calculated incorrectly or with incorrect rates, prior to the bills being sent to the customers.	We recommend that management implement controls to require a re-calculation of a sample of customer bills each billing cycle, with a minimum of one bill from each rate class. This procedure should be documented to support which bills were re-calculated, who performed the procedures, and to date when the procedures were completed.	A	Jr Accounting Specialist	Monthly after the bills are generated, the Jr. Accountant will obtain a billing register and recalculate a sample of customer bills to ensure accuracy of the bills. Review will occur prior to mailing of customer bills. Jr. Accountant will maintain a log of customer bills verified and retained until after audit.	Completed - Placed in effect with April 2020 billing. Junior Accountant performs testing and reviewed by Finance Director.
Process	3	Manual adjustments to customer accounts – During our procedures we noted that the District often makes manual adjustments to customer bills and consumption amounts.	We recommend that manual adjustments are reviewed and approved by someone other than the person recording the adjustments prior to the bill being sent to the customer. This approval should be documented either electronically through the billing system or in writing. In addition, we recommend that the District run monthly reports to detail the adjustments made during the month, and such a report should be reviewed by someone other than those responsible for recording adjustments, to help identify any unauthorized adjustments.	A	Finance Director	Monthly the Finance Director will run a "Transactions by Date" report from the system for adjustments and review for anomalies. The Finance Director will initial and date evidencing approval, and the report will be retained until after audit.	Completed - Placed in effect in early April. Finance Director ran report and reviewed. Documented review with initials and data and filed for reference.
Process	4	Customer refund approvals – During our inquiries, we noted that the District has a policy in place that requires any customer refunds should be approved by the Finance Director prior to being issued to the customer. However, during our testing we noted instances where the refunds were not approved by the Finance Director and had been issued to customers. We also noted that individuals other than the Finance Director had access to approve refunds in the system.	We recommend that the Finance Director reviews and approves all refunds prior to being issued, and that electronic access to approve refunds be limited to the Finance Director.	A	Finance Director	The Finance Director receives documentation supporting a customer refund which requires signature and date of approval. Documentation is retained as support for AP. Refund batches are committed (posted) in the system by the Finance Director. Access to approve refund batches has been limited to the Finance Director or the General Manager.	Control is currently in place and operating effectively.
Process	5	New customer setup – During our inquiries, we noted that no formal review control is in place to verify the accuracy of the new customer information input into the billing system. This is particularly important for new services to validate that the proper rate class was entered into the billing system.	We recommend that management establish a control to routinely review reports of new customers added and to verify that the customers were setup correctly with accurate billing attributes.	A	Jr Accounting Specialist	Monthly the Jr Accounting Specialist will run an "Account Master List" report indicating all accounts setup during the month and review for completeness and accuracy of information. All exceptions will be addressed and resolved immediately. The report will be initialed and dated evidencing the review, and will be retained until after audit. Upon setup of a new customer account, a service order will be generated for an initial read. Initial read and meter information on each account will be verified to the respective service order for initial read.	Completed - Control placed in effect April 2020 with review of customer account changes for March 2020. Review performed by Jr. Accounting Specialist and any exceptions reported to Finance Director (Financial Consultant) for direction of resolution. All documentation retained for reference.
Process	6	Exceptions – During our inquiries over the exception reporting process, we noted that the exceptions report is a live screen that populates all the variances identified by the system and clears them out as exceptions are cleared by staff. However, no evidence of the exceptions is maintained on file to support the variances that were identified, and the manner with which those exceptions were cleared. This also creates challenges with verifying whether all exceptions were cleared prior to issuing all the bills to customers.	We recommend that the District establish procedures to review the exceptions report prior to issuing customer bills each billing cycle to ensure all exceptions were cleared appropriately and timely. This review should be documented to note who performed the review and when it was completed.	B	Finance Director	The Finance Director will work with Springbrook to identify a report from the system that can evidence exceptions identified, resolution, and approval. That report will be run each month prior to bills being sent to customers and retained until after audit.	April 30, 2020

Process	7	Asset tracking system – We noted that the District does not currently utilize an asset tracking system to track and monitor costs by project throughout the year, and to document when projects were placed into commercial operation and should be moved to assets in service for financial reporting purposes.	We recommend that the District consistently utilize an electronic project tracking system to capture all the costs by project each year and to utilize reports from the system to monitor the costs by project to identify any significant variances from budget or estimate. The information in this system should also be reconciled to the general ledger on a monthly basis and any projects placed into service should be closed to assets in service on the general ledger.	C	Management Team	The Finance Director will work directly with other members of the management team to identify the objectives and requirements of a project tracking system, then evaluate options to best meet those needs. An approach will be selected and implemented to ensure project cost information is complete and accurate on a go-forward basis.	Project will begin with scoping in May 2020 and be fully implemented in July 2020.
Process	8	Capital asset reconciliation to the general ledger – We noted that the District does not currently have a control in place to reconcile certain key, full-accrual accounts on a monthly basis, specifically capital assets.	To improve the accuracy of the monthly financial reports and to reduce the burden of the year end closing process, we recommend that the activity per the asset tracking system be routinely reconciled to the capital outlay accounts on a monthly basis. This reconciliation should be formally documented and reviewed by someone other than the person performing the reconciliation as part of the District's monthly close process.	C	Jr Accounting Specialist	The Jr Accounting Specialist will reconcile capital asset records to asset additions, and other changes in capital assets for fiscal year end June 30, 2020 in preparation for the annual audit. Reconciliations will be reviewed and approved by the Finance Director. Beginning with the 20-21 fiscal year, staff will reconcile capital assets activity quarterly.	Capital assets activity will be reconciled for the June 30, 2020 year end by the end of August 2020. Subsequent quarters will be reconciled by the end of the month following the quarter end.
Process	9	Labor and overhead costs – During our review of project costs, we noted that the District does not currently track and apply internal labor and overhead costs to projects.	With the implementation of an asset tracking system as noted in the previous comment, we recommend that the District begin to track these costs and apply them to the appropriate projects to help capture all costs that were incurred during the construction phase of each project.	C	Management Team	This will be a key component of the project as outlined in number 7 above	Project will begin with scoping in May 2020 and be fully implemented in July 2020.
Process	10	Physical inventory of capital assets – During the audit several assets were identified on the general ledger that were disposed of in previous periods, thus requiring a prior period adjustment for this error.	We recommend that the District establish controls to perform periodic physical inventories of capital assets to help identify assets that were disposed of, but have not been captured appropriately in the financial records of the District.	C	Jr Accounting Specialist	The Jr Accounting Specialist will develop and implement a plan for a physical inventory of the District's capital assets in accordance with best practices. That plan will include identification of all capital assets by location and incorporate property tagging as well as procedures for reporting acquisition, transfer and disposal of capital assets in support of accurate financial reporting.	Some inventory procedures have been undertaken at the treatment plant. A complete physical inventory of the District's capital assets will take place in late summer 2020, prior to finalization of the annual audit for FYE June 30, 2020.
Process	11	Useful lives of capital assets – As we were analyzing depreciation expense and useful lives assigned to assets, we noted that the ability to change useful lives is unrestricted and therefore unauthorized changes could occur and impact the calculation of depreciation expense.	We recommend that access to change useful lives be restricted to certain individuals.	C	Jr Accounting Specialist/Finance Director	System security will be updated to restrict edit authority for capital assets to the Jr Accounting Specialist, with review responsibilities by the Finance Director	March 31, 2020
Process	12	Journal entries – During our review of IT access, we noted that the Finance Director has the ability to both prepare and post journal entries without a secondary approval.	We recommend that any manual journal entry have a documented approval from someone other than the person responsible for posting the entry.	A	Sr Accountant/Finance Director	The District has a policy in place that journal entries be approved/committed by someone other than the initiator. The system captures information on who initiated the journal entry and who approved/committed it. Staff is currently working with Springbrook to identify a report/procedure for documenting review and approval of separation of duties re: journal entries.	April 15, 2020
Process	13	Review of reconciliations – During our testing, we noted no evidence to support that reconciliations are reviewed and approved timely by someone other than the person preparing the reconciliations. This includes bank reconciliations, accounts payable reconciliations, the daily cash summaries, as well as other monthly reconciliations.	We recommend that each reconciliation be reviewed monthly and that the review be documented electronically or in writing.	A	Finance Director	The Finance Director currently reviews all staff prepared reconciliations in a timely manner, and evidences that review with initials and date. Reconciliations are retained in accordance with records retention requirements.	Currently in place and operating effectively.
Process	14	Physical inventory of wastewater inventory – During our inquiries we determined that the District had not recorded materials and supplies inventory previously, which resulted in an audit adjustment of approximately \$116,000.	We recommend that the District record and track wastewater inventory consistently going forward and that physical inventories be performed on at least an annual basis to validate the accuracy of the amounts recorded.	B	Finance Director/Plant Superintendent/Collections Manager	The Finance Director will work directly with the Plant and Operations Managers to identify the required information in support of an effective and efficient materials inventory for Wastewater operations. That inventory will address quantities and costs in support of complete and accurate financial reporting.	Control will be in place by June 30, 2020 in support of annual audit.
Process	15	Inventory costs – We noted that the purchase of inventory items are not being input into the system timely, which has created instances where inventory items are identified during the year end physical inventory count and management may have to call the vendor to obtain the price.	We recommend that all inventory purchases be input into the inventory system on a timely basis to ensure the listing is updated, costs are accurate, and amounts charged to projects will be charged at accurate rates.	B	Finance Director/Plant Superintendent/Collections Manager	This will be a key component of the project as outlined in number 14 above	Control will be in place by June 30, 2020 in support of annual audit.
Process	16	Approval of inventory charged to projects – We noted that the District did not have controls established to require formal approval of inventory to be charged to projects.	We recommend that controls be established to require a formal charge-out approval for any inventory items to be taken from the warehouse and utilized on a project. These approvals should be compared to the actual inventory charged to each project to ensure only authorized costs were captured on the project.	B	Finance Director/Plant Superintendent/Collections Manager	This will be a key component of the project as outlined in number 14 above	Control will be in place by June 30, 2020 in support of annual audit.

Process	17	Obsolete inventory – We noted that the District did not have a process in place to regularly review its inventory listing to identify obsolete or unusable inventory items.	We recommend that as part of the physical inventory process, the District identify any obsolete items that should be expensed in the current year.	B	Finance Director/Plant Superintendent/Collections Manager	This will be a key component of the project as outlined in number 14 above	Control will be in place by June 30, 2020 in support of annual audit.
Process	18	Cutoff of expenditures – During our testing, we noted amounts where the service period per the invoice spanned over both fiscal year 2018 and 2019, but the total amount of the invoice was expensed in fiscal year 2019. In addition, we noted an expenditure for which receiving documentation was not retained for materials that were invoiced in the prior fiscal year, but were recorded as expenditures in the current fiscal year.	We recommend that the District establish controls to review year end cutoff to ensure that costs are recorded in the period in which the service was provided or the materials were received. We also recommend that the District retain all documentation related to purchases including any receiving documentation.	A	Finance Director	The Finance team will initiate communications regarding cutoff to District staff in advance of year end emphasizing cutoff issues. The Finance Director reviews all expenditure batches against supporting documentation prior to payment. One element of review is that expenditures are charged to the proper period. Review is documented with initials and date evidencing approval.	Control is currently in place and operating effectively.
Process	19	Duplicate payment – We noted one instance in our subsequent disbursement testing where an invoice was paid twice by the District and was not discovered during the District's approval process.	We recommend a formal review of all disbursements prior to issuing payment to ensure the amount to be paid matches the amount owed to the vendor for the products or services received and invoiced.	A	Finance Director	The Finance Director is currently working with the new Jr Accounting Specialist to tighten controls and processes over expenditures and utilize system functionality to reduce or eliminate the opportunity for duplicate payments.	Process documentation will be complete by March 31, 2020 Update - to be completed by end of April.
Process	20	Review of NCCWC balance – During the audit of the North Clackamas County Water Commission (NCCWC), a prior period adjustment was identified and reported relating to the improper previous amortization of water rights. The restatement of the NCCWC's financial statements had a direct impact on the District's reporting of its investment in the NCCWC on the District's financial statements. The adjustment to the investment in NCCWC was not properly recorded as a restatement in the initial draft of the district's financial statements provided to us.	We recommend that the district provide for a review of the final, audited NCCWC financial statements prior to finalizing the District's financial statements to ensure proper reflection of the investment in NCCWC. The review should be documented as part of the District's year end closing process.	A	Finance Director	The Finance Director will perform a careful and detailed review of NCCWC accounting records and financial statements in conjunction with the audit of NCCWC. That review will translate to a timely update of relevant accounting records and financial statements of the District.	Control is currently in place and operating effectively.
Process	21	Listing of public procurement contracts – As part of our testing of compliance with state procurement requirements, we noted that the District does not maintain a centralized list of all contracts executed during the year.	We recommend that this process be centralized with one employee to help track all procurements and ensure all documentation required is maintained on file to support the District's compliance with the State's procurement requirements.	B	District Recorder	The District Recorder has assumed responsibility for centralizing the District's contracts and related information as well as compliance with State records requirements. The Finance Director will work directly with the District Recorder to ensure all information related to procurements is centralized in support of contracts with vendors.	Contract centralization is currently in process. It is expected that records will be complete and available by September 30, 2020.
Process	22	IT user access – We noted that the District does not regularly perform and document its review of user access to the various systems supporting the financial reporting function.	We recommend that the District perform routine reviews of user access, at least annually, to determine whether access to the systems are appropriately updated, terminated users have been removed timely, and any segregation of duties conflicts are identified.	A	Finance Director	The Finance Director will review system access quarterly and work with the appropriate staff to maintain appropriate segregation of duties.	Review and adjustments to system security will occur by March 31, 2020. Update - will be completed by Mid-May
Process	23	Pay rate and other employee master file changes – We noted during our payroll testing that once a pay rate is entered into the system, there is no formal review to verify that the rates were entered correctly.	We recommend that the District run reports of any changes made to the employee master file on a monthly basis to verify the accuracy and timeliness of the changes. Such review should be formally documented to evidence who performed the review and when it was completed.	A	Finance Director	System security will be updated to allow the Finance Director "view only" and "reporting" access to the HR module so that changes to employee master files can be reviewed for completeness and accuracy. All changes to employee master files will be supported by a personnel action form approved and dated by appropriate parties. The Finance Director will review these forms against the system as they are implemented.	Control will be implemented by April 30, 2020.
Process	24	Purchase orders – We noted that the District's current policy requires purchase orders to be utilized for any inventory items over \$500. However, non-inventory items do not have a similar requirement.	We recommend that the District update its policy to require purchase orders on non-inventory items over \$500 as well. The purchase orders should be reviewed and approved by someone other than the person requesting the purchase.	B	Finance Director	The District's procurement and related approval policy is currently in review. Once finalized and implemented the policy will allow for consistency across transactions and require training of appropriate District staff in the generation and approval of PO's, supporting documentation for payment, and records retention.	June 30, 2020

Bank Reconciliation
 Checks by Date
 User: jeff
 Printed: 04/03/2020 - 10:30AM
 Cleared and Not Cleared Checks
 Print Void Checks

Check No.	Check Date	Name	Comment	Module	Void	Clear Date	Amount
ACH Disbursement Activity							
0	3/3/2020	Check Commerce		AP		3/ 3/2020	174.00
0	3/9/2020	TSYS		AP		3/10/2020	6,652.44
0	3/9/2020	TSYS		AP		3/10/2020	23.95
0	3/11/2020	Wells Fargo Bank		AP		3/11/2020	1,830.09
14180311	3/12/2020	Public Employees	PERS Adjustment	BRX		3/12/2020	-0.08
0	3/13/2020	OR Dept of Justice, Div of Child Support		AP		3/25/2020	640.80
0	3/13/2020	Oregon Department Of Revenue		AP		3/24/2020	7,808.27
0	3/13/2020	Public Employees		AP			27,063.07
0	3/13/2020	Nationwide Retirement Solutions		AP		3/23/2020	1,721.70
0	3/13/2020	IRS Dept of The Treasury		AP		3/23/2020	28,496.95
0	3/13/2020	VALIC c/o JP Morgan Chase		AP		3/23/2020	3,676.87
0	3/13/2020	Oregon DOR - State Transit Tax		AP		3/24/2020	99.60
0	3/13/2020	Payroll Direct Deposit	DD 00001.03.2020	PR		3/13/2020	68,372.08
0	3/18/2020	Pitney Bowes Global Financial Services LLC		AP		3/18/2020	147.84
0	3/18/2020	Pitney Bowes Global Financial Services LLC		AP		3/18/2020	283.71
0	3/27/2020	Wells Fargo Remittance Center		AP		3/27/2020	17,825.50
14180327	3/27/2020	Public Employees	PERS Adjustment	BRX			-0.02
0	3/31/2020	OR Dept of Justice, Div of Child Support		AP			640.80
0	3/31/2020	VALIC c/o JP Morgan Chase		AP			3,618.33
0	3/31/2020	IRS Dept of The Treasury		AP			31,143.08
0	3/31/2020	Public Employees		AP			29,900.38
0	3/31/2020	Oregon Department Of Revenue		AP			8,713.63
0	3/31/2020	Oregon DOR - State Transit Tax		AP			112.24
0	3/31/2020	Nationwide Retirement Solutions		AP			1,621.70
0	3/31/2020	Payroll Direct Deposit	DD 00002.03.2020	PR		3/31/2020	76,678.85
ACH Disbursement Activity Subtotal							317,245.78
Voided ACH Activity							0.00
Adjusted ACH Disbursement Activity Subtotal							317,245.78

Paper Check Disbursement Activity

43666	2/28/2020	Barney & Worth Inc		AP	Void		1,122.96
43669	2/28/2020	Bullard Law		AP	Void		20,142.92
43682	2/28/2020	Govt. Finance Officers Assoc.		AP	Void		415.00
43724	3/2/2020	Customer Refund		AP		3/ 3/2020	170.32
43725	3/6/2020	Aks Engineering & Forestry		AP		3/10/2020	6,712.95
43726	3/6/2020	ALFA Laval Inc.		AP		3/12/2020	1,846.94
43727	3/6/2020	Applied Industrial Technologies		AP		3/10/2020	573.56
43728	3/6/2020	Brown And Caldwell		AP		3/10/2020	3,895.50
43729	3/6/2020	Century Link		AP		3/10/2020	933.58
43730	3/6/2020	Grainger, Inc.		AP		3/10/2020	417.60
43731	3/6/2020	J. Thayer Company		AP		3/10/2020	167.48
43732	3/6/2020	Employee Expense Reimbursement		AP		3/11/2020	93.15
43733	3/6/2020	Madison Biosolids, Inc.		AP		3/10/2020	6,227.98
43734	3/6/2020	Mission Communications, LLC		AP		3/10/2020	2,839.80
43735	3/6/2020	murraysmith		AP		3/10/2020	6,240.78
43736	3/6/2020	Northstar Chemical, Inc.		AP		3/ 9/2020	595.00
43737	3/6/2020	Oregonian Media Group		AP		3/10/2020	133.64
43738	3/6/2020	Portland General Electric		AP		3/ 9/2020	1,618.33
43739	3/6/2020	Employee Expense Reimbursement		AP		3/30/2020	133.00
43740	3/6/2020	Short Load Concrete		AP		3/ 9/2020	273.00

Bank Reconciliation
 Checks by Date
 User: jeff
 Printed: 04/03/2020 - 10:30AM
 Cleared and Not Cleared Checks
 Print Void Checks

Check No.	Check Date	Name	Comment	Module	Void	Clear Date	Amount
43741	3/6/2020	Tice Electric Company		AP		3/11/2020	47,721.02
43742	3/6/2020	Tritech Software Systems		AP		3/13/2020	825.00
43743	3/6/2020	Unifirst Corporation		AP		3/16/2020	599.89
43744	3/6/2020	Water Environment Services		AP		3/11/2020	151.65
43745	3/6/2020	Xylem Water Solutions USA Inc		AP		3/12/2020	964.80
43746	3/13/2020	Employee Paycheck		PR		3/16/2020	348.35
43747	3/13/2020	Employee Paycheck		PR		3/13/2020	909.81
43748	3/13/2020	Employee Paycheck		PR		3/17/2020	1,023.00
43749	3/16/2020	Accountemps		AP		3/20/2020	2,850.40
43750	3/16/2020	AFLAC		AP		3/27/2020	1,840.60
43751	3/16/2020	AFSCME Council 75		AP		3/20/2020	1,690.01
43752	3/16/2020	Apex Labs		AP		3/18/2020	5,174.00
43753	3/16/2020	Barney & Worth Inc		AP		3/18/2020	259.73
43754	3/16/2020	Bend Mailing Services LLC		AP		3/18/2020	3,911.69
43755	3/16/2020	Employee Expense Reimbursement		AP			192.13
43756	3/16/2020	Bullard Law		AP		3/20/2020	637.50
43757	3/16/2020	Cable Huston LLP		AP		3/19/2020	6,857.50
43758	3/16/2020	Customer Refund		AP		3/19/2020	127.27
43759	3/16/2020	Cascadia Backflow		AP		3/19/2020	800.00
43760	3/16/2020	Cavanaugh & Associates. PA		AP		3/20/2020	12,250.00
43761	3/16/2020	CDR Labor Law, LLC		AP		3/18/2020	9,832.50
43762	3/16/2020	Employee Expense Reimbursement		AP		3/27/2020	305.27
43763	3/16/2020	Cintas Corporation - 463		AP		3/30/2020	156.94
43764	3/16/2020	City Of Gladstone		AP		3/20/2020	435.15
43765	3/16/2020	City Of Milwaukie		AP		3/26/2020	1,608.88
43766	3/16/2020	Employee Expense Reimbursement		AP			124.00
43767	3/16/2020	Coastal Farm & Home Supply		AP		3/20/2020	199.58
43768	3/16/2020	Consolidated Supply Co.		AP		3/18/2020	8,160.38
43769	3/16/2020	Contractor Supply		AP		3/18/2020	310.80
43770	3/16/2020	Correct Equipment, Inc.		AP		3/27/2020	1,840.34
43771	3/16/2020	Environmental Paper & Print, Inc		AP		3/30/2020	212.73
43772	3/16/2020	HealthEquity		AP		3/23/2020	39.35
43773	3/16/2020	IDEXX Laboratories		AP	Void		195.96
43774	3/16/2020	Impressions Printing Inc		AP		3/18/2020	200.00
43775	3/16/2020	J. Thayer Company		AP		3/19/2020	132.96
43776	3/16/2020	Customer Refund		AP			7.74
43777	3/16/2020	Madison Biosolids, Inc.		AP		3/24/2020	2,393.73
43778	3/16/2020	McFarlane's Bark, Inc.		AP		3/23/2020	10.00
43779	3/16/2020	Metro Overhead Door		AP			228.00
43780	3/16/2020	Metropolitan Utility Coordinating Council		AP			150.00
43781	3/16/2020	Moss Adams LLP		AP		3/19/2020	28,177.29
43782	3/16/2020	Napa Auto Parts		AP		3/30/2020	108.99
43783	3/16/2020	NCCWC		AP		3/17/2020	75,979.16
43784	3/16/2020	Net Assets Corporation		AP		3/19/2020	413.00
43785	3/16/2020	Northwest Natural		AP		3/18/2020	588.26
43786	3/16/2020	Olson, LLC		AP		3/23/2020	68,834.70
43787	3/16/2020	Pacific Fence and Wire		AP		3/20/2020	4,163.00
43788	3/16/2020	Pacific Truck Colors, Inc.		AP		3/23/2020	424.88
43789	3/16/2020	Pamplin Media Group		AP		3/19/2020	39.51
43790	3/16/2020	Employee Expense Reimbursement		AP		3/16/2020	321.80
43791	3/16/2020	Portland Engineering Inc		AP		3/26/2020	1,423.50
43792	3/16/2020	Portland General Electric		AP		3/18/2020	20,665.13
43793	3/16/2020	R & L Services Inc.		AP		3/26/2020	1,269.68
43794	3/16/2020	Relay Resources		AP		3/23/2020	5,734.31
43795	3/16/2020	Santana Crane, Inc		AP		3/23/2020	442.50

Bank Reconciliation
 Checks by Date
 User: jeff
 Printed: 04/03/2020 - 10:30AM
 Cleared and Not Cleared Checks
 Print Void Checks

Check No.	Check Date	Name	Comment	Module	Void	Clear Date	Amount
43796	3/16/2020	Customer Refund		AP		3/23/2020	751.70
43797	3/16/2020	SDIS		AP		3/24/2020	31,083.47
43798	3/16/2020	Seattle Ace Hardware		AP		3/24/2020	109.01
43799	3/16/2020	Employee Expense Reimbursement		AP		3/17/2020	321.80
43800	3/16/2020	Customer Refund		AP			1.11
43801	3/16/2020	SwiftComply US Opco, Inc		AP			250.00
43802	3/16/2020	Customer Refund		AP		3/19/2020	105.03
43803	3/16/2020	Tritech Software Systems		AP		3/23/2020	825.00
43804	3/16/2020	Tualatin Valley Short Load		AP			272.00
43805	3/16/2020	Unifirst Corporation		AP		3/23/2020	602.56
43806	3/16/2020	United Fire, Health, & Safety		AP		3/18/2020	1,422.15
43807	3/16/2020	US Bank Equipment Finance		AP		3/19/2020	220.00
43808	3/16/2020	Waste Management Of Oregon		AP		3/23/2020	8,405.23
43809	3/16/2020	Customer Refund		AP		3/18/2020	99.82
43810	3/31/2020	Employee Paycheck		PR			770.81
43811	3/31/2020	Employee Paycheck		PR			1,246.95
43812	3/31/2020	Employee Paycheck		PR			2,134.64
Paper Check Disbursement Activity Subtotal							427,439.14
Voided Paper Check Disbursement Activity							21,876.84
Adjusted Paper Check Disbursement Activity Subtotal							405,562.30
Total Void Check Count:							4
Total Void Check Amount:							21,876.84
Total Valid Check Count:							112
Total Valid Check Amount:							722,808.08
Total Check Count:							116
Total Check Amount:							744,684.92

STAFF REPORT

To Board of Directors
From David Mendenhall, Plant Superintendent
Title Plant Operations Monthly Report
Item No. 9c
Date April 21, 2020

Summary

The Board has requested updates at the Regular Meetings of the Board on the status of the District's Operations.

Highlights of the Month

- World upheaval
- Coliform permit limit exceedance
- Process changes

Water Reclamation Facility Operations

Well, someone needs to say it. March came in like a lamb and then the whole world changed. We have been adjusting to the continuous changes in responding the COVID-19. Our schedule has been thinned a little and we were already on a Sunday-Wednesday/Wednesday-Saturday split with the operators. There is some working from home but there still is a plant to run. There are few enough people working at one time that we have been able to practice social distancing. John offered to do extra daily cleaning and disinfecting of surfaces and door handles throughout the Operations and Maintenance building (see photo 1). We are all doing extra cleaning of our work areas, keyboards, touch surfaces, and phones with disinfectant wipes.

As I mentioned last month, we were looking into stopping the use of our drum screen equipment. The supplier looked it over and estimated we needed about \$25,000 in near term repairs. A little longer term, the drum itself would need to be replaced. That would be a major project. As shown in the pictures last month the drum support is developing cracks and it has already cracked and been rewelded before. It looks like the roof would need to be removed to extract the drum. The drum screen system was installed with the Cannibal process and the intent was to remove small debris from the end of the aeration basin process. This is predominately cellulose material, but it does trap organic material as well. This debris is compacted to remove the water and put in a dumpster with grit and screenings. When the compactor is working well the Waste Management bill is about \$4,000 per month. When it is not, and we have had several problems with it

over the past year, the product contains a lot of water and the bill can be as high as \$10,000 per month. Eliminating this system would save tens of thousands a year. Returning the extra organics to the process will increase wasting a bit and the solids load on the process but the plant is in good enough shape to handle it. We also think that any fibrous material that would not get digested could help with dewatering on the belt press. The drum screen has been offline for months at a time in the past without harming the plant. On March 10 we took the screen offline and have been monitoring things since. The solids have indeed increased in the process, but the settling has still been good, and we increased the wasting to get the solids back in line. Rainfall has been low again easing any stress on the plant. We did see a little increase in turbidity but that is normal in this plant in the spring and fall as seasons change and the water temperatures change. The foam has decreased in quantity and is lighter in color. Under the microscope the organisms and floc look good.

Then on March 24th, the test result of the E coli (Coliform) sample from the 23rd came in at 866 Most Probable Number (MPN)/100 mL, well over the daily maximum of 406. There is a DEQ protocol to follow when this occurs. It involves taking a series of 5 more samples over the next 24 hours to see if the result is still high or if it is an anomaly from the one sample. Usually a weird high result is caused by something getting in or interfering with the sample. In this case the extra results also were high resulting in an exceedance of the daily maximum. This would point to a problem with the UV system or a process problem. The UV system was functioning properly and while the turbidity of the effluent was a bit higher, the disinfection should have been happening as usual and as had been happening up until March 23rd. On the morning of the 25th after reading the extra samples we switched channels to isolate the channel where the limits had been exceeded and took our normal sample for coliform. The result read on the 26th was under the daily max but still high. This reduced the possibility of it being the UV system or bulbs and we put both channels and all the banks of bulbs online to make sure we were disinfecting thoroughly. We took more regular samples on the 27th, 30th, and 31st and because the results were low enough, we stayed under the monthly average limit.

We have investigated our process, tested the UV system, consulted with the manufacturer, and gotten the other permit test results back. The UV system looks sound. The suspended solids from the 23rd and 24th samples were higher but do not exceed permit and the UV system should have handled it easily. The solids results on the 25th were down and clarity had improved. At this point we do not know what caused these high results and can only speculate that something went through the plant that interfered with the UV light ability to disinfect the coliform bacteria. I kept in contact with DEQ keeping them up to date and submitted our report on April 6th. We will continue to investigate to see if we can come up with a cause.

Water Reclamation Facility Maintenance

Thankfully, we have not had many mechanical difficulties and have been able to do a couple jobs that we had not been able to get to. One of those is the grit system. Maintenance and operations collaborated on opening the grit head cell hatches and

flushed the head cells (see photo 2). We were trying to increase grit removal. The grit classifier was cleaned out by as well by Jayson Kahler and the cleanings and maintenance did increase grit removal into the dumpster (see photo 3). Grit pump #1, which had a leaking mechanical seal was removed for a rebuild in the shop (see photo 4). Parts have been ordered. We did cleaning and flushing of the odor control tower getting some good gunk removal (see photo 5). The west UV channel was drained and cleaned and a couple of bulbs were replaced in the week prior to the coliform event (see photos 6 and 7). John Krogstad finished the rebuild of the digested sludge recirculation pump (see photo 8). Pump stations have been inspected and have been behaving with no clogs.

Preventive work orders continue and streamlining continues. Total work orders are lower this month in comparison with the previous two months because there were a lot of work orders caught up in January and February. As we continue with the system, we will see a steadier number over time. We took delivery of two Flygt pumps for the east return activated sludge pump station. This completes the pump fleet update in the plant. Installation is coming soon. John Krogstad has been working on consolidating several separate work orders for the secondary clarifiers with Elaine Murray. Elaine has been improving the Lucity process for work orders and inspections and has been helping Admin staff getting billing done, meter information entered and getting data into Lucity. It has been quite a busy and challenging month.

Attachments

1. Photo Pages of March 2020 work
2. Rainfall vs Flow Data Correlation for September 2019-March 2020
3. Plant Performance BOD-SS Graph for September 2019-March 2020
4. Work Order Summary Graph 2020



1) Cleaning Kit



2) Cleaned Grit Head Cell



3) Cleaned Slurry Cup



4) Grit Pump Rebuild



5) Odor Control Tower Gunk



6) UV Channel with Gunk



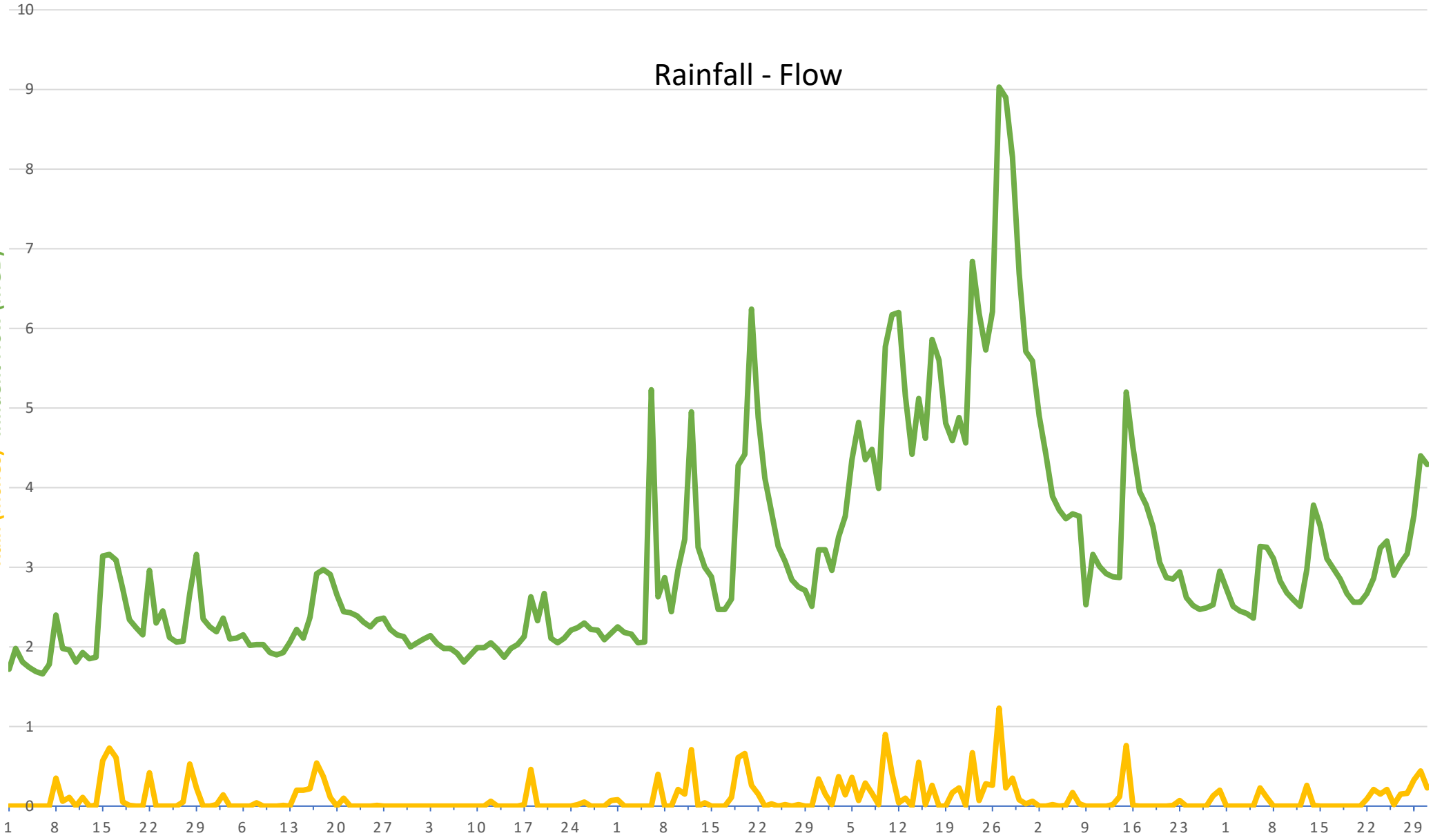
7) UV Channel De-Gunked



8) Digested Sludge Recirculation Pump

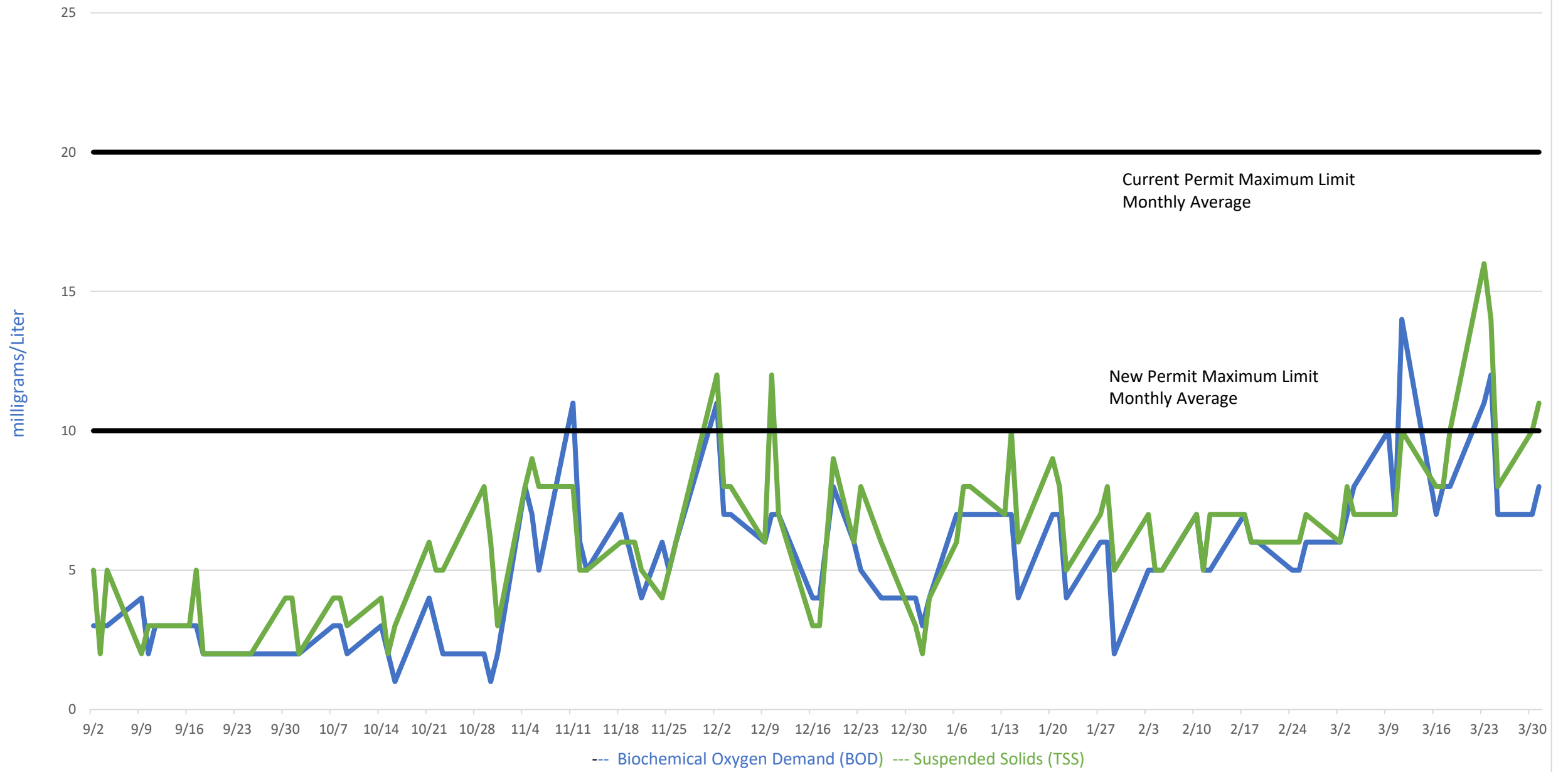
Rainfall - Flow

Rain (inches) - Inflow Flow (MGD)

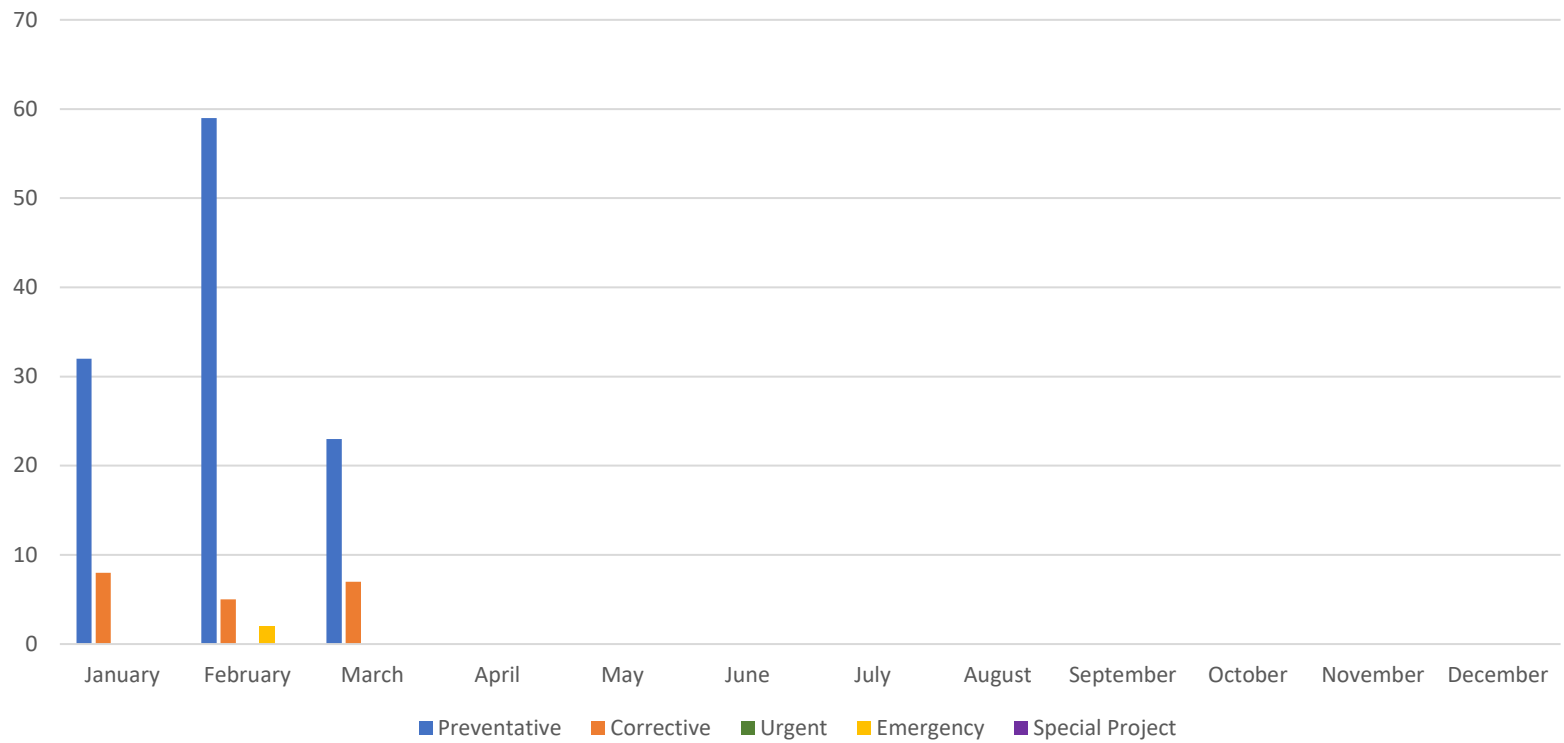


Sept through Mar

Effluent Water Quality



Treatment Plant Work Order Summary 2020



STAFF REPORT

To Board of Directors
From Jason Rice, District Engineer
Title Technical Services Monthly Report
Item No. 9d
Date April 6, 2020 for April 21, 2020 Regular Meeting

Summary

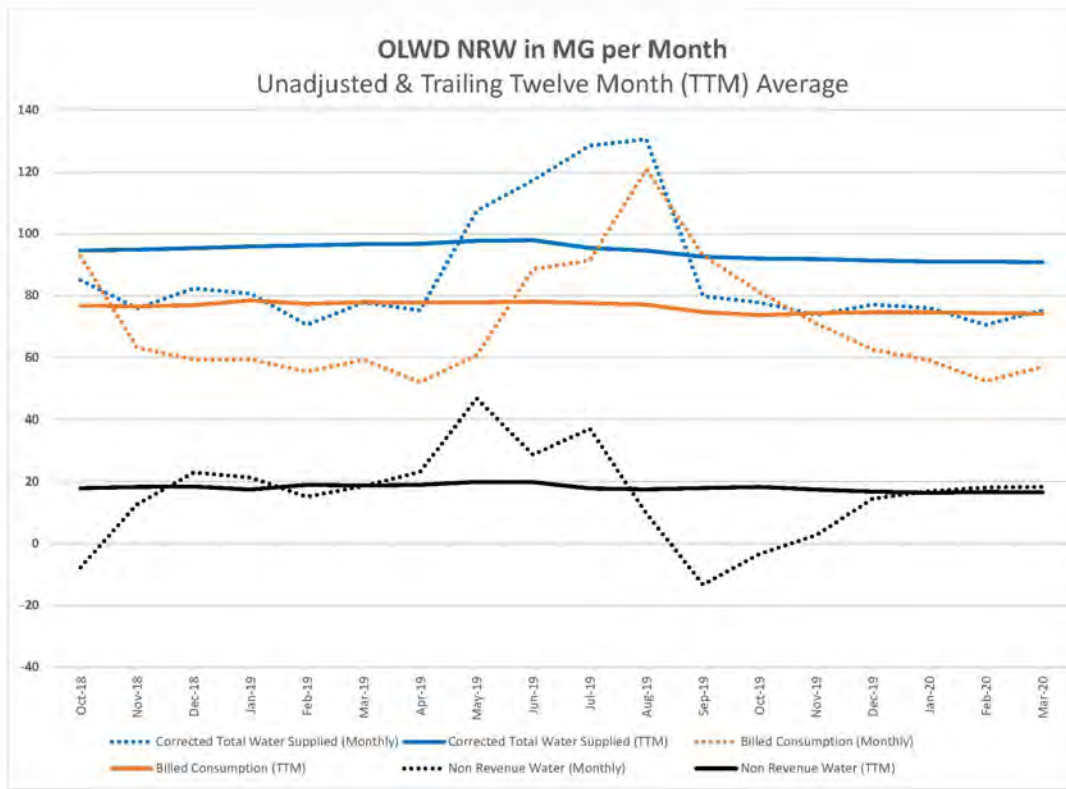
The Board has requested updates at the Regular Meetings of the Board on the status of the District's Operations.

Highlights of the Month

- Technical Services Staff transitioned to working from home for as much as they can. IT Staff is on site for coordinating issues as they arise, while inspections, drinking water quality sampling and stormwater sampling are still occurring within the District.
- Project Managers are preparing two construction contracts for release in April.
- The Water Meter Replacement Project is being closed out.
- Boardman Wetland is in the final stages of being accepted by the District (except for the sewer line work that will be completed this summer).
- Technical Services Staff spearheaded an effort to reduce the District's overall liability under the 1200Z Permit at the Treatment Plant while the Field Operations Staff performed the construction.

Non-Revenue Water Audit Efforts

- Using a list generated by Asset Management Staff, the Field Crew has been collecting data on our large meters (meters over $\frac{3}{4}$ ") while Finance Staff has been checking that data against our billing database.
- Once large meters are accounted for, the same will be performed for smaller (residential) meters. At this moment, staff is hoping to take on a representative sample and test that field data against our billing database. Depending upon the results a complete count will be planned.
- The District Engineer has started the transition of tracking all Non-Revenue Water Audit Data in-house and reporting to the Board.



Education and Outreach

Since our last Board meeting and the onset of COVID-19 in our community, much has changed for outreach and education in general. For the District, COVID-19 has altered all OLWS outreach strategies.

The main messaging that staff have been focused on revolves around OLWS operations and functionality. With the social distancing practices being put into place, we have wanted customers to know that the District is still functioning to support their needs around all core services, including plant and field operations, permitting, addressing service interruptions, bill payment, and technical services.

Staff have worked to keep our website up to date with relevant COVID-19 information, pertinent to District operations.

One current message for the Board to share with the OLWS public is to dispose of wipes in the trash. Wipes usage has increased dramatically since the start of the public health emergency, and for good reason. Unfortunately, wipes are usually marketed as “flushable” when they do not break down in our sewer system. They end up at the Water Reclamation Facility and can cause breakdowns in the treatment plant pumps, or even in the pump stations. We want the public to understand they can help do their part by throwing wipes into the trash can. One solution in the bathroom is to add a small

trash can with a lid. Disinfection wipes used in the rest of the house can go there too or be put into the kitchen trash.

A new feature on the website is a page for the Board to access up to date District messages, called "Important Messages". This link is under the "Your District" and then under the "Board of Directors" on the main page of the website. Currently the messages include basic information relevant to the services that OLWS provides. Please take time to familiarize yourself with accessing this page and let staff know what other information would be helpful to add to this page. Regular updates can be made based on Board needs, and the page can be referenced quickly and from anywhere you have your phone.

- <https://www.oaklodgewaterservices.org/bc/page/important-messages>

Both of our largest children's educational events, produced in partnership with other water providers, have been cancelled for 2020. Depending on how public health efforts go, they will resume next spring.

In addition, outreach staff have been busy working to revamp our non-profit partnerships for the remainder of this fiscal year. All strategies for connecting with students and adults are shifting somewhat considering social distancing. Every non-profit partner will be slightly modifying their work agreements in order to best fulfill their annual goals for OLWS clean water messaging.

The Clean Rivers Coalition Steering Committee continues to work on the third phase of their strategic communications outreach project. The initial statewide topic will be on pesticides, herbicides and insecticides, with a pro-water quality baseline message. As Phase III continues, the core team is working to revamp the campaign timeline based on the response to Covid-19. Luckily, plans for this campaign have been mostly virtual, so work is able to continue mostly as planned.

The North Clackamas Watersheds Council cancelled its Board Retreat and will be reworking its operational strategy for the next 3-6 months. Updates will be posted to this Board as they roll out.

March 2020 Permit Activity

	<i>This Month</i>	<i>Last Month</i>	<i>Fiscal Year-to-Date</i>	<i>This Month Last Year</i>	<i>Last Year-to-Date</i>
Pre-applications Conferences	0	2	18	1	19
Hours Spent on Development Review	20	30	265	20	475
Hours spent on Utility Permits	20	50	505	20	295
Development Permits Issued	0	0	9	0	17
Utility Permits Issued	4	0	80	4	49
New Sewer Connections	4	0	87	4	37
New Water Services	4	0	69	4	-
Active Erosion Control Permits	63	65	637	28	367
Total Erosion Control Permits Inspected	63	65	637	28	367
Active Construction Permits	8	8	114	30	220
Sanitary SDC Fees Received	\$20,660	\$0	\$406,323	\$20,660	\$323,230
Water SDC Fees Received	\$17,280	\$0	\$321,650	\$22,395	\$293,100
Plan Review Fees Received	\$3,230	\$200	\$39,510	\$1,000	\$65,943
Inspection Fees Received	\$2,170	\$0	\$29,010	\$2,272	\$63,866

Attachments

1. Development Tracker
2. Capital Project Tracker

Project Status	Address	Type of Development	Notes	Last Updated
Warranty Period	Taxlots 2000 & 2100 located	Residential Subdivision; 3 lots	Oak Lodge warranty period ends March 2019. Warranty complete awaiting asbuilts	4/3/20
Closed	22E07CA03003 (SE Allan Rd @ SE Worthington)	Residential subdivision: 2-lots	Oak Lodge warranty expires Feb. 2020. Inspection scheduled for Feb. 2020. Awaiting asbuilts	4/3/20
Warranty Period	3622 SE Pinehurst	Residential Subdivision; 7 lots	Warranty Period ends September 2020	4/3/20
Under Construction	4322 SE Pinehurst Ave	Residential Subdivision; 7 lots	Oak Lodge permits expire April 2020	4/3/20
Under Construction	14107 SE Lee Ave	Residential subdivision: 2 lots	Oak Lodge permits expire June 2020	4/3/20
Under Construction	16800 SE McLoughlin	Commercial Structural Alteration	Oak Lodge permits expire June 2020	4/3/20
Under Construction	4410 SE pinehurst	Residential Subdivision; 4 lots	Water utility only. Inspections Continuing	4/3/20
Under Construction	16518 SE River Rd.	Head Start School Additions	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	17624 SE RIVER RD	Multi-family residential; three (3) 2-family_ dwelling units and two (2) three family dwelling units	Oak Lodge permits expire June 2020	4/3/20
Plan Review	13505 SE River Rd	Rose Villa Phase 4 Medical Building	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	SE Kellogg @ SE Birch	Road Improvements / CC DTD CIP	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	15601 SE Meadowlark Ln.	2-lot partition	Oak Lodge Permit approved. Awaiting building permit. Oak Lodge permit expires Feb. 2021	4/3/20
Plan Review	15099 SE McLoughlin Blvd	CORPORATE HEADQUARTERS CLACKAMAS FEDERAL CREDIT UNION	Application submitted to Oak Lodge. Oak Lodge permit expires Sept 2020	4/3/20
Plan Review	1901 SE Oak Grove Blvd	Alteration of a Nonconforming Use to replace a portion of existing New Urban HS facility	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	15115 SE East Ave	Residential Subdivision	Application submitted to Oak Lodge. Oak Lodge permit expires January 2021	4/3/20
Plan Review	View Acres Elementary	Redevelopment: School	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	19315 SE River Rd	Residential 2-lot partition	Land Use comments sent to CCDTD. County land use expiration timeline.	4/3/20

<i>Project Status</i>	<i>Address</i>	<i>Type of Development</i>	<i>Notes</i>	<i>Last Updated</i>
Plan Review	Riverside Elementary School	Redevelopment: School	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	New Urban High School "Annex"	Redevelopment: School	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	Candy Lane School	Redevelopment: School	Oak Lodge Site Development Permit current review	4/3/20
Plan Review	Jennings Lodge School	Redevelopment: School	Oak Lodge Site Development Permit current review	4/3/20
Pre-Application	13822 SE Oatfield Rd	Residential zone change from R-10 to R-7 and a 10-lot minor subdivision.	Pre-app Comments sent to CCDTD. County land use expiration timeline.	4/3/20
Pre-Application	15717 SE McLoughlin	Bank and Office	Pre-app Comments sent to CCDTD. County land use expiration timeline.	4/3/20
Pre-Application	2718 SE Risley	Zone change and 4 - 6 lot minor subdivision with conditional use for one three-family dwelling	Pre-app Comments sent to CCDTD. County land use expiration timeline.	4/3/20
Pre-Application	5722 SE OATFIELD RD	2 parcel partition	Scheduled for April 15	4/3/20
Pre-Application	14720 SE River Rd	12 Unit Development + MR-1 to HDR Rezone	Scheduled for April 29	4/3/20
Pre-Application	14733 SE Rupert Ave	Residential tri-plex; no demo	Pre-app Comments sent to CCDTD. County land use expiration timeline.	4/3/20

STAFF REPORT

To Board of Directors
From Todd Knapp, Field Operations Manager
Title Field Operations Monthly Report
Item No. 9e
Date April 21, 2020

Summary

The Board has requested updates at the Regular Meetings of the Board on the status of the District's Operations.

Highlights of the Month

- Meters replaced, new services added, and leaks repaired (See chart).
- Water consumption for **March: 70,192,000 Gallons (3.76% Above the 10-year average of 67,650,700, but were down -0.84% compared to last year)** (See metered monthly consumption chart).
- Crews split into alternating week work groups.

Water Operations

Water crews were busy replacing meters the contractor could not get to due to various conditions; setting meters for new services; meter box maintenance and replacements; tapped two new services, set meters for six already tapped services for a total of eight new services for the month of March.

Water and collections have both been split into two groups each to further maintain separation. This has been challenging but both teams and groups are making the best of the current situation. The at remote work group (which rotates every week) has been given several options. Aleah (who I must say has done an amazing job throughout this trying time) has set up several training courses for folks with computers at their home office to go through. The courses include excel, word, and there is also a link for OSHA training courses. Other training material was given to folks without a computer, this included books and other reading material to help them advance to their next level of certification.

Both the water crew and collections crew have been hauling biosolids 2-3 times per week for the treatment plant.

Collections Operations

The collections crew finished Basin A and started Basin D. They were able to get most of their footages despite having to split the crews the last week in March. The crew was also able to help the Mechanic to complete small projects around the plant.

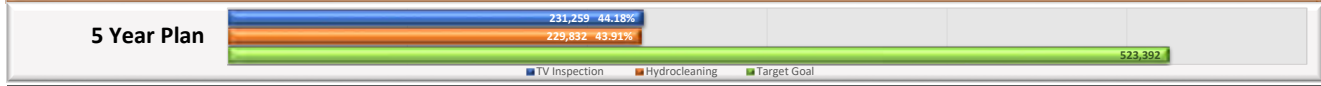
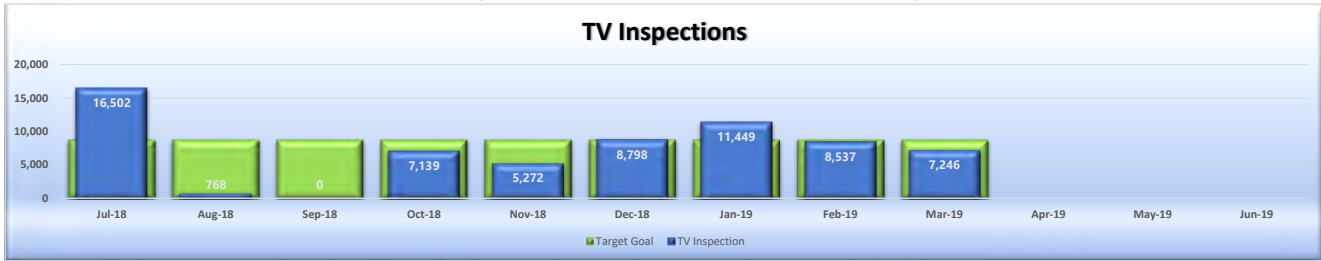
The collections crew as of the last week of March have stopped cleaning sewer mains due to concern of spreading droplets into the air and having them land on by passers as well as themselves, so we switched to plan B and are currently cleaning storm basins as well as trucks and equipment on a very thorough basis.

Collections crews have been given the same access to training as well as book certification courses for our newer employees, this includes the Sacramento State Operations and Maintenance of Wastewater Collection Systems Volume 1 and 2. There are also plenty of Lucity training videos.

Attachments

1. Collections Report
2. Water Report
3. Meter Report

Oak Lodge Water Services Collections Report



FY 2017-2018

Month	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Current Month %	To Date Totals	Year 1 % Complete	5 Year %	Total Feet Remaining
TV Inspection	2,512	11,906	13,532	8,961	4,566	4,987	5,092	1,548	1,942	9,212	7,875	6,239		78,372	74.87%	14.97%	445,020
Hydrocleaning	6,967	8,539	13,085	10,206	4,472	2,328	4,723	513	4,906	8,953	8,638	5,367		78,697	75.18%	15.04%	444,695
Target Goal	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723		104,678	100.00%	20.00%	418,714
Actual to Goal	-3,984	1,499	4,585	860	-4,204	-5,066	-3,816	-7,693	-5,299	359	-467	-2,920		-26,144			
Grease Line	3,625	5,105	3,276	3,625	10,227	3,859	3,625	4,757	3,625	3,276	11,061	4,225		60,286			

FY 2018-2019

Month	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Current Month %	To Date Totals	Year 2 % Complete	5 Year %	Total Feet Remaining
TV Inspection	4,308	10,281	10,488	3,388	5,886	13,480	3,283	8,993	4,635	1,657	4,923	15,854		87,176	83.28%	31.63%	357,844
Hydrocleaning	3,619	9,456	6,197	13,307	2,636	16,171	1,124	11,765	14,542	3,289	287	0		82,393	78.71%	30.78%	362,302
Target Goal	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723		104,678	100.00%	40.00%	314,035
Actual to Goal	-4,760	1,145	-381	-376	-4,462	6,102	-6,520	1,656	865	-6,250	-6,118	-796		-19,894			
Grease Line	3,276	4,757	3,625	3,625	3,625	2,192	5,105	3,625	2,963	10,872	4,006	3,276		50,947			

FY 2019-2020

Month	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Current Month %	To Date Totals	Year 3 % Complete	5 Year %	Total Feet Remaining
TV Inspection	16,502	768	0	7,139	5,272	8,798	11,449	8,537	7,246				83.07%	65,711	62.77%	44.18%	292,133
Hydrocleaning	21,557	0	0	7,709	9,405	9,493	11,164	0	9,414				107.92%	68,742	65.67%	43.91%	293,560
Target Goal	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723	8,723				100.00%	78,507	75.00%	55.00%	235,528
Actual to Goal	10,306	-8,339	-8,723	-1,299	-1,385	423	2,584	-4,455	-393					-11,281			
Grease Line	1,480	3,276	3,276	1,480	9,392	3,276	3,625	3,625	3,625					33,055			

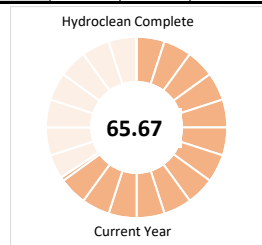
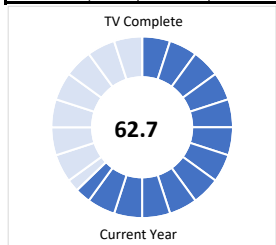
FY 2020-2021

Month	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Current Month %	To Date Totals	Year 3 % Complete	5 Year %	Total Feet Remaining	
TV Inspection																		0
Hydrocleaning																		0
New Target Goal																		0
Grease Line														0				0

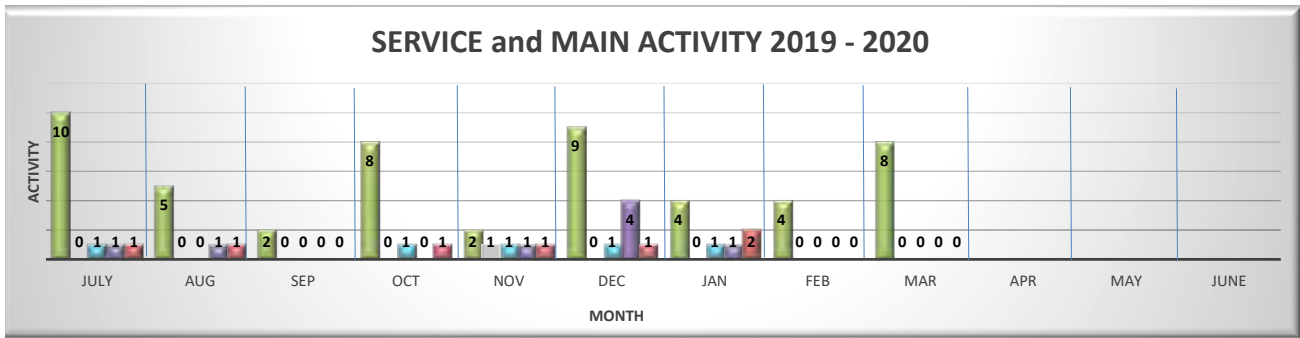
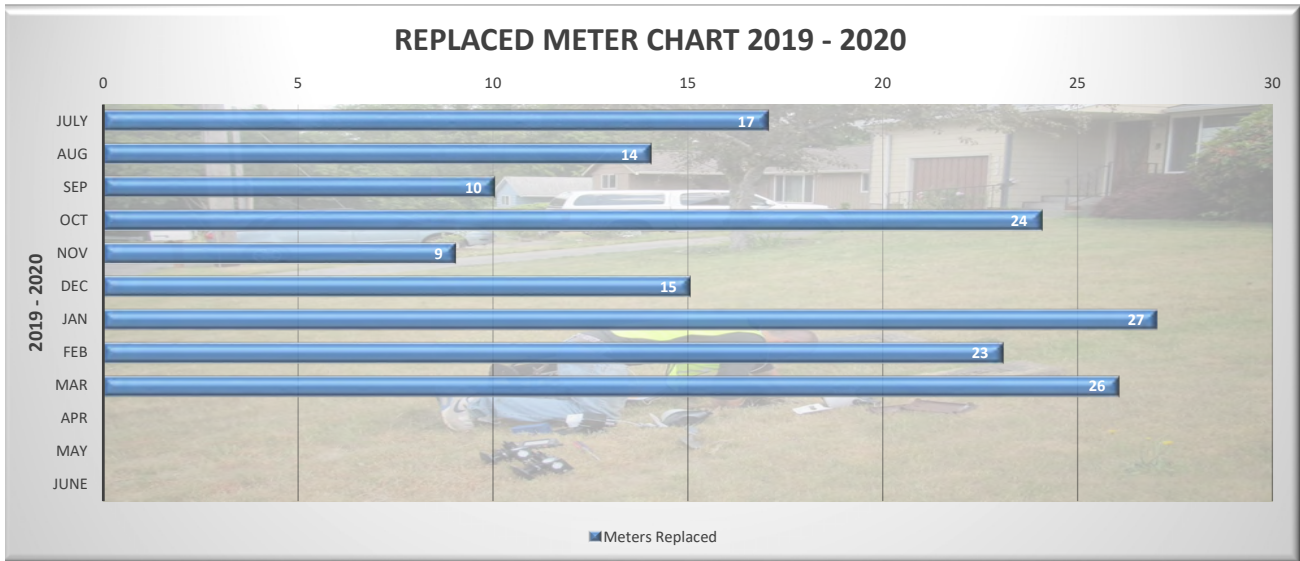
FY 2021-2022

Month	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Current Month %	To Date Totals	Year 3 % Complete	5 Year %	Total Feet Remaining	
TV Inspection																		0
Hydrocleaning																		0
New Target Goal																		0
Grease Line																		0

	Year 1	Year 2	Year 3	Year 4	Year 5	Remaining
Total Feet	523,392	523,392	523,392	523,392	523,392	
Target Per Year	104,678	104,678	104,678	104,678	104,678	
Target Per Month	8,723	8,723	8,723			
Actual Per Year TV	78,372	87,176	65,711			292,133
Actual Per Year Hyd	78,697	82,393	68,742			293,560
Make up	-26,144	-19,894	-37,452			
Percent Completed	75%	81%	64%	0%	0%	44%



Oak Lodge Water Services Water Report



Fiscal Year 2019 - 2020	Month	Meters Replaced	New Services	Iron Services Renewed	Plastic Services Renewed	Service Leaks Repaired	Main Leaks Repaired
2019	July	17	10	0	1	1	1
2019	Aug	14	5	0	0	1	1
2019	Sep	10	2	0	0	0	0
2019	Oct	24	8	0	1	0	1
2019	Nov	9	2	1	1	1	1
2019	Dec	15	9	0	1	4	1
2020	Jan	27	4	0	1	1	2
2020	Feb	23	4	0	0	0	0
2020	Mar	26	8	0	0	0	0
2020	Apr						
2020	May						
2020	June						
Yearly Total		165	52	1	5	8	7

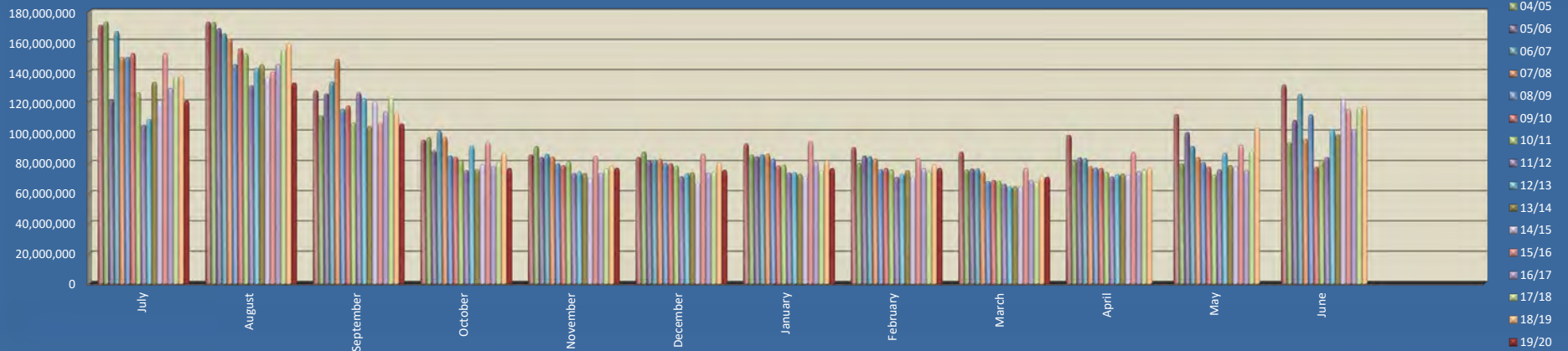
Backflow Program Update for the Month of December

Signed up to Date	Devices Repaired	New Installations	Notice of Non-Compliance	Notice of Violation	Notice of Termination	Force Test
624	4	1	2	0	0	6
List of Backflow Letters						
Letter 1	Notice of Non-Compliance			District made aware (30 days to respond)		
Letter 2	Notice of Violation			Customer has final 30 days to correct		
Letter 3	Notice of Termination of water service			Customer has 5 days til water shut off		

Water Purchased from NCCWC By Month and Year

Year	Fiscal 1st Half						Fiscal 2nd Half						Total Yearly Con	Average Daily Demand	10 Year % Ave	
	July	August	September	October	November	December	January	February	March	April	May	June				
03/04	170,652,000	172,726,000	127,198,000	94,416,000	85,037,000	83,285,000	91,933,000	89,441,000	86,755,000	97,665,000	111,392,000	130,863,000	1,341,363,000	3.67		
04/05	172,883,000	172,499,000	110,696,000	95,973,000	90,079,000	86,823,000	84,976,000	79,415,000	74,996,000	80,616,000	79,088,000	92,885,000	1,220,929,000	3.35		
05/06	120,871,000	168,248,000	125,172,000	87,512,000	83,230,500	80,773,500	83,697,000	84,098,667	75,580,333	83,028,000	99,436,000	107,501,000	1,199,148,000	3.29		
06/07	166,449,000	164,957,000	132,989,000	100,180,000	85,350,000	81,587,000	85,179,000	83,766,000	75,622,455	82,508,545	90,129,000	124,696,000	1,273,413,000	3.49		
07/08	149,207,000	161,512,000	147,980,000	96,159,000	83,445,000	81,921,000	85,466,000	82,200,000	73,405,000	77,221,722	83,162,278	94,885,000	1,216,564,000	3.33		
08/09	149,422,000	144,592,000	114,830,000	84,307,000	79,094,000	79,319,000	82,042,000	75,196,000	67,364,000	76,238,000	79,968,000	111,127,286	1,143,499,286	3.13		
09/10	151,804,000	155,069,000	117,099,000	83,457,000	77,782,000	79,107,000	77,735,000	75,975,000	67,986,000	75,943,000	76,903,000	76,720,000	1,115,580,000	3.06	101.42%	
10/11	125,996,000	151,590,000	105,880,000	81,052,000	80,389,000	77,515,000	78,266,000	74,983,000	67,462,000	73,285,000	71,613,000	81,189,000	1,069,220,000	2.93	97.21%	
11/12	104,328,000	130,684,000	125,733,000	74,646,000	72,657,000	70,555,000	73,041,000	70,104,000	65,501,000	70,380,000	75,148,000	83,256,000	1,016,033,000	2.78	92.37%	
12/13	108,236,000	142,023,000	121,981,000	90,545,000	73,672,000	72,454,000	73,277,000	72,051,000	63,866,000	71,906,000	86,085,000	101,278,000	1,077,374,000	2.95	97.95%	
13/14	132,837,000	144,354,000	103,403,000	75,217,000	72,624,000	73,180,000	72,052,000	74,566,000	63,886,000	72,171,000	77,889,000	97,978,000	1,060,157,000	2.90	96.38%	
14/15	120,411,000	135,271,000	120,008,000	78,257,000	69,534,000	66,200,143	70,840,857	70,318,000	63,972,000	71,515,000	77,173,000	121,185,000	1,064,685,000	2.92	96.79%	
15/16	151,728,000	139,696,000	105,238,000	92,781,000	83,966,000	85,368,000	93,522,000	82,637,000	76,044,000	86,443,000	90,989,000	114,745,667	1,203,157,667	3.30	109.38%	
16/17	128,722,333	144,599,000	113,212,000	77,196,000	72,766,000	72,839,000	80,205,000	75,867,000	68,040,000	73,822,000	74,515,000	101,310,000	1,083,093,333	2.97	98.47%	
17/18	136,262,000	154,085,000	122,113,000	79,860,000	75,718,000	73,584,000	74,389,000	73,219,000	66,754,000	74,713,000	87,263,000	115,543,000	1,133,503,000	3.11	103.05%	
18/19	136,887,000	158,433,000	112,001,000	86,062,000	77,769,000	79,690,000	81,040,000	78,594,000	70,790,000	76,199,000	102,519,000	116,626,000	1,176,610,000	3.22	106.97%	
19/20	120,368,000	132,181,000	105,200,000	75,825,000	76,089,000	74,759,000	75,848,000	75,918,000	70,192,000							
20/21																
10 Year Average	126,577,533	143,291,600	113,476,900	81,144,100	75,518,400	75,049,214	77,248,086	74,825,700	67,650,700	74,637,700	82,009,700	100,983,067		3.01	75,707,667	
Last Year Compare	87.93%	83.43%	93.93%	88.11%	97.84%	93.81%	93.59%	96.60%	99.16%							Summer Ave
10 year Average	95.09%	92.25%	92.71%	93.44%	100.76%	99.61%	98.19%	101.46%	103.76%							127,782,011
	-3.31%	-4.91%	-7.75%	-7.29%	-6.56%	0.76%	-0.39%	-1.81%	1.46%							
	-28,402,233	-6,209,533	-11,110,600	-8,276,900	-5,319,100	570,600	-290,214	-1,400,086	1,092,300	2,541,300						

OLWSD'S Metered Monthly Purchase Graph



AGENDA ITEM

Title	Call for Public Comment
Item No.	10
Date	April 21, 2020

Summary

The Board of Directors welcomes comment from members of the public.

Written comments may not be read out loud or addressed during the meeting, but all public comments will be entered into the record.

The Board of Directors may elect to limit the total time available for public comment or for any single speaker depending on meeting length.

AGENDA ITEM

Title Business from the Board
Item No. 11
Date April 21, 2020

Summary

The Board of Directors appoints District representatives from time to time to serve as liaisons or representatives of the District to committees or community groups.

Directors assigned specific roles as representatives of the District are placed on the agenda to report to the Board on the activities, issues, and policy matters related to their assignment.

Business from The Board Items Include:

- a. Individual Board Member Reports**
- b. Parking Lot**

Date Added	Item	Work Update
6/18/2019	SDC and ADU Comparison to other Communities	Jason will be presenting this data in April
8/13/2019	OLWSD/Gladstone IGA	OLWSD Staff is working to create the first full draft of the IGA for City of Gladstone review



April 15, 2020

Board of Directors
Oak Lodge Water Services

Dear Directors,

Oak Lodge Water Services has received an official request from the North Clackamas Watersheds Council (NCWC) for a letter of support regarding a Council budget issue. At this time, Staff are requesting that the Board review the attached letter of support and authorize President Williams and myself to sign it on behalf of the organization.

Sincerely,

A handwritten signature in black ink that reads "Sarah Jo A. Chaplen".

Sarah Jo Chaplen



April 22, 2020

To: Jeff Becker, Chair, Clackamas Soil & Water Conservation District
Jim Johnson, Zone 2 Director
Jason Faucera, Budget Committee
Lisa Kilders, Acting General Manager

Dear Jeff, Jim, Jason, and Lisa,

Hello. We are writing as a board representative for the North Clackamas Watersheds Council, a community-based stewardship nonprofit that works to engage people in bringing about healthy watersheds in North Clackamas County. As a jurisdictional board supporter, Oak Lodge Water Services District (OLWS) has been proud to help guide the Council as it has grown over the years. However, the possibility that the Clackamas SWCD might cut the funding to NCWC, and other Watershed Councils, threatens to undo all that growth. OLWS asks that you reinstate Watershed Council funding in 2020-21 at the same level as 2019-20.

This funding is particularly critical to our Council because, due to the date of our founding, we are ineligible for OWEB Watershed Council Capacity grants. Therefore, the CSWCD is currently the primary source of funding for Core Mission Support to keep the basic operations of our Council running. Without these funds, we will be far less able to sustain our work.

With the District's support, NCWC has:

- Restored riparian vegetation on 163 private parcels with 159 different landowners, in four watersheds, revegetating 18,031 feet of riparian habitat.
- Conducted the first Bio-Assessment of Kellogg/Mt. Scott, River Forest, Boardman, Rinearson creeks, and a stretch of the Willamette. We are now developing a Watershed Action Plan that will prioritize restoration projects for years to come and will pre-design high priority projects so they can advance to implementation.
- Convening stakeholders to advance the removal of Kellogg Dam, and restore fish passage to Kellogg and Mt. Scott watersheds. We've engaged the Governor's Natural Resources Office, the Congressional Delegation, federal and state agencies, Metro, the City of Milwaukie, and private investment to move this high-priority project of regional significance forward.
- Conducted many public volunteer stewardship projects on the Willamette River, Rinearson, Boardman, Mt. Scott, and Kellogg Creeks, working in partnership with the District on our Watershed Cleanup and Stewardship Day and restoration of Olson Wetlands in partnership with a low-income housing nonprofit, and to restore the headwaters of Mt. Scott Creek.



But most importantly, we are the locally based, non-governmental stewardship partner for an area of 163,000 people — equal to Oregon's 4th-largest city, equal to Eugene. To *not* have an effective Watershed Council for a population this large that supported the District at the ballot box would be large step backwards.

In the current crisis, the Council anticipated that many general-purpose philanthropic foundations and project partners will cease funding Watershed Councils in order to instead respond to Covid-19. CSWCD funding is therefore even more critical to our survival and ability to implement our programs than ever. It would be a terrible loss to the community if we had to abandon what we've built together.

I ask that you reinstate this funding for both the North Clackamas Watershed Council, and for all the Councils in Clackamas County.

Sincerely,

Kevin Williams
Board President, OLWS

Sarah Jo Chaplen
General Manager, OLWS

**Sunrise Water Authority
March 25, 2020 Board Meeting
Paul Gornick's Notes**

- **Board vice-chairman Chris Hawes called meeting to order, then swore in new commissioner Kevin O'Meara. Meeting was held remotely using WebEx audio meeting platform.**
- **With the passing of Ernie Platt, board elected new officers: Chris Hawes selected as board chair, Andy Coate selected as vice-chair. Board will solicit candidates to fill remainder of Ernie Platt's term. Chris Hawes was chosen to replace Ernie Platt on NCCWC. Wayne Barstow was chosen to replace Ernie Platt on CRWSC.**
- **Board approved the consent agenda, which included reappointment of one budget committee member whose term had expired, and approval of the February 2020 financial statements.**
- **Similar to Oak Lodge, board approved two resolutions, one establishing emergency authority, and a second declaring an emergency due to COVID19 outbreak. Emergency declaration was open ended until canceled by board.**
- **Board suspended water shutoffs; delinquent accounts would continue to accrue fees, but if customer established a payment plan, waiver of fees may be considered by staff.**
- **Rate hearing was cancelled.**
- **GM Wade Hathorn gave Manager's update and the operation and construction reports. A discussion took place of how to address potential outbreak of COVID19 among staff members. Board granted GM the discretion to deal with how to utilize leave for the affected employee(s).**



10602 S.E. 129th Avenue, Happy Valley, OR 97086-6218
tel: 503.761.0220 • fax: 503.761.7406
www.sunrisewater.com

Board of Commissioners: Regular Meeting
Wednesday, March 25, 2020 - 6:00 p.m.

AGENDA

REMOTE ACCESS FOR BOARD OF COMMISSIONERS MEETING:

WEBEX MEETING #199 438 883

Join online: <https://www.webex.com/login/attend-a-meeting>

Join by Phone: 1-415-655-0001

CALL REGULAR MEETING TO ORDER

Voice Roll Call

Approval of Agenda

ADMINISTER OATH OF OFFICE FOR KEVIN O'MEARA

ELECTION OF OFFICERS & LIAISON ASSIGNMENTS

1. CONSENT AGENDA

- 1.1 Approval of Minutes
- 1.2 Appointment of Budget Committee Member
- 1.3 Acceptance of Water Mains and Related Facilities for Deer Ridge Subdivision
- 1.4 Award Contract for Highway 212 8-inch Main Abandonment Asphalt Restoration
- 1.5 Financial Statements

2. DISCUSSION ITEMS

- 2.1 Adopt Resolution 2020-03, Establishing Emergency Authorities
- 2.2 Adopt Resolution 2020-04, Declaring an Emergency
- 2.3 Temporary Suspension of Shutoffs and Managing Delinquent Accounts

3. STAFF REPORTS

- 3.1 Manager's Update
- 3.2 Engineering & Construction Reports
- 3.3 Operational Reports

4. BOARD BUSINESS

- 4.1 Board Calendar
- 4.2 Liaison Reports
- 4.3 Information Items
- 4.4 Future Agenda Items

POSTED FRIDAY, MARCH 20, 2020 PER REQUIREMENTS.

The meeting site is accessible to persons with disabilities. Requests for an interpreter for the hearing impaired should be directed to Cindy Wolff at 503-761-0220 or cwolff@sunrisewater.com at least 48-hours in advance.

Meetings Attended During the Past Month

1. March 17 – OLWS Board meeting
2. March 20 – Free AWWA Webinar: Utility Actions to Sustain Operations During COVID-19
3. March 25 – Oak Grove Community Council meeting – CANCELLED
4. March 25 – OLWS Board work session (virtual meeting)
5. March 31 – OLWS Budget Committee work session (virtual meeting)
6. April 3 – Free AWWA Webinar: Be a Trusted Source: How to Handle Communication Challenges During COVID-19
7. April 6 – Free AWWA Webinar: Legal Aspects of COVID-19 for Water Utilities
8. April 8 – Regional Water Providers Consortium Executive Committee meeting (virtual meeting - agenda attached)
 - a. RWPC members' responses to COVID-19 & RWPC's support roles
 - b. RWPC Board and EC elections
 - c. Program Updates
 - d. June Board meeting planning / agenda planning (special meeting on May 13)
9. April 9 – Oregon Infrastructure Finance Authority Board meeting (virtual meeting)
 - a. Funding request by Port of Coos Bay for new ice plant & pier
 - i. Note that business continuity insurance may not cover pandemic
 - b. Funding request by Lusted Water District for water system improvements
 - c. Update on Business Oregon response to COVID-19
 - i. Near-term responses
 1. Business hotline / website / state support
 2. "Field hospital" funding
 3. Reassignment of Portland office space
 - ii. Additional federal funding from HUD to be distributed through counties
 1. For special economic development, facilities/improvements, public services
 2. Pending implementation of current programs before release of new funds
 3. Accelerated application and award schedules (from 30d to 5d)
 - iii. Growing concern about IFA borrower's ability to pay ... potential forbearance (~ 3 months) on monthly and quarterly payments, but not annual payments at this time

Meetings Scheduled for the Coming Month

1. April 22 – Oak Grove Community Council meeting – CANCELLED?
2. April 27 – Business Oregon Audit Committee meeting (virtual meeting)
3. April 28 – OLWS Budget Committee meeting
4. April 30 – OLWS Budget Committee meeting
5. May 5 – OLWS Budget Committee meeting
6. May 13 – RWPC Executive Committee special meeting



Executive Committee Meeting Agenda

DATE: April 8, 2020
5:30 p.m.

LOCATION: Meeting will be phone-in using this number: 503-823-9993

Agenda

Introductions

Approval of December 11, 2019 Meeting Summary

COVID-19 Response – Share information and discuss potential Consortium role

Director Report – Rebecca Geisen, Managing Director (20 minutes)

- Update on on-going projects. Board and County Executive Committee elections.

Program Updates – Bonny Cushman, Program Coordinator (20 minutes)

- Update on activities of the Emergency Planning and Conservation Programs.

June Consortium Board Meeting Draft Agenda – Rebecca Geisen, Managing Director (10 minutes)

- Review draft agenda and make any necessary revisions.
- Potential Placeholder Discussion Topics
 - Critical Energy Infrastructure Hub - (guest speaker available/confirmed)
 - Web analytics (case study presented by Bonny Cushman)
 - COVID-19?

Legislative Updates – Rebecca Geisen, Managing Director (10 minutes)

- Informational.

Next Meeting Date/Location:

September 2, 2020

Portland Building

2nd Floor, Room 216

Search the web Search <http://www.regionalh2o.org>

Search



Welcome to the REGIONAL WATER PROVIDERS CONSORTIUM

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[Our Region's Water](#)

[About Us](#)

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[Español](#)

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COVID-19

Like 0

Tweet



Your tap water is safe to drink and available.

The Consortium's 23 water provider members are committed to providing safe and reliable drinking water to their customers every day, and this remains true during the COVID-19 pandemic.

Here in Oregon, water providers are required to meet the Environmental Protection Agency and the Oregon Health Authority treatment and water quality requirements. The treatment processes used by water providers kill bacteria and viruses such as COVID-19. Find out more from the EPA and the CDC about COVID-19 and drinking water.

We'll keep the water on and we're here to help.

Water is a key element to staying healthy and safe during the COVID-19 pandemic. You can always count on reliable water service from us.

Customers that are concerned about their ability to pay their upcoming water bills should contact their water provider to find out what support and resources they can provide. (Please note that many water providers have reduced their customer service staffing in order to follow physical distancing recommendations, and that response times may be increased.)

Saving water saves money.

Find out how you can use water more efficiently at home and in the garden. More efficient water use will lead to savings on your upcoming water bill.

We are in this together.

Water is an essential service and our staff are essential too. Water providers are taking precautions to keep their work force safe and healthy. In order to maintain physical distancing, providers are teleworking when possible, shifting work schedules, and limiting access to important facilities such as treatment and operations locations to protect critically essential staff.

Contact your water provider for specific financial assistance information.

If you are not sure which water provider serves your address, use the widget at the top of the right sidebar to find out. Any specific questions regarding your water service, billing, financial resources, or to request information in another format should be directed to your water provider.

Beaverton, City of 503-526-2257	Clackamas River Water 503-722-9220	Cornelius, City of 503-357-3011
Forest Grove, City of 503-922-3221	Gladstone, City of 503-557-2771	Gresham, City of 503-661-3000
Hillsboro, City of 503-615-6700	Lake Oswego, City of 503-635-0265	Milwaukie, City of 503-786-7597
Newberg, City of 503-537-1282	Oak Lodge Water Services 503-654-7765	Portland, City of 503-823-7404
Raleigh Water District 503-292-4894	Rockwood Water PUD 503-665-4179	Sandy, City of 503-668-5533
Sherwood, City of 503-925-2315	South Fork Water Board 503-657-5030	Sunrise Water Authority 503-761-7406
Tigard, City of 503-718-2591	Tualatin, City of 503-692-2000	Tualatin Valley Water District 503-848-3000
Troutdale, City of 503-674-3300	West Slope Water District 503-292-2777	

Latest Coronavirus Research Update

April 16, 2020 - Page 1 of 2

Presenters:

- Peter Grevatt, PhD, CEO–The Water Research Foundation
- Charles Haas, PhD–Drexel University, WRF Academic Council, *A Risk Assessment Update and Perspective*
- Matthew Arduino, DrPH–Centers for Disease Control and Prevention, *CDC's Current Update on COVID-19*
- Charles Gerba, PhD – University of Arizona, *The Survivability of the COVID-19 Virus in Air, Water, Wastewater, and Various Surfaces*
- Krista Wigginton, PhD–University of Michigan, *Overview of the COVID-19 Virus Loads in Human Samples and Using Predictive Models to Predict Fate in the Environment*
- Gertjan Medema, PhD–KWR Water Research Institute in Nieuwegein, the Netherlands – *The Dutch Case Study on Sewage Surveillance of COVID-19*
- Mark LeChevallier, PhD–Dr. Water Consulting, LLC, *Overview of PPEs and the Current Implications and Applicability to COVID-19*

Notable Findings & Comments

1. Chuck Haas, Drexel University
 - a. Wastewater treatment and disinfection highly effective in removing/inactivating coronavirus-19 (CoV-19) – including UV – but much less information on biosolids
2. Matt Arduino, CDC
 - a. Stool can have high *detectable* virus loads (PCR) but may not be *infective*; unclear if fecal material is infective
 - b. CoV-19 detectable in raw wastewater; useful in tracking occurrence in community
 - c. 20% of all disease occurrence in US currently in health care-related workers – particularly nurses
 - d. PPE shortage in healthcare is real; e.g., need to disinfect & reuse N95 masks

3. Chuck Gerba, Univ of Arizona

- a. CoV (general) – 99.9% die within 2 days outside of host
- b. Transfer efficiency varies by material (fomite) and relative humidity

Material	Transfer Efficiency (%)	
	High Humidity	Low Humidity
Hard Surfaces (glass, stainless steel, Formica)	>50%	~20%
Porous Surfaces (cardboard, money, fabric)	~2%	<1%

- c. Virus particles survive 2-3 days on hard surfaces & plastics; <24 hours on cardboard
- d. No evidence of transfer of viable organisms from fecal material ... but more research required
- e. Readily disinfected with chlorine & ozone; more research needed on chloramine

4. Krista Wigginton, Univ of Michigan

- a. Model predicts >90% inactivation in natural waters in < 24 hours at 20°C
- b. Some temperature sensitivity; increased inactivation at higher temps
- c. UV highly effective

Latest Coronavirus Research Update

April 16, 2020 - Page 2 of 2

5. Gertjan Medema, KWR Water Research Institute, the Netherlands
 - a. Raw sewage surveillance can provide early warning in community
 - b. Able to detect CoV-19 in sewage prior to detections in people living in sewershed
 - i. Found in sewer lines from hospital in China
 - ii. History of finding Polio and Hepatitis viruses in sewers from infected communities
 - c. Increasingly positive results from community raw sewage surveillance in Netherlands in 2020
 - i. Limitations on testing capacity & supplies
 - d. Sewage detection rates suggest occurrence could be up to 20x greater than results of tests of people in same community

6. Mark LeChevallier, Dr. Water Consulting, LLC
 - a. Many other pathogens in wastewater – other pathogens can be:
 - i. More common
 - ii. Highly contagious/infective
 - iii. Cause acute health effects
 - iv. More resistant to disinfection
 - v. More stable in natural environment
 - vi. Thus, other pathogens in wastewater may pose similar or greater risks
 - b. General duty clause in OSHA requirements applies to worker protection based on existing risks and hazards
 - i. Job hazard analysis
 - ii. Existing PPE requirements applicable; gloves, eye shields, respiratory protection
 - c. Additional research needed
 - i. Aerosols from activated sludge
 - ii. Biosolids



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WRF Webcast

Coronavirus Disease 2019 (COVID-19)

Latest Research Update

April 16, 2020

3:30 pm – 5:00 pm ET USA





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Webcast Host

Lola Olabode, MPH, BCES

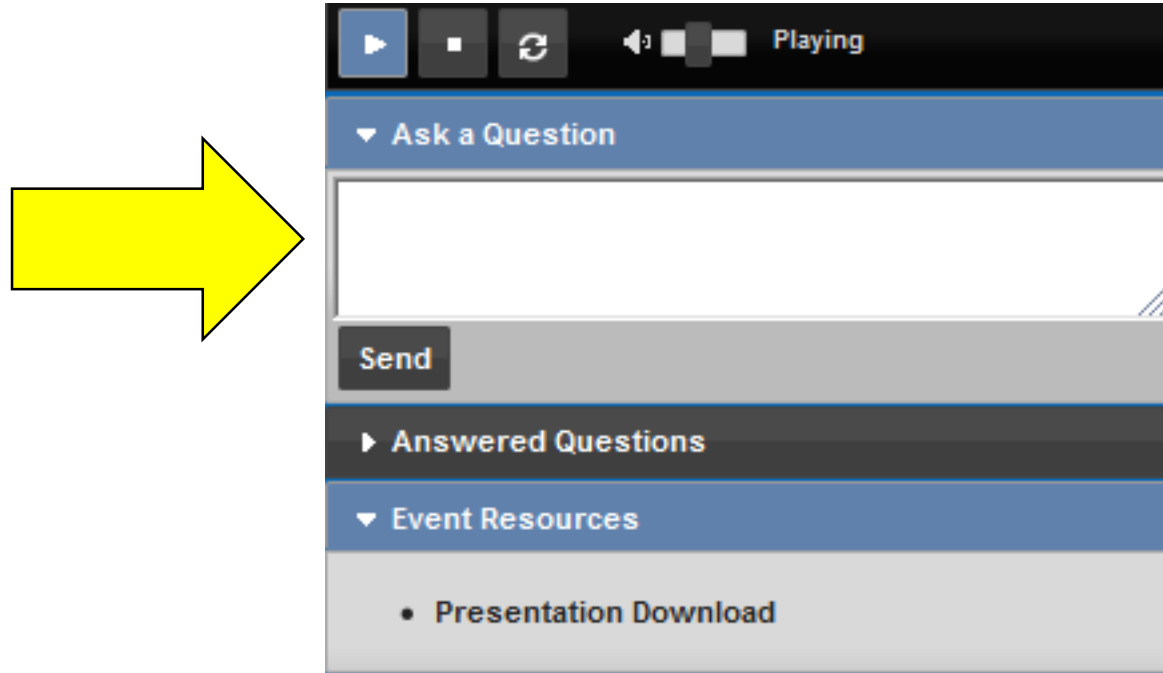
*The science is rapidly moving, and the technical
recommendations are changing!*



Housekeeping Items

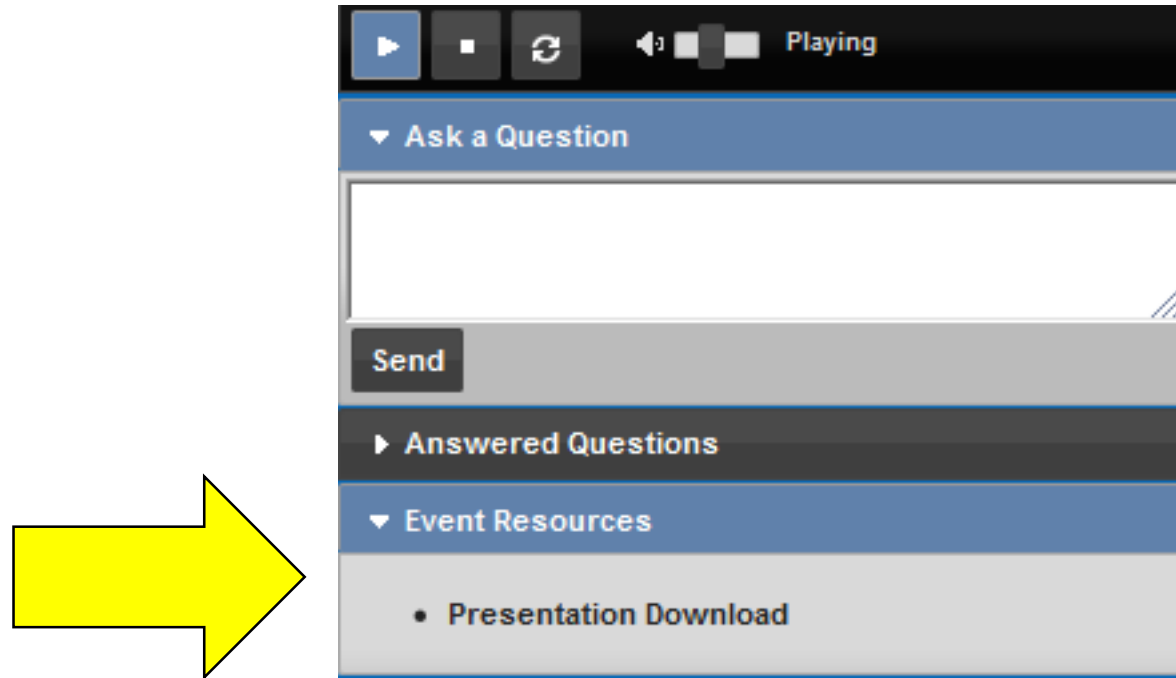
- Submit questions through the question box at any time! We will do a Q&A near the end of the webcast.
- Slides and a recording of the webcast will be available at www.waterrf.org.
- Send an email to Michelle Suazo at msuazo@waterrf.org for a PDH certificate.
- Survey at the end of the webcast.

Input your webcast questions here



Q&A at end of webcast

Download presentation



Slides and recording will be available within 24 hours after the webcast

Webcast Agenda

TIME	Content	Presenter
3:30 – 3:40p	Webcast Host – Introductions, Live Poll	Lola Olabode, MPH, BCES The Water Research Foundation
3:40 – 3:45p	WRF CEO Welcome	Peter Grevatt, PhD The Water Research Foundation
3:45 - 3:50p	Technical Moderator and A Risk Assessment Update and Perspective	Charles Haas, PhD Drexel University, WRF Academic Council
3:50 – 4:00p	CDC’s Current Update on COVID-19	Matthew Arduino, DrPH Centers for Disease Control and Prevention
4:00 – 4:10p	The Survivability of the COVID-19 Virus in Air, Water, Wastewater, and Various Surfaces	Charles Gerba, PhD University of Arizona
4:10 – 4:20p	Overview of the COVID-19 Virus Loads in Human Samples and Using Predictive Models to Predict Fate in the Environment	Krista Wigginton, PhD University of Michigan
4:20 – 4:30p	The Dutch Case Study on Sewage Surveillance of COVID-19	Gertjan Medema, PhD KWR Water Research Institute in Nieuwegein, the Netherlands
4:30 – 4:40p	Overview of PPEs and the Current Implications and Applicability to COVID-19	Mark LeChevallier, PhD Dr. Water Consulting, LLC
4:40 – 5:00p	Q&A	Dr. Haas and Lola Olabode



Live Poll #1: What geographical location are you calling in from today?

- Eastern US
- Midwest US
- Western US
- Canada
- Mexico
- Central America and the Caribbean
- South America
- Sub-Saharan Africa
- Middle East, North Africa and Greater Arabia
- Europe
- Asia
- Australia and Oceania

Live Poll #2: Please identify your affiliation:

- Academia
- Utilities
- Government
- Media
- Consultant/Industry
- Non-profit or Non government organization
- Health care
- Private citizen

Live Poll #3: Why are you interested in today's webcast? (Multiple Choices Allowed)

- I want the most up-to-date research on COVID-19 to remain informed.
- I want to know what measures exist to protect both workers and public health in general.
- We have cases in my area.
- I am a first-line responder and I'm not sure what to do.
- I travel often and worried about safety.
- I want to know the latest public health recommendations as of April 16, 2020 (today).
- I want to know more about containing and combating community spread.



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WRF CEO Welcome

Peter Grevatt, PhD





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A Risk Assessment Update and Perspective

Charles Haas, PhD
Drexel University, WRF Academic Council



Nomenclature

COVID-19

- COVID-19 refers to the disease

SARS-CoV-2 2019-nCoV and COVID-19 virus

- All refer to the virus that results in COVID-19

The screenshot shows the WHO website's navigation bar with options: Home, Health Topics, Countries, Newsroom, Emergencies, and About Us. The breadcrumb trail is: Home / Emergencies / Diseases / Coronavirus disease 2019 / Technical guidance / Naming the coronavirus disease (COVID-19) and the virus that causes it. The left sidebar contains a list of technical guidance topics, with 'Naming the coronavirus disease (COVID-19) and the virus that causes it' selected. The main content area includes the title, a paragraph stating that official names have been announced for the virus and disease, and lists the official names for the disease (coronavirus disease (COVID-19)) and the virus (severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)). It also addresses why the virus and disease have different names, explaining that viruses are named based on genetic structure while diseases are named for prevention, spread, and treatment. At the bottom, there are two links: 'WHO Director-General's remarks at the media on 11 February 2020' and 'WHO Situation Report on 11 February 2020'.

[https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)

Knowns and Unknowns

Unknowns

- Concentration of viable virus in wastewater (and its variability)
- Is SARS dose response relationship applicable?
- We believe WWTP's can adequately control, but needs confirmation
 - Fate & transport in biosolids

Knowns

- Framework for risk to sewer collection workers has been established
- No oral route (aspiration?)



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CDC's Current Update on COVID-19

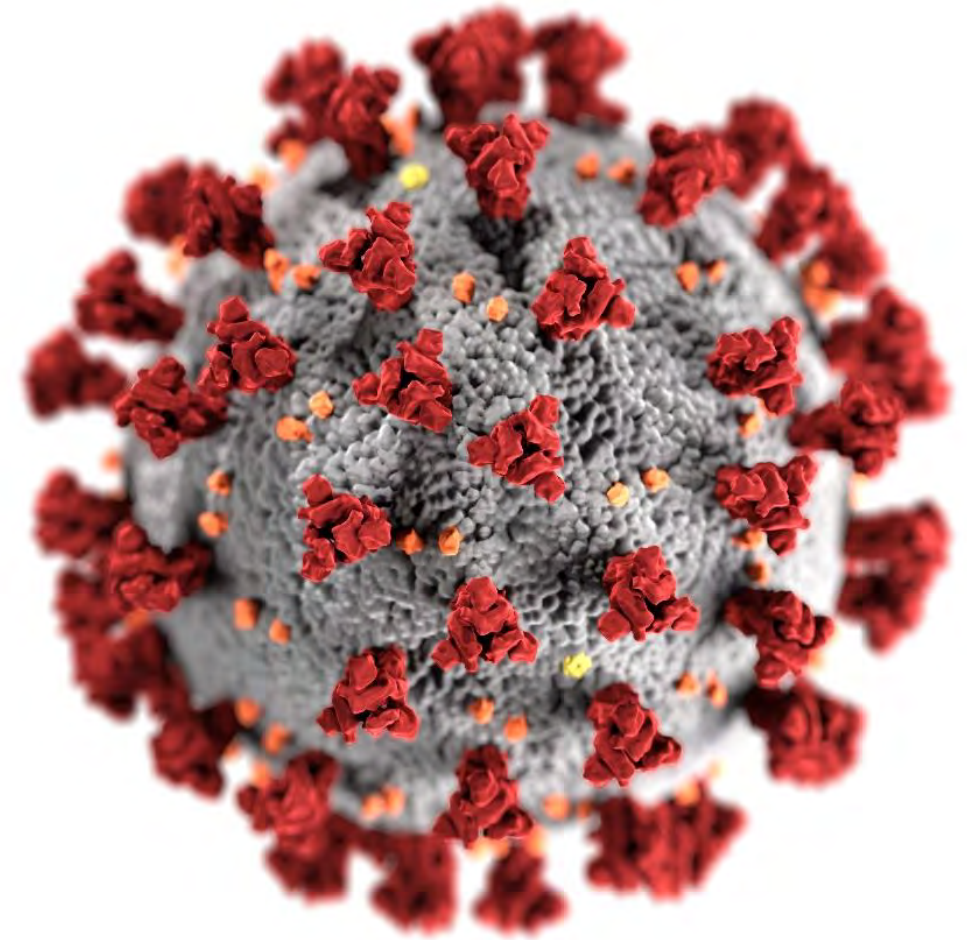
Matthew Arduino, DrPH
Centers for Disease Control and Prevention



Novel Coronavirus for Water Professionals

Matthew J Arduino, MS, DrPH, FSHEA, M(ASCP)

April 16, 2020



For more information: www.cdc.gov/COVID19

COVID-19: Situation Overview

- As of 15 April 2020:
 - WHO reports 1,914,916 cases and 123,010 deaths from the 6 WHO Regions; (Africa, Americas, Eastern Mediterranean, Europe, South-East Asia, and Western Pacific) (WHO SITUATION REPORT 86 [WHO COVID-2019 SIT REPS](#))
 - As of 15 April 2020 (16:00 EST) in the US and Territories: ([Daily Report](#))
 - Total cases: 605,390
 - Total deaths: 24,582
 - Jurisdictions reporting cases: 55 (50 States, District of Columbia, Guam, Puerto Rico, the Northern Mariana Islands, and the U.S. Virgin Islands)
 - [COVID-19 Weekly Surveillance Summary](#)



COVID-19: Social Distancing

- Also called “physical distancing”; keep space between yourself and others
- Can help slow ongoing spread of respiratory illnesses, like COVID-19
- This can include:
 - Personal protective measures
 - Maintain 6 ft. from others in public
 - Stay home if exposed or sick
 - Community measures
 - Postpone or cancel mass gatherings
 - Dismissal of schools
 - Encourage telework



Use of Cloth Face Coverings to Help Slow the Spread of COVID-19

- Wear a cloth face covering to cover their nose and mouth in the community setting
- In situations where you may be near people
- Not a substitute for social distancing
- Not intended to protect the wearer, but it may prevent the spread of virus from the wearer to others



COVID-19: Shedding

- Patients shed virus into their environment:
 - Primarily from respiratory tract
 - Stools have high PCR positivity (two reports from China have recovered culturable virus from small number of patients, but these have not been reproducible)
 - All healthcare contamination studies have been PCR based both air samples and surface samples. U Nebraska included culture in an attempt to recover infectious virus but has not been successful to date.
 - Recent report from the Netherlands of RNA detected in wastewater and the possibility of using PCR as a surveillance tool



Fecal Shedding From Patients

- The combination of very high virus RNA concentrations and occasional detection of sgRNA-containing cells in stool indicate active replication in the gastrointestinal tract
- Our failure to isolate live SARS-CoV-2 from stool may be due to the mild courses of cases, with only one case showing intermittent diarrhea
- Further studies should therefore address whether SARS-CoV-2 shed in stool is rendered non-infectious though contact with the gut environment
- Initial results suggest that measures to contain viral spread should aim at droplet-, rather than fomite-based transmission.

Article

Virological assessment of hospitalized patients with COVID-2019

<https://doi.org/10.1038/s41586-020-2196-x>

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Roman Wölfel^{1,6}, Victor M. Corman^{2,6}, Wolfgang Guggemos^{3,6}, Michael Seilmaier³, Sabine Zange¹, Marcel A. Müller², Daniela Niemeyer², Terry C. Jones^{2,4}, Patrick Vollmar¹, Camilla Rothe⁵, Michael Hoelscher⁵, Tobias Bleicker², Sebastian Brünink², Julia Schneider², Rosina Ehmann¹, Katrin Zwirgmaier¹, Christian Drosten^{2,7} & Clemens Wendtner^{3,7}

Coronavirus disease 2019 (COVID-19) is an acute respiratory tract infection that emerged in late 2019^{1,2}. Initial outbreaks in China involved 13.8% cases with severe, and 6.1% with critical courses³. This severe presentation corresponds to the usage of a virus receptor that is expressed predominantly in the lung^{2,4}. By causing an early onset of severe symptoms, this same receptor tropism is thought to have determined pathogenicity, but also aided the control, of severe acute respiratory syndrome (SARS) in 2003⁵. However, there are reports of COVID-19 cases with mild upper respiratory tract symptoms, suggesting the potential for pre- or oligosymptomatic transmission^{6–8}. There is an urgent need for information on body site-specific virus

Wölfel R, et al. Virological assessment of hospitalized patients with COVID-2019.

Nature 2020 [Published on line 1 April 2020] <https://doi.org/10.1038/s41586-020-2196-x>



Is Feces Infectious?

- The risk of transmission of the virus that causes COVID-19 from the feces of an infected person is also unknown.
- The risk is expected to be low based on data from previous outbreaks of related coronaviruses, such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).
- There has been no confirmed fecal-oral transmission of COVID-19 to date.



Disease among Healthcare Workers



Characteristics of Health Care Personnel with COVID-19— United States, February 12–April 9, 2020

CDC COVID-19 Response Team

As of April 9, 2020, the coronavirus disease 2019 (COVID-19) pandemic had resulted in 1,521,252 cases and 92,736 deaths worldwide, including 459,165 cases and 16,570 deaths in the United States (1,2). Health care personnel (HCP) are essential workers defined as paid and unpaid persons serving in health care settings who have the potential for direct or indirect exposure to patients or infectious materials (3). During February 12–April 9, among 315,531 COVID-19 cases reported to CDC using a standardized form, 49,370 (16%) included data on whether the patient was a health care worker in the United States, including 9,282 (19%) who were identified as HCP. Among HCP patients with data available, the median age was 42 years (interquartile range [IQR] = 32–54 years), 6,603 (73%) were female, and 1,779 (38%) reported at least one underlying health condition. Among HCP patients with data on health care, household, and community exposures, 780 (55%) reported contact with a COVID-19 patient only in health care settings. Although 4,336 (92%) HCP patients reported having at least one symptom among fever, cough, or shortness of breath, the remaining 8% did not report any of these symptoms. Most HCP with COVID-19 (6,760, 90%) were not hospitalized; however, severe outcomes, including 27 deaths, occurred across all age groups; deaths most frequently occurred in HCP aged ≥65 years. These preliminary findings highlight that whether HCP acquire infection at work or in the community, it is necessary to protect the health and safety of this essential national workforce.

Data from laboratory-confirmed COVID-19 cases voluntarily reported to CDC from 50 states, four U.S. territories and affiliated islands, and the District of Columbia, during February 12–April 9 were analyzed. Cases among persons repatriated to the United States from Wuhan, China, and the Diamond Princess cruise ship during January and February were excluded. Public health departments report COVID-19

cases to CDC using a standardized case report form* that collects information on patient demographics, whether the patient is a U.S. health care worker, symptom onset date, specimen collection date, history of exposures in the 14 days preceding illness onset, COVID-19 symptomatology, pre-existing medical conditions, and patient outcomes, including hospitalization, intensive care unit (ICU) admission, and death. HCP patient health outcomes, overall and stratified by age, were classified as hospitalized, hospitalized with ICU admission, and deaths. The lower bound of these percentages was estimated by including all cases within each age group in the denominators. Upper bounds were estimated by including only those cases with known information on each outcome as denominators. Data reported to CDC are preliminary and can be updated by health departments over time. The upper quartile of the lag between onset date and reporting to CDC was 10 days. Because submitted forms might have missing or unknown information at the time of report, all analyses are descriptive, and no statistical comparisons were performed. Stata (version 15.1; StataCorp) and SAS (version 9.4; SAS Institute) were used to conduct all analyses.

Among 315,531 U.S. COVID-19 cases reported to CDC during February 12–April 9, data on HCP occupational status were available for 49,370 (16%), among whom 9,282 (19%) were identified as HCP (Figure). Data completeness for HCP status varied by reporting jurisdiction; among 12 states that included HCP status on ≥80% of all reported cases and reported at least one HCP patient, HCP accounted for 11% (1,689 of 15,194) of all reported cases.

Among the 8,945 (96%) HCP patients reporting age, the median was 42 years (IQR = 32–54 years); 6,603 (73%) were female (Table 1). Among the 3,801 (41%) HCP patients with available data on race, a total of 2,743 (72%) were white, 801 (21%) were black, 199 (5%) were Asian, and 58 (2%) were

* <https://www.cdc.gov/coronavirus/2019-nCoV/php/reporting-pui.html>.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

- Healthcare Workers account for 20% of all US acquired infections
- 9,282 cases, 27 deaths
- Median age 42 years, 73% female
- 38% had at least 1 underlying condition



<https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6915e6-H.pdf>

CDC Updates

- Symptoms
- Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for Coronavirus Disease 2019 (COVID-19)
- Testing in the United States
- Groups at Higher Risk for Severe Illness
- Cleaning and Disinfecting Your Facility
- Use of Face Coverings to Slow the Spread
- How to Protect Yourself
- Resources for Businesses and Employers



<https://www.cdc.gov/coronavirus/2019-ncov/whats-new-all.html>

SARS CoV-2 RNA in Wastewater

SARS-CoV-2 in wastewater: potential health risk, but also data source. The Lancet Gastroenterology and Hepatology 1 April 2020, DOI: [https://doi.org/10.1016/S2468-1253\(20\)30087-X](https://doi.org/10.1016/S2468-1253(20)30087-X)

Medema G, Heijnen L, Elsinga G, Italiaander R, Brouwer A. Presence of SARS-Coronavirus-2 in sewage. medRxiv 2020.03.29.20045880 doi: <https://doi.org/10.1101/2020.03.29.20045880>

- Data like most other environmental data is PCR based.
- PCR data alone from environmental samples means you found a sequence
- Does not indicate presence of intact virus
- Does not indicate presence of infectious virus.
- Authors suggest use for surveillance purposes



Strategies to Optimize PPE

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/pep-strategy/index.html>



Strategies to Optimize the Supply of PPE and Equipment

Personal protective equipment (PPE) is used every day by healthcare personnel (HCP) to protect themselves, patients, and others when providing care. PPE helps protect HCP from potentially infectious patients and materials, toxic medications, and other potentially dangerous substances used in healthcare delivery.

PPE shortages are currently posing a tremendous challenge to the US healthcare system because of the COVID-19 pandemic. Healthcare facilities are having difficulty accessing the needed PPE and are having to identify alternate ways to provide patient care.

CDC's optimization strategies for PPE offer options for use when PPE supplies are stressed, running low, or absent. Contingency strategies can help stretch PPE supplies when shortages are anticipated, for example if facilities have sufficient supplies now but are likely to run out soon. Crisis strategies can be considered during severe PPE shortages and should be used with the contingency options to help stretch available supplies for the most critical needs. As PPE availability returns to normal, healthcare facilities should promptly resume standard practices.

Eye Protection

Isolation Gowns

Facemasks

N95 Respirators

Decontamination and Reuse of Filtering Facepiece Respirators

Ventilators

Decontamination and Reuse of Filtering Facepiece Respirators

- **UVGI**
- **Vapor phase hydrogen peroxide**
 - Battelle Decontamination System
 - Bioquelle
 - Vaprox
- **Hydrogen peroxide plasma**
 - Sterrad
- **Moist heat (microwave; steam bag; without bag); moist heat incubation**
- **Ethylene oxide**

Decontamination and Reuse of Filtering Facepiece Respirators

Disposable filtering facepiece respirators (FFRs) are not approved for routine decontamination and reuse as standard of care. However, FFR decontamination and reuse may need to be considered as a crisis capacity strategy to ensure continued availability. Based on the limited research available, ultraviolet germicidal irradiation, vaporous hydrogen peroxide, and moist heat showed the most promise as potential methods to decontaminate FFRs. This document summarizes research about decontamination of FFRs before reuse.

Introduction

Reusing disposable filtering facepiece respirators (FFRs) has been suggested as a crisis capacity strategy to conserve available supplies for healthcare environments during a pandemic. Strategies for FFR extended use and reuse (without decontamination of the respirator) are currently available from [CDC's National Institute for Occupational Safety and Health \(NIOSH\)](#).

The surfaces of an FFR may become contaminated while filtering the inhalation air of the wearer during exposures to pathogen-laden aerosols. The pathogens on the filter materials of the FFR may be transferred to the wearer upon contact with the FFR during activities such as adjusting the FFR, improper doffing of the FFR, or when performing a user-seal check when redoffing a previously worn FFR. A study evaluating the persistence of SARS-CoV-2 (the virus that causes COVID-19) on plastic, stainless steel, and cardboard surfaces showed that the virus is able to survive for up to 72-hours [1]. One strategy to mitigate the contact transfer of pathogens from the FFR to the wearer during reuse is to issue five respirators to each healthcare worker who may care for patients with suspected or confirmed COVID-19. The healthcare worker will wear one respirator each day and store it in a breathable paper bag at the

Elastomeric Respirators for U.S. Healthcare Delivery



This webinar provides an overview of respiratory protection and guidance surrounding supply shortages. This webinar also provides information on infection prevention measures, strategies for optimizing the supply of N95 respirators, and a broad overview



<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>

COVID-19: Infection Prevention and Control

- There are steps HCP can take to prepare for arrival, elevation and transportation of patients.
 - Healthcare Personnel Preparedness Checklist for COVID-19
 - <https://www.cdc.gov/coronavirus/2019-ncov/hcp/hcp-personnel-checklist.html>

Healthcare Personnel Preparedness Checklist for 2019-nCoV

Front-line healthcare personnel in the United States should be prepared to evaluate patients for 2019 novel coronavirus (2019-nCoV). The following checklist highlights key steps for healthcare personnel in preparation for transport and arrival of patients potentially infected with 2019-nCoV.

- Stay up to date on the latest information about signs and symptoms, diagnostic testing, and case definitions for 2019-nCoV disease (<https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>).
- Review your infection prevention and control policies and CDC infection control recommendations for 2019-nCoV (<https://www.cdc.gov/coronavirus/2019-nCoV/infection-control.html>) for:
 - Assessment and triage of patients with acute respiratory symptoms
 - Patient placement
 - Implementation of Standard, Contact, and Airborne Precautions, including the use of eye protection
 - Visitor management and exclusion
 - Source control measures for patients (e.g., put facemask on suspect patients)
 - Requirements for performing aerosol generating procedures
- Be alert for patients who meet the persons under investigation (PUI) (<https://www.cdc.gov/coronavirus/2019-nCoV/infection-control.html>) definition
- Know how to report a potential 2019-nCoV case or exposure to facility infection control leads and public health officials
- Know who, when, and how to seek evaluation by occupational health following an unprotected exposure (i.e., not wearing recommended PPE) to a suspected or confirmed nCoV patient
- Remain at home, and notify occupational health services, if you are ill
- Know how to contact and receive information from your state or local public health agency



COVID-19: Tools and Resources

- **Water and COVID FAQs**
 - <https://www.cdc.gov/coronavirus/2019-ncov/php/water.html>
- **Healthcare Facilities**
 - [Ambulatory Care Services](#)
 - [Guidance for Dental Settings](#)
 - [Guidance for Nursing Homes and Long-Term Care Facilities](#)
 - [Guidance for Dialysis Facilities](#)
 - [Blood and Plasma Facilities](#)
- **Supply of Personal Protective Equipment (PPE)**
 - [Healthcare Supply of Personal Protective Equipment](#)
 - [Strategies for Optimizing Supply of N95 Respirators](#)
 - [Decontamination and Reuse of Filtering Facepiece Respirators](#)
 - [FAQ about Respirators](#)



COVID-19: Tools and Resources (cont'd.)

- Home Care

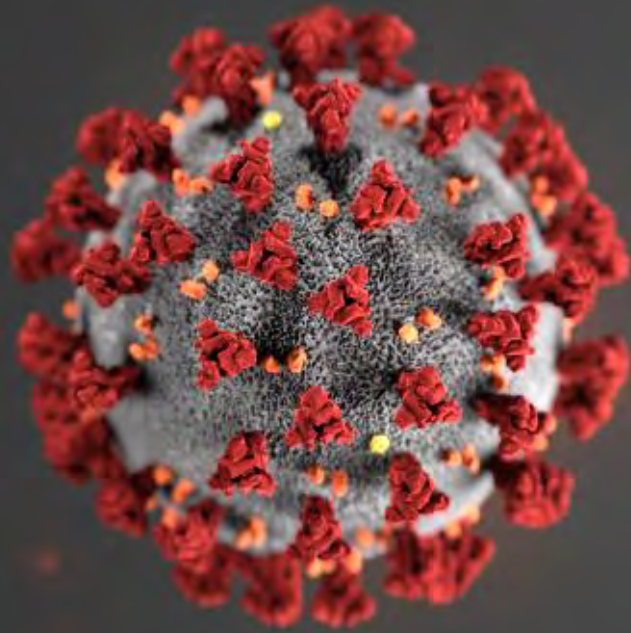
- [Implementing Home Care of People Not Requiring Hospitalization](#)
- [Preventing COVID-19 from Spreading in Homes and Communities](#)
- [Disposition of Non-Hospitalized Patients with COVID-19](#) (ending home isolation)

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

COCA Calls/Webinars:

<https://emergency.cdc.gov/coca/calls/index.asp>





For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.





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The Survivability of the COVID-19 Virus in Air, Water, Wastewater, and Various Surfaces

Charles Gerba, PhD
University of Arizona



Survival of Coronaviruses in Air, Water and Wastewater

Walter Betancourt

Charles P. Gerba

Ian Pepper

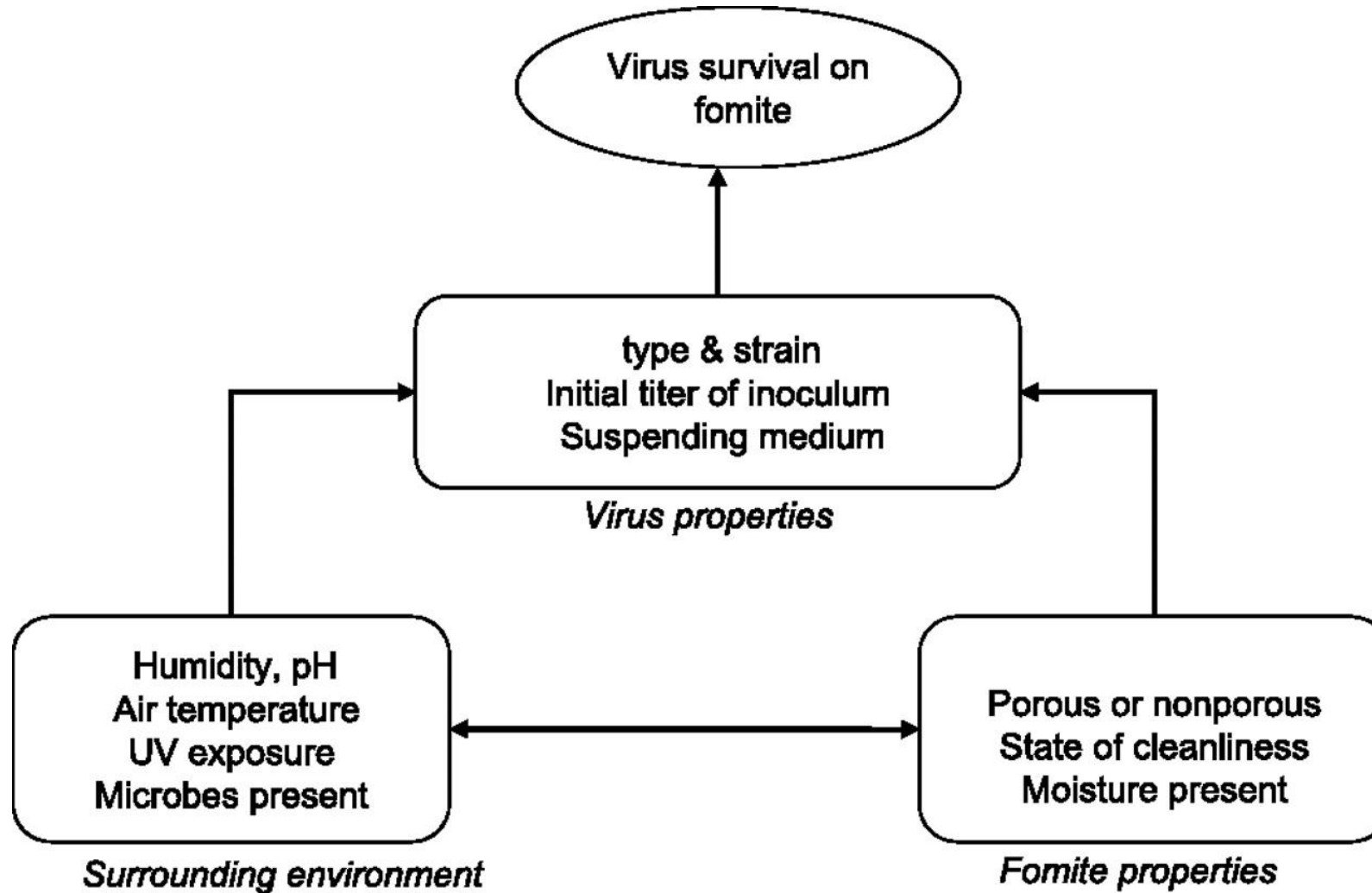
Department of Environmental
Science



Human Coronaviruses

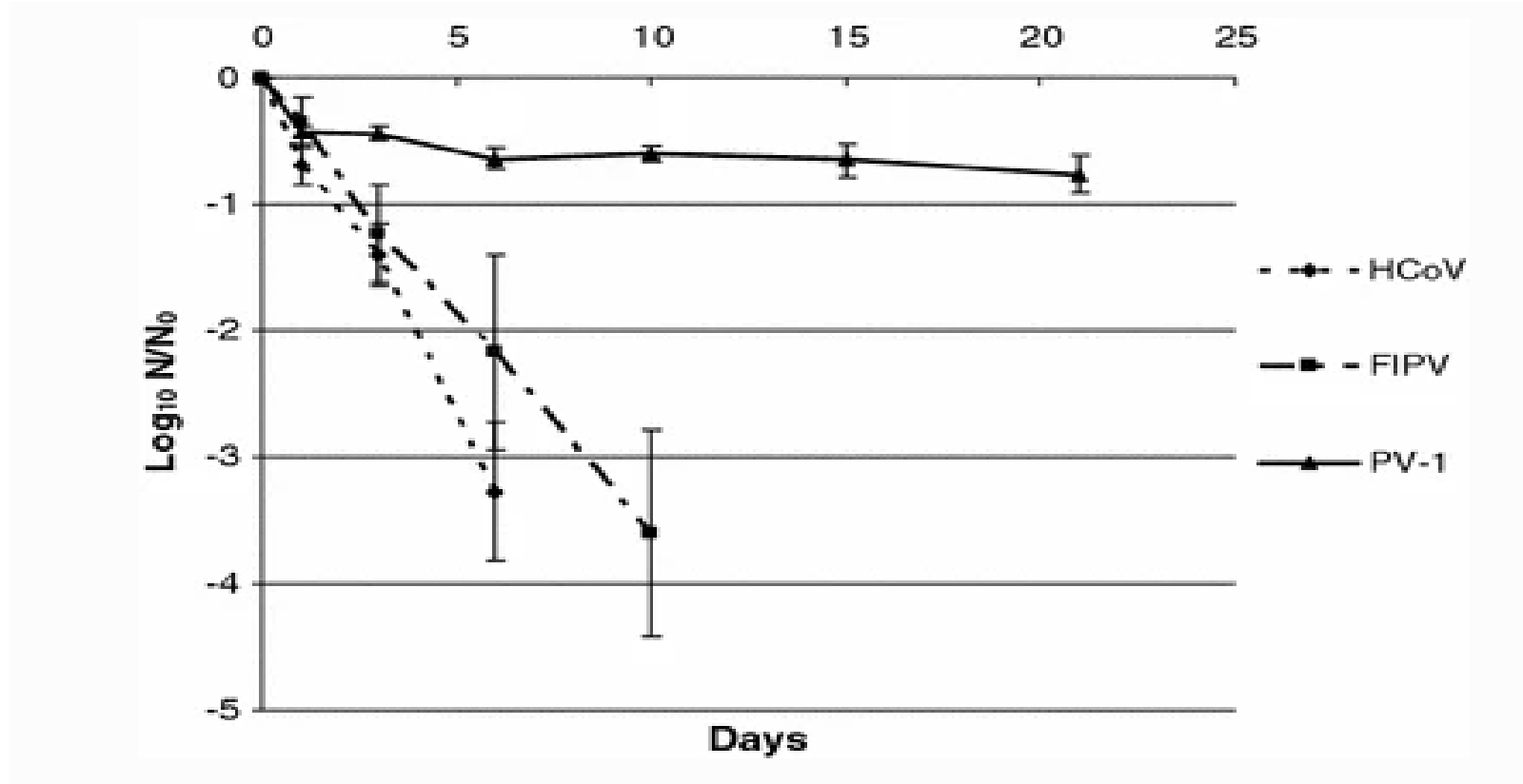
- HCoV- OC43 common cold
- HCoV-229E common cold
- SARS-CoV Severe Acute Respiratory Syndrome
- MERS-CoV Middle East Respiratory Syndrome
- SARS-CoV-2 HCoV-19

Factors influencing virus survival on fomites.



Stephanie A. Boone, and Charles P. Gerba Appl. Environ. Microbiol. 2007; doi:10.1128/AEM.02051-06

Survival of human coronavirus 229E in tap water at 23 °C



HCoV = coronavirus 229E; FIPV = Feline coronavirus; PV-1 = poliovirus type 1

From Gundy, Gerba and Pepper 2008 FEV

Average \log_{10} reduction of study viruses in primary effluent and secondary effluent at room temperature (23°C)

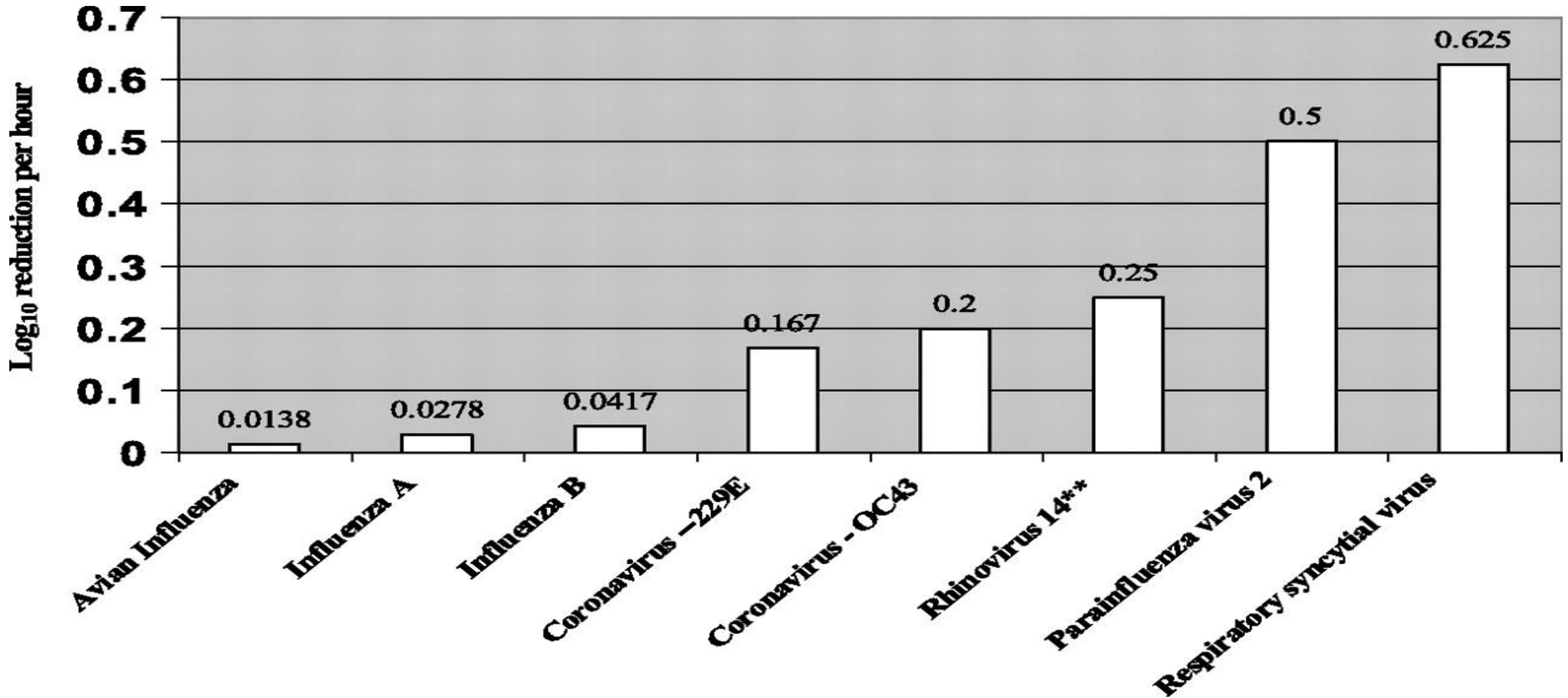
Day	Primary effluent (filtered)			Primary effluent (unfiltered)			Secondary effluent (unfiltered)		
	HCoV	FIPV	PV-1	HCoV	FIPV	PV-1	HCoV	FIPV	PV-1
1	$>2.0 \pm 0.88$	1.7 ± 1.1	0.04 ± 0.09	$>1.8 \pm 0.54$	$>1.8 \pm 1.0$	0.2 ± 0.19	1.1 ± 0.80	1.1 ± 1.0	0.96 ± 0.26
2	$>2.9 \pm 0.21$	$>2.5 \pm 0.62$	0.11 ± 0.17	$>2.0 \pm 0.86$	$>2.7 \pm 0.85$	0.54 ± 0.46	$>2.7 \pm 0.54$	$>2.6 \pm 0.85$	1.5 ± 0.65
3	$>3.4 \pm 0.66$	$>3.6 \pm 0.17$	0.25 ± 0.24	$>2.0 \pm 1.5$	$>3.1 \pm 0.62$	0.69 ± 0.51	$>2.9 \pm 0.80$	$>3.7 \pm 0.62$	2.1 ± 1.1
6	ND	ND	0.58 ± 0.26	ND	ND	1.6 ± 0.32	ND	ND	3.8 ± 1.1
10	ND	ND	1.03 ± 0.54	ND	ND	2.5 ± 0.58	ND	ND	4.6 ± 1.5
15	ND	ND	1.31 ± 0.54	ND	ND	4.3 ± 0.58	ND	ND	3.6 ± 1.5
21	ND	ND	1.64 ± 0.37	ND	ND	4.7 ± 1.2	ND	ND	ND

ND not determined

HCoV = coronavirus 229E; FIPV = Feline coronavirus; PV-1 = poliovirus type 1

From Gundy, Gerba and Pepper 2008 FEV

Inactivation Rates of Respiratory Viruses on Hard Surfaces



From Boone and Gerba AEM 2007

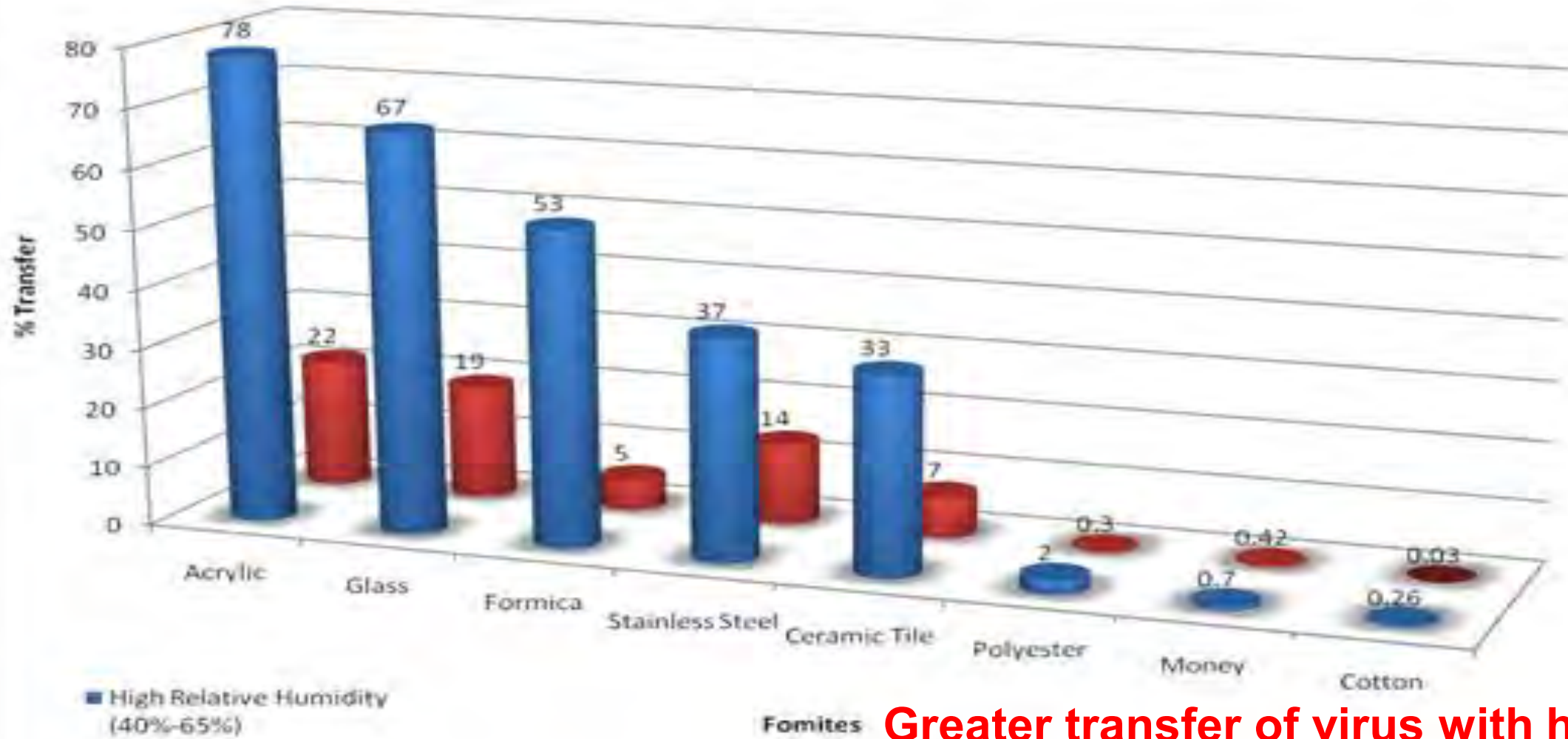
How Efficient is Transfer?

(Lopez et al, 2009)

- Type of suspending media
 - Greater transfer when suspended in feces than phosphate buffered saline
- Hand/object contact
 - Type of interaction with object (i.e. doorknob vs. push button)
 - Finger vs. hand



Transfer of MS2 Bacteriophage from Fomites to Fingers



Red = low relative humidity
(15% - 32%)

Greater transfer of virus with high relative humidity and non-porous surfaces

HCoV-19

- Infectious virus detected in feces of patients up to five weeks after infection
- Survival (Relative humidity 40% R.H. - 23 ° C) (Morris et al 2020)
 - 2-3 days on plastic and stainless-steel surfaces
 - 4 hours on copper surface
 - 24 hours on cardboard
 - 3 hours in aerosols
- No evidence for transmission by feces or fomites or presence of infectious virus sewage



CURRENT NEEDS

- Survival of the SARS – CoV-2
 - Wastewater
 - Sewage sludge
 - Treatment processes
 - Ct times for chloramines and UV light





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Overview of the COVID-19 Virus Loads in Human Samples and Using Predictive Models to Predict Fate in the Environment

Krista Wigginton, PhD
University of Michigan



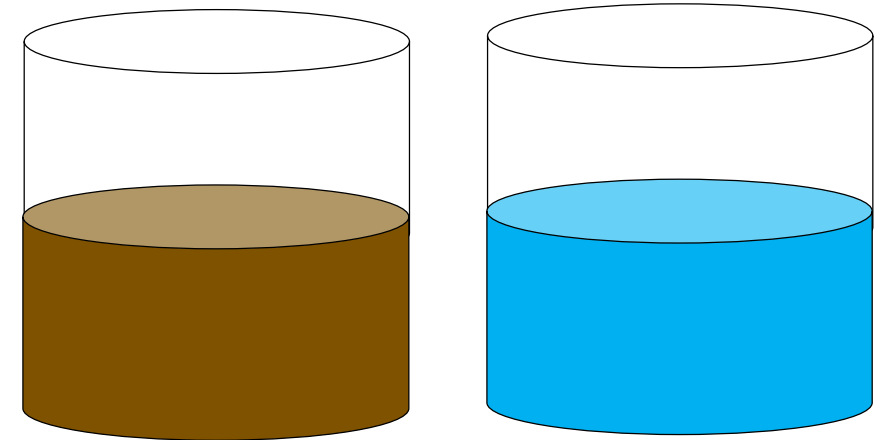
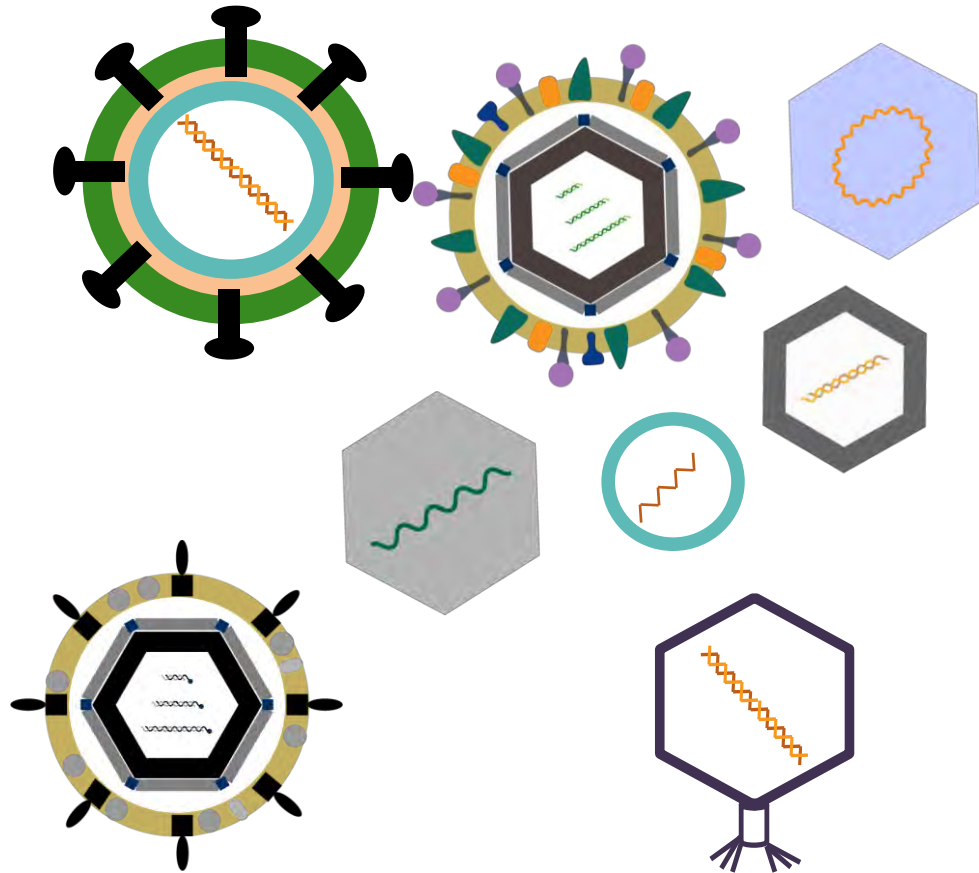
SARS-CoV-2 RNA in fecal samples

- RNA in feces detected in multiple studies
- Between 30% to 60% sampled stool samples positive for COVID-19 Virus RNA
- Excreted for weeks after onset of symptoms.
- Loose stool and diarrhea reported in some studies
- Mean Ct values for positive stool samples typically >30, but some as low as 25

Infective SARS-CoV-2 in fecal samples?

- Virus particles detected in 2 of 4 tested fecal samples by TEM analysis
- At least one study tried to culture 13 stool samples that tested positive for RNA and failed
- Chinese CDC reported that viruses were cultivated from feces
- No cases of transmission via the fecal–oral route have been reported

Can we use virus and media characteristics to predict virus fate in the environment?



e.g., temperature, pH, suspended solids, etc.

e.g., envelope, genome type and sequence, protein composition


2017 study developed model for predicting virus inactivation in wastewaters

ENVIRONMENTAL
Science & Technology

Article

pubs.acs.org/est

Censored Regression Modeling To Predict Virus Inactivation in Wastewaters

Julii Brainard,[†] Katherine Pond,[‡] and Paul R. Hunter^{*,†} 

[†]Norwich Medical School, University of East Anglia, Norwich NR4 7TJ, United Kingdom

[‡]Department of Civil and Environmental Engineering, Robens Centre for Public and Environmental Health, University of Surrey, Guildford GU2 7XH, United Kingdom

Extracted data: RNA or DNA genome, enveloped or not, primary transmission pathway (airborne, body contact/fluids, fecal-oral, insect vector, respiratory, rodents, or multiple), temperature, pH, light levels, matrix level of contamination (high, medium, or low level of fecal contamination), genus, and taxonomic family.

Chosen model for predicting T_{90} includes both virus characteristics and water characteristics

Table 1. Model 1 Coefficients and Attributes, Censored Regression To Predict $\sqrt{T_{90} \text{secs}}$ ^a

	coefficient	95% CI for coeff values		p-value
		lower bound	upper bound	
model constant	2.56883	2.49456	2.64310	<0.001
fecal oral transmission pathway (y)	0.12877	0.07305	0.18448	<0.001
enveloped virus (y)	-0.09392	-0.15091	-0.03925	0.001
DNA virus (y)	0.01523	-0.02873	0.05918	0.496
temperature in °C	-0.00971	-0.01136	-0.00805	<0.001
low contamination	0	na	na	Na
medium contamination	0.00428	-0.04468	0.05323	0.864
high contamination	-0.11271	-0.15790	-0.06752	<0.001

^a $\sqrt{T_{90} \text{ s}}$ = square root $[\log_{10}(T_{90} \text{ in seconds})]$. Enveloped virus (y) = 1 when enveloped, else 0. fecal oral (y) = 1 when fecal oral is primary transmission pathway, else 0. DNA virus (y) = 1 for DNA virus, else 0. Model default is when level of contamination = low, else model adjusts for when contamination is medium or high as indicated.

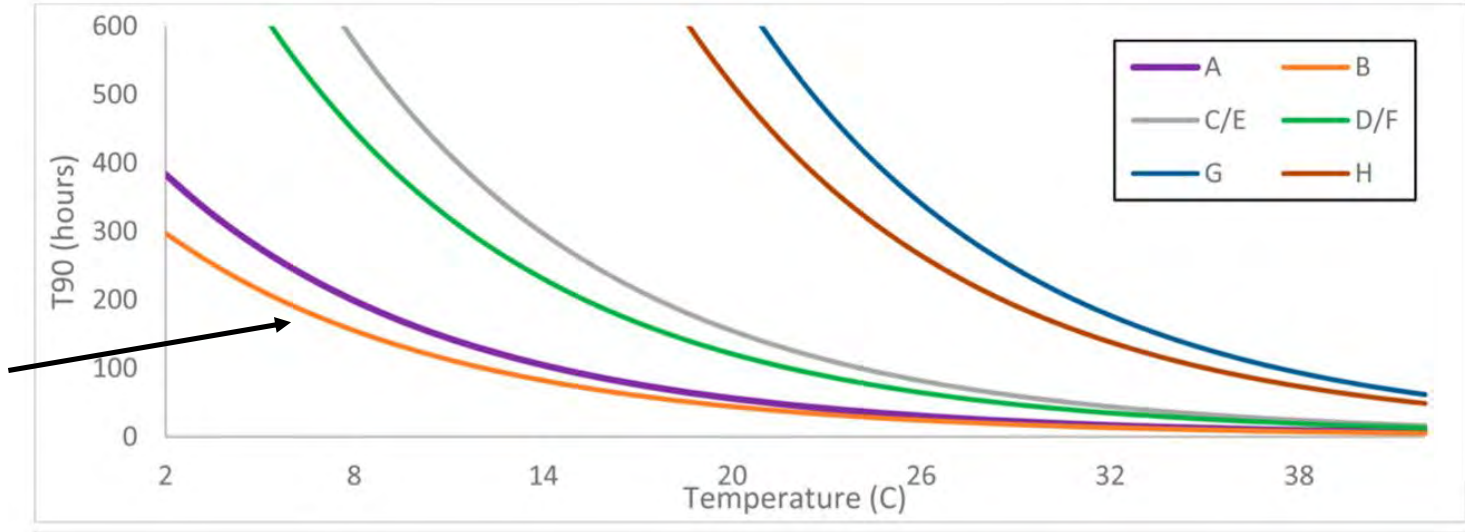
Data from 52 articles with 464 data records to build regression model

COVID-19 Virus T_{90} at 20 C in high contamination water: 13.9 hr

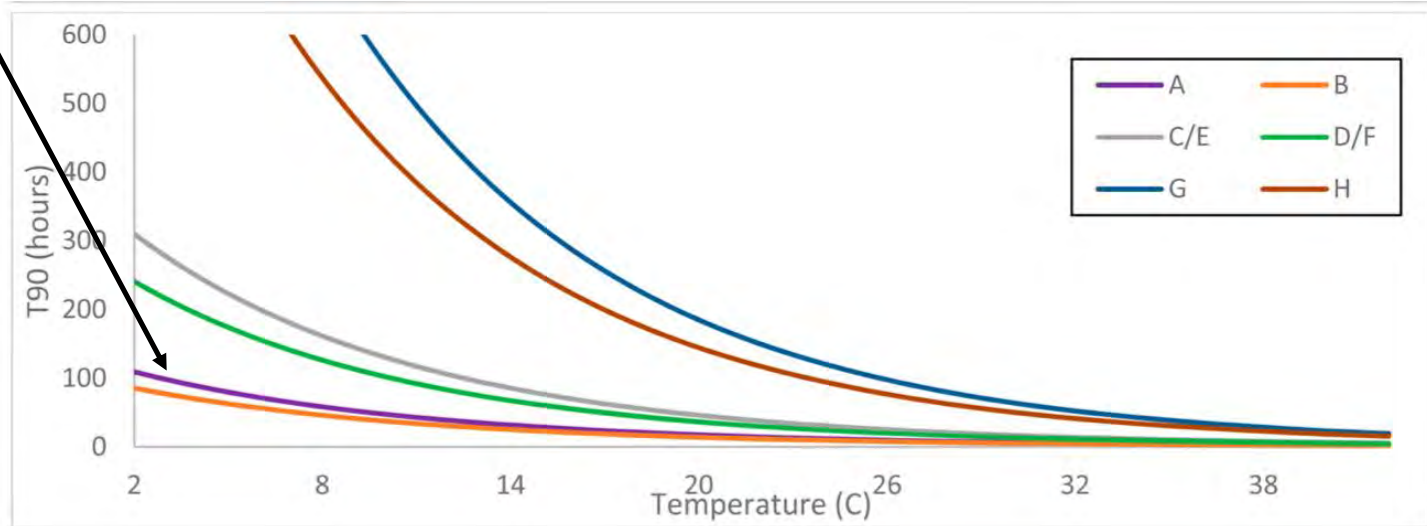
95% CI Range: 1.9 - 122 hr

The contamination level of water has large impact on T_{90} values

COVID-19
Virus



Low
contamination



High
contamination



2005 study by Lytle and Sagripanti uses genome size and virus family to predict inactivation from sunlight

JOURNAL OF VIROLOGY, Nov. 2005, p. 14244–14252
0022-538X/05/\$08.00+0 doi:10.1128/JVI.79.22.14244–14252.2005

Vol. 79, No. 22

Predicted Inactivation of Viruses of Relevance to Biodefense by Solar Radiation

C. David Lytle and Jose-Luis Sagripanti*

*Research and Technology Directorate, Edgewood Chemical Biological Center, U.S. Army,
Aberdeen Proving Ground, Maryland 21010-5424*

Received 27 June 2005/Accepted 22 August 2005

Genome size and virus family used to predict virus inactivation by UV₂₅₄ and solar radiation.

Predictive model based on literature inactivation rates for viruses in same family and genome size.

TABLE 2. Measured and predicted UV₂₅₄ sensitivities for RNA-containing virus families whose hosts are vertebrates^a

Family ^b	Measured D_{37} (J/m ²)	Genome size range	Measured or predicted SnS (J/m ² · kb)	Representative virus(es)	Predicted D_{37} range for entire family (J/m ²)	Reference(s)
dsRNA viruses						
<i>Birnaviridae</i>	120 (110–170)	5.7–6.2	1,400 (1,300–1,900)	1PNV	110–120	32, 50, 63
<i>Reoviridae</i>	89 (46–123)	18.6–26.4	3,800 (1,700–5,800)	MRV-1, -2, -3, RV-A, KEMV-10, -91	72–100	3, 18, 19, 39, 55, 68, 87
ssRNA viruses						
<i>Arenaviridae</i> *		11	140 p		13	
<i>Bornaviridae</i> *	34	8.9	300	BDV	34	8
<i>Bunyaviridae</i> *		11–19	140 p		7.4–13	
<i>Deltavirus</i> *		1.7	140 p		82	
<i>Filoviridae</i> *		19	140 p		7.4	
<i>Orthomyxoviridae</i> *	7.5 (4.8–10)	10–15	110 (70–140)	FLUAV, ISAV	7.3–11	50, 54
<i>Paramyxoviridae</i> *	11 (10–12)	15–16	170 (150–190)	NDV, MeV	11	10, 29, 31
<i>Rhabdoviridae</i> *	4.3 (1.1–23)	11–15	51 (12–260)	VSV, RABV, VHSV	3.4–4.6	2, 4, 8, 50, 63, 79
<i>Arterioviridae</i> **		13–16	295 p		18–23	
<i>Astroviridae</i> **		6.8–7.9	295 p		37–44	
<i>Caliciviridae</i> **		7.4–8.3	295 p		36–40	
<i>Coronaviridae</i> **	3.1	20–31	78	BEV	2.5–3.9	79
<i>Flaviviridae</i> **		9.6–12	295 p		25–31	
“HEV-like” viruses**		7.2	295 p		41	
<i>Nodaviridae</i> **	140	4.5	630	SBNN	140	11
<i>Picornaviridae</i> **	48 (25–70)	7–8.5	370 (190–540)	PV-1, -2, -3, E-1, -11, CV-A9, -B1, -B5, HHAV, EMCV	44–53	3, 6, 18, 19, 42, 43, 47, 55, 78, 86
<i>Togaviridae</i> **	19 (7.3–23)	9–12	220 (83–260)	SINV, VEEV, SFV	18–24	69, 79, 86
<i>Retroviridae</i> ***	89 (88–120)	7–11	740 (620–980)	MLV, FeLV, MoMSV, RSV	67–110	5, 25, 31, 46, 49, 70, 83–85

$$D_{37} = \text{SnS}/\text{kb}$$

$$D_{37} = 1/k$$

COVID-19 Virus

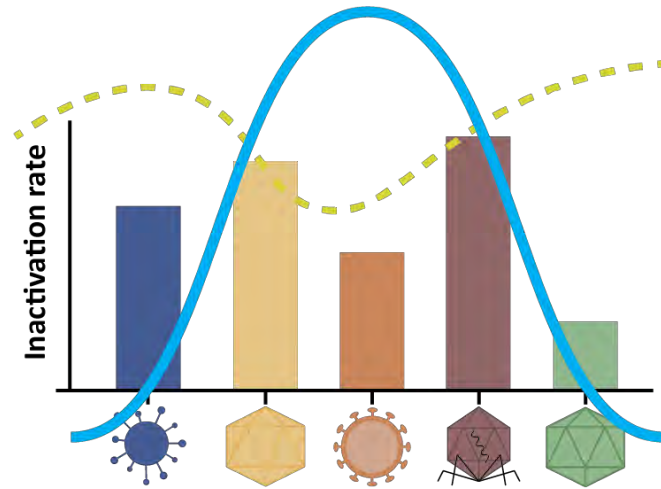
$$k = 3.8 \text{ cm}^2/\text{mJ}$$

$$D_{90} = 0.6 \text{ mJ}/\text{cm}^2$$

^a See footnotes to Table 1 for explanations of columns. In addition, ssRNA viruses are listed according to sense of genetic information and/or mode of replication.

^b *, family has negative-sense ssRNA; **, family has positive-sense ssRNA; ***, family replicates via reverse transcriptase.

We are developing predictive models through disinfection using multiple virus characteristics that we suspect drive inactivation



$$k \sim \beta_0 + \beta_{U,i} \times U_i + \beta_{C,i} \times C_i + \dots \epsilon$$

Inactivation rate of a virus
 $\ln(C/C_0) = k \times \text{UV Dose}$

Independent variables included:

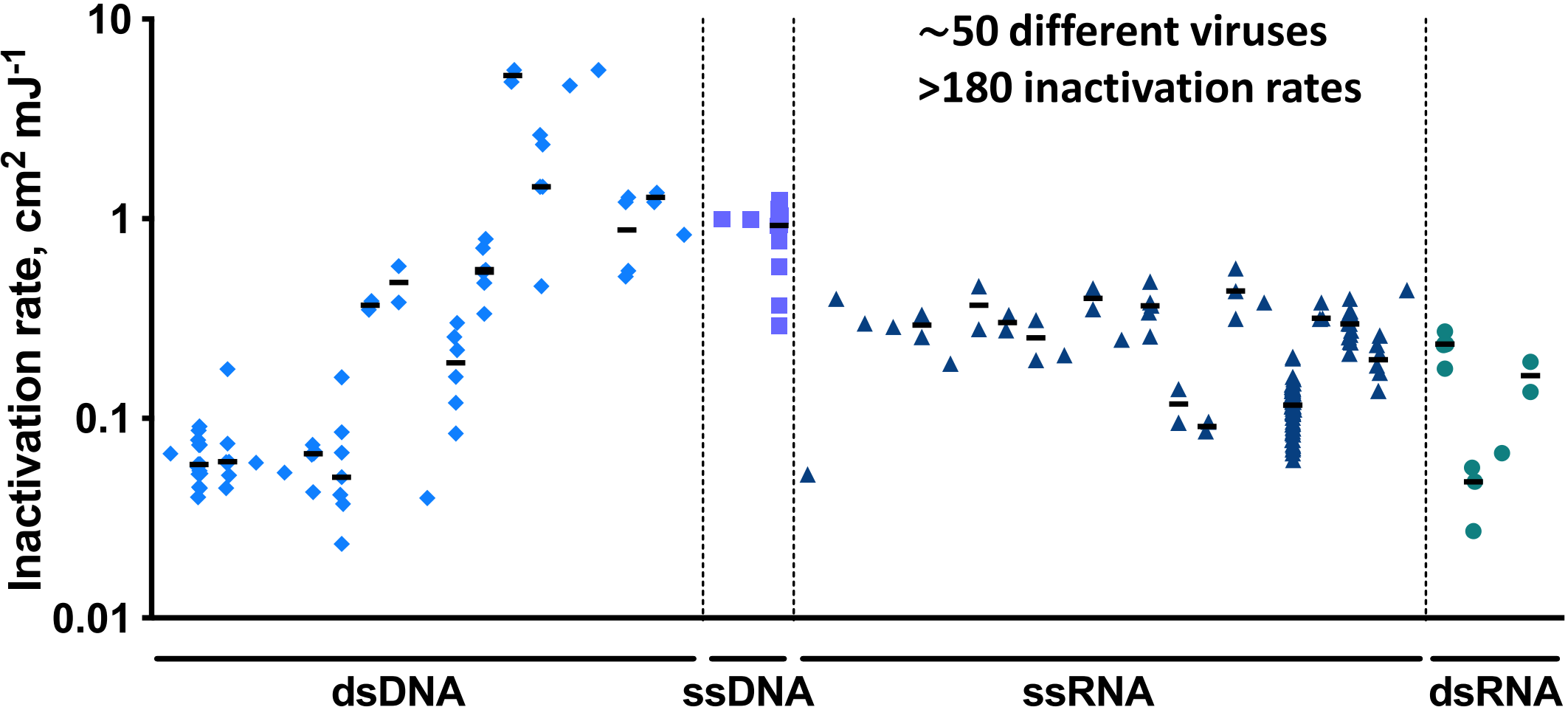
- Genome attributes:
 - Uracil bases
 - Cytosine bases



Model types:

- Multiple linear regression
- Elastic net regularization
- Boosted trees
- Random forest

We conducted a systematic review of UV₂₅₄ inactivation rates and culled the data based on quality what was reported in the manuscript.



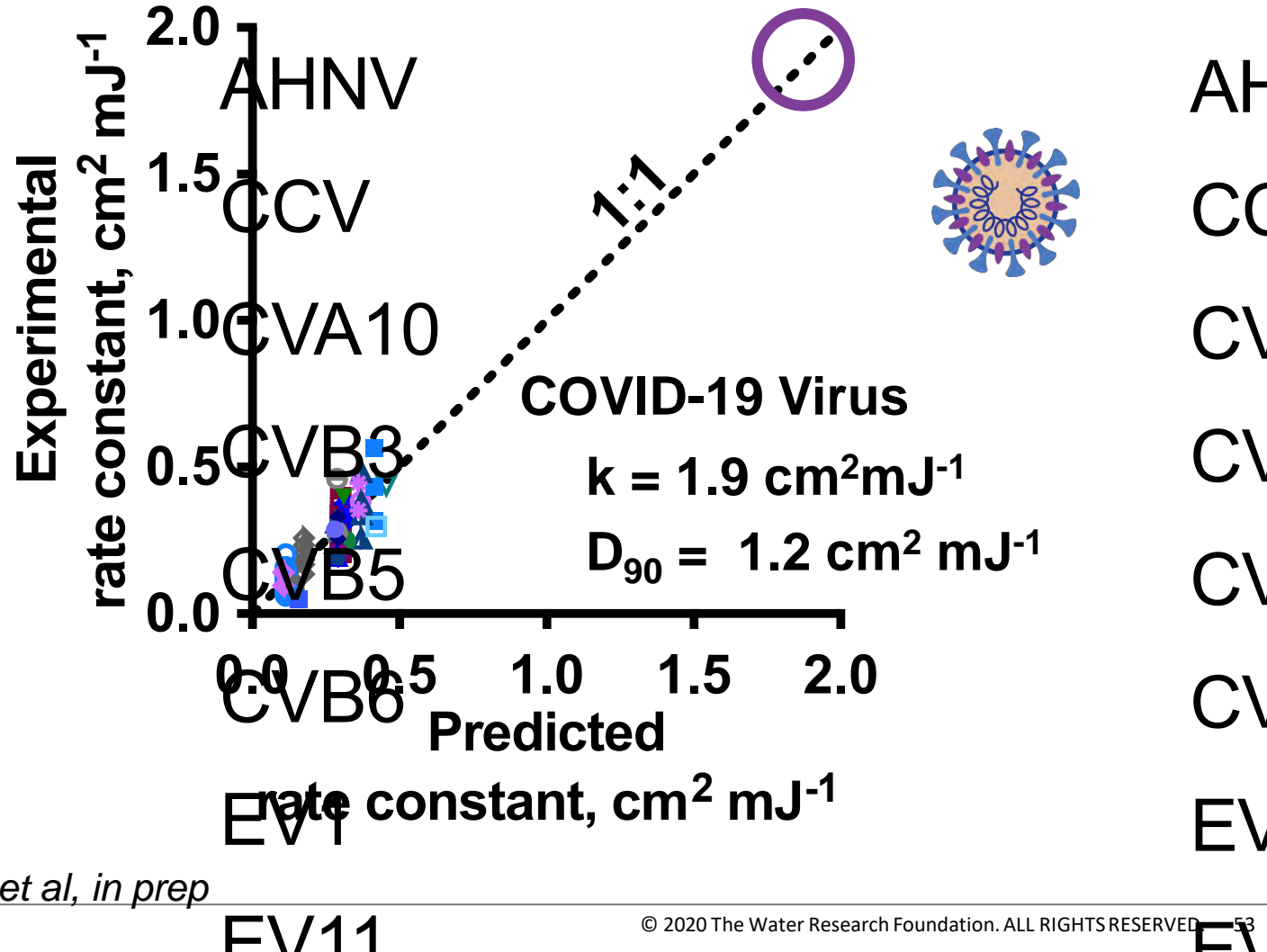
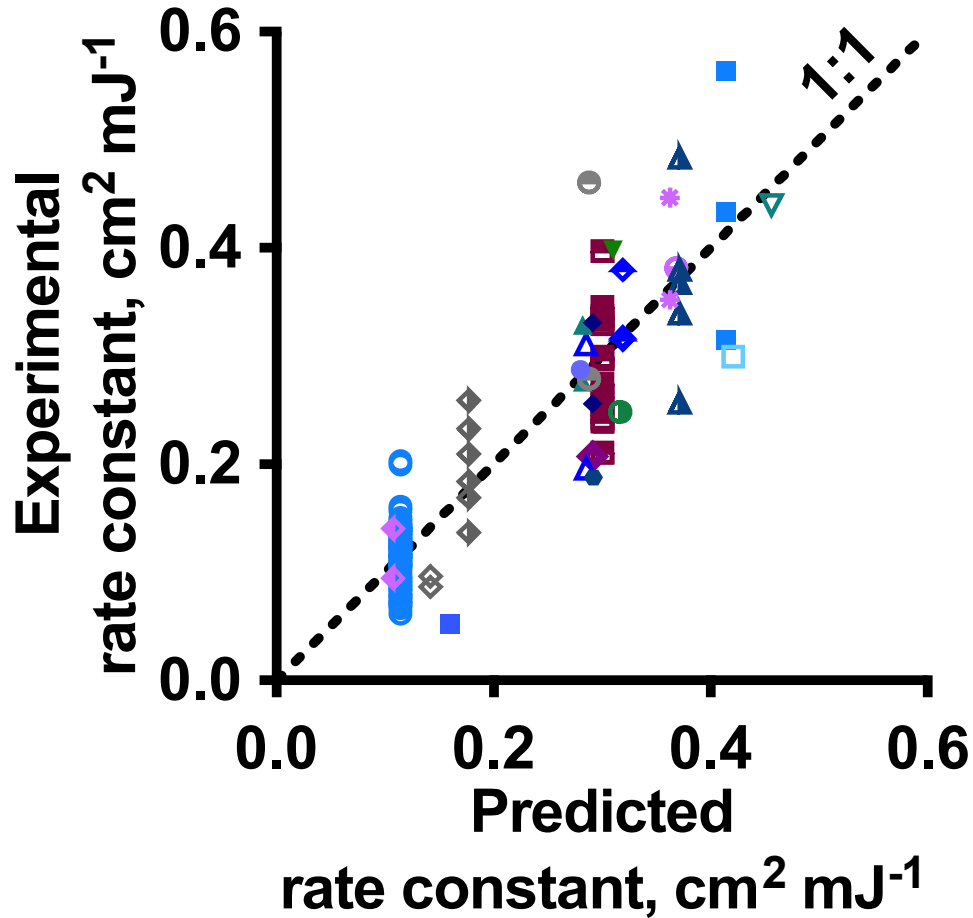
Amount of inactivation data is skewed to certain viruses.
We need more data for a wider range of virus types.



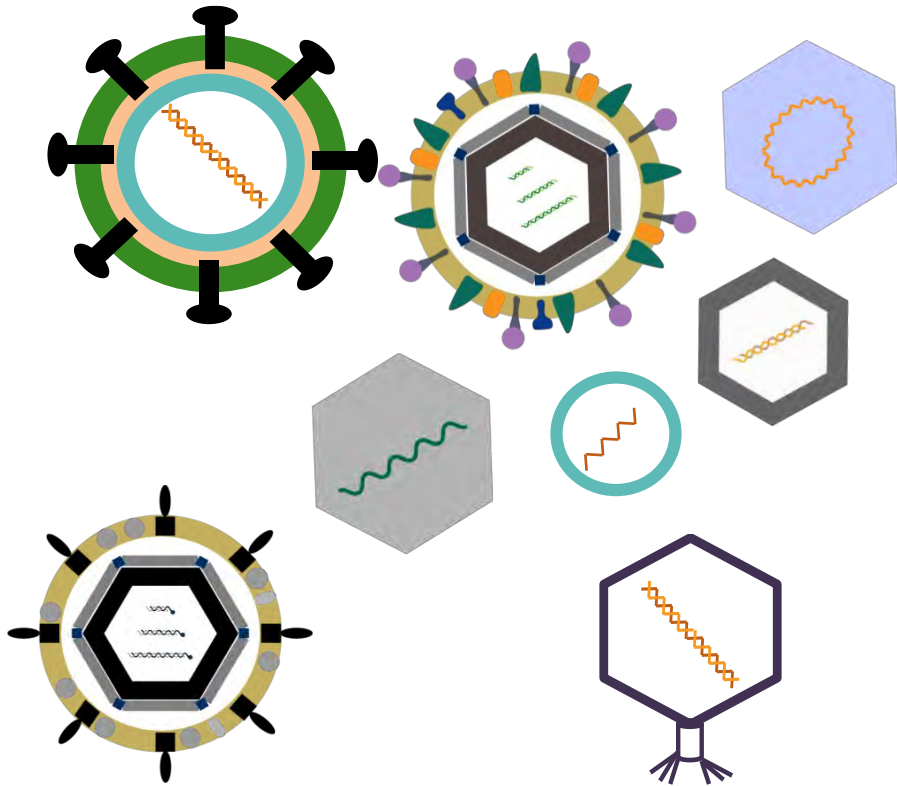
We can use these models to predict UV_{254} inactivation of viruses of interest

Mouse CoV inactivation (predicted): $k_{pred} = 1.85 \text{ cm}^2 \text{ mJ}^{-1}$

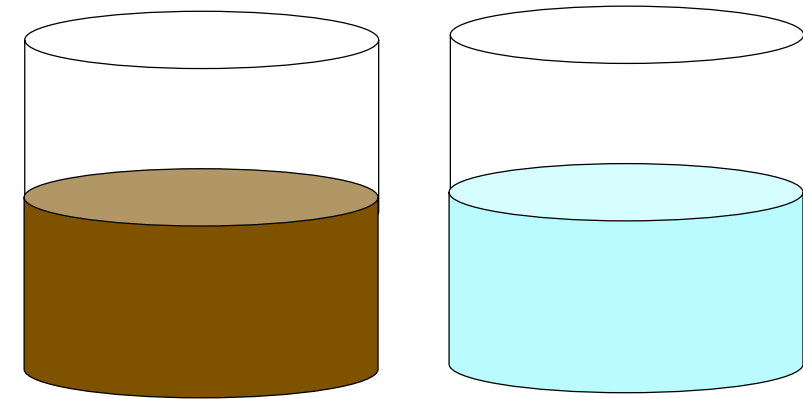
Mouse CoV inactivation (experimental): $k_{exp} = 1.7 \text{ cm}^2 \text{ mJ}^{-1}$



To expand this approach to COVID-19 virus and more conditions, we need more measured inactivation data for a broader group of viruses under various environmental conditions.



e.g., envelope, genome type and sequence, protein composition



e.g., temperature, pH, suspended solids, etc.



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The Dutch Case Study on Sewage Surveillance of COVID-19

Gertjan Medema, PhD

KWR Water Research Institute in Nieuwegein, the Netherlands



16-04-2020

WRF second coronavirus webcast

Dutch case study on sewage surveillance



Contents

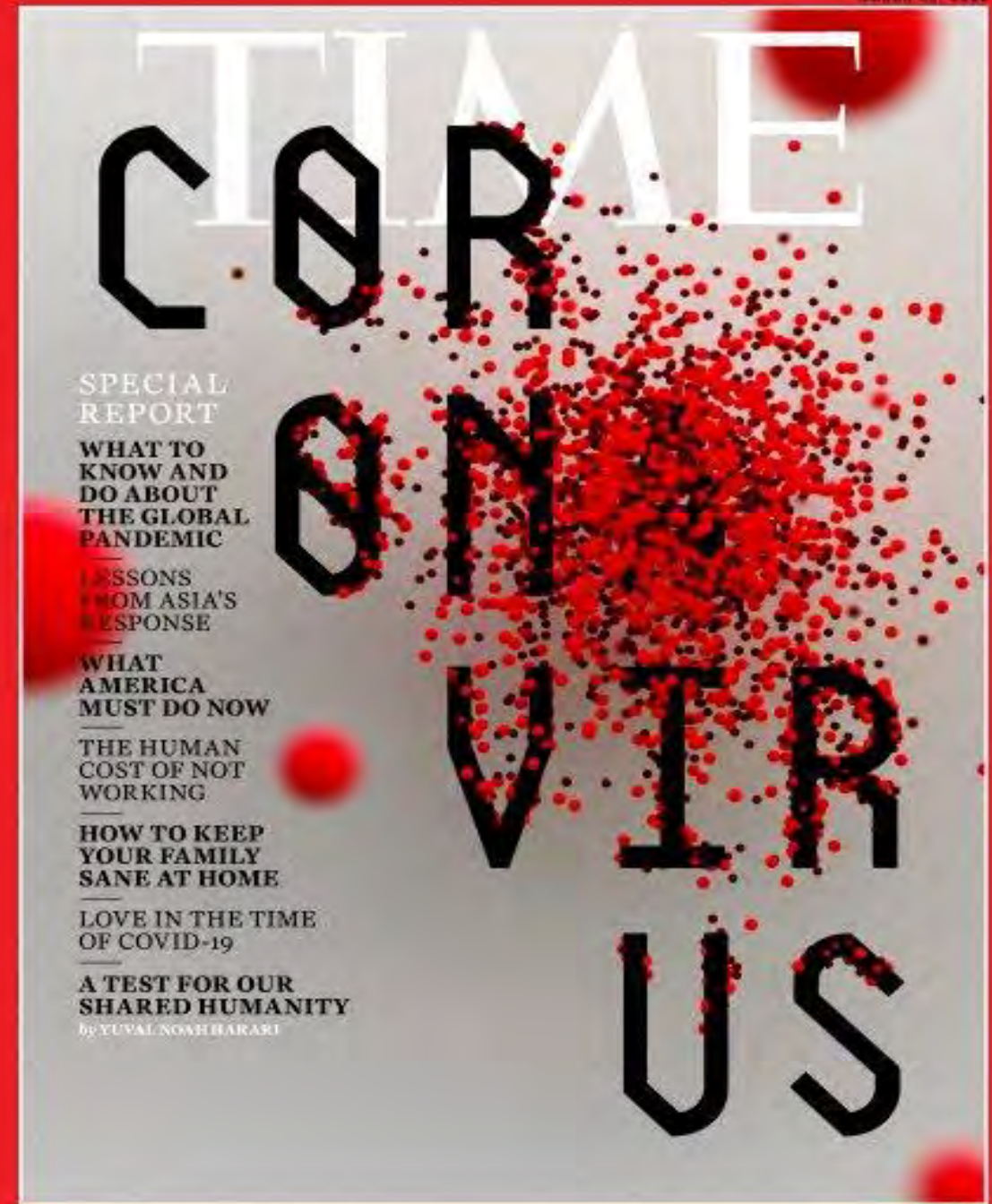
- COVID-19 Virus in sewage
- The value of sewage surveillance for COVID-19 Virus
- Knowledge needs

COVID-19 pandemic 2019/20

Proportion of people with COVID-19 have diarrhea and shed virus with stool

SARS Coronavirus 2 detectable in sewage?

Sewage surveillance to complement health surveillance?



Sewage surveillance to track virus circulation

- Proven for other viruses
- Sensitive instrument
- Complements health surveillance
- Early warning for re-emergence
- Understanding virus circulation in the population

REVIEW ARTICLE

Role of environmental poliovirus surveillance in global polio eradication and beyond

T. HOVI^{1*}, L. M. SHULMAN², H. VAN DER AVOORT³, J. DESHPANDE⁴,
M. ROIVAINEN¹ AND E. M. DE GOURVILLE⁵

¹ National Institute for Health and Welfare (THL), Helsinki, Finland

² Central Virology Laboratory (CVL), Ministry of Health, Sheba Medical Center, Tel-Hashomer, Israel

³ National Institute of Public Health and the Environment (RIVM), Bilthoven, The Netherlands

⁴ Enterovirus Research Centre (ERC), Mumbai, India

⁵ Global Poliomyelitis Eradication Initiative, WHO, Geneva, Switzerland

(Accepted 21 December 2010)



Detection of Pathogenic Viruses in Sewage Provided Early Warnings of Hepatitis A Virus and Norovirus Outbreaks

Maria Hellmér,^a Nicklas Paxéus,^b Lars Magnus,^c Lucica Enache,^b Birgitta Arnholm,^d Annette Johansson,^b Tomas Bergström,^a Heléne Norder^{a,c}

Department of Clinical Microbiology, Sahlgrenska Academy, Gothenburg University, Gothenburg, Sweden^a; Gryaab AB, Gothenburg, Sweden^b; MTC, Karolinska Institutet, Stockholm, Sweden^c; Department of Communicable Disease Control, Västra Götaland Region, Sweden^d



Eurosurveillance Europe's journal on infectious disease surveillance, epidemiol

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Research article

Open Access

Monitoring human enteric viruses in wastewater and relevance to infections encountered in the clinical setting: a one-year experiment in central France, 2014 to 2015

Like 0

Download

Maxime Bisseux^{1,2}, Jonathan Colombet¹, Audrey Mirand^{1,2}, Anne-Marie Roque-Afonso³, Florence Abravanel⁴, Jacques Izopet⁴, Christine Archimbaud^{1,2}, Hélène Peigue-Lafeuille^{1,2}, Didier Debroas¹, Jean-Luc Bailly¹, Cécile Henquell^{1,2}



Door: Wesley Oudijk

zet je geluid aan



Images produced by
Wesley Oudijk for
NU.nl



Sewage surveillance: tool to study virus circulation? Early warning?



Sewage sampling at WWTP inlet: surveillance of large populations
Is it sensitive enough?



Concentration and purification of COVID-19 virus from sewage
Extraction of virus RNA



RT-qPCR against 4 targets (CDC N1, N2, N3; Corman ea 2020 E)
Concentration and RT-PCR controls



Bron: KWR

6 Feb



27 Feb

First NL case

6 Mar



16 Mar



Sewage surveillance at 6 WWTP in the Netherlands by KWR



6 Feb

27 Feb

6 Mar

16 Mar

First NL case

25 Mar

N1 -
N2 -
N3 -
E -

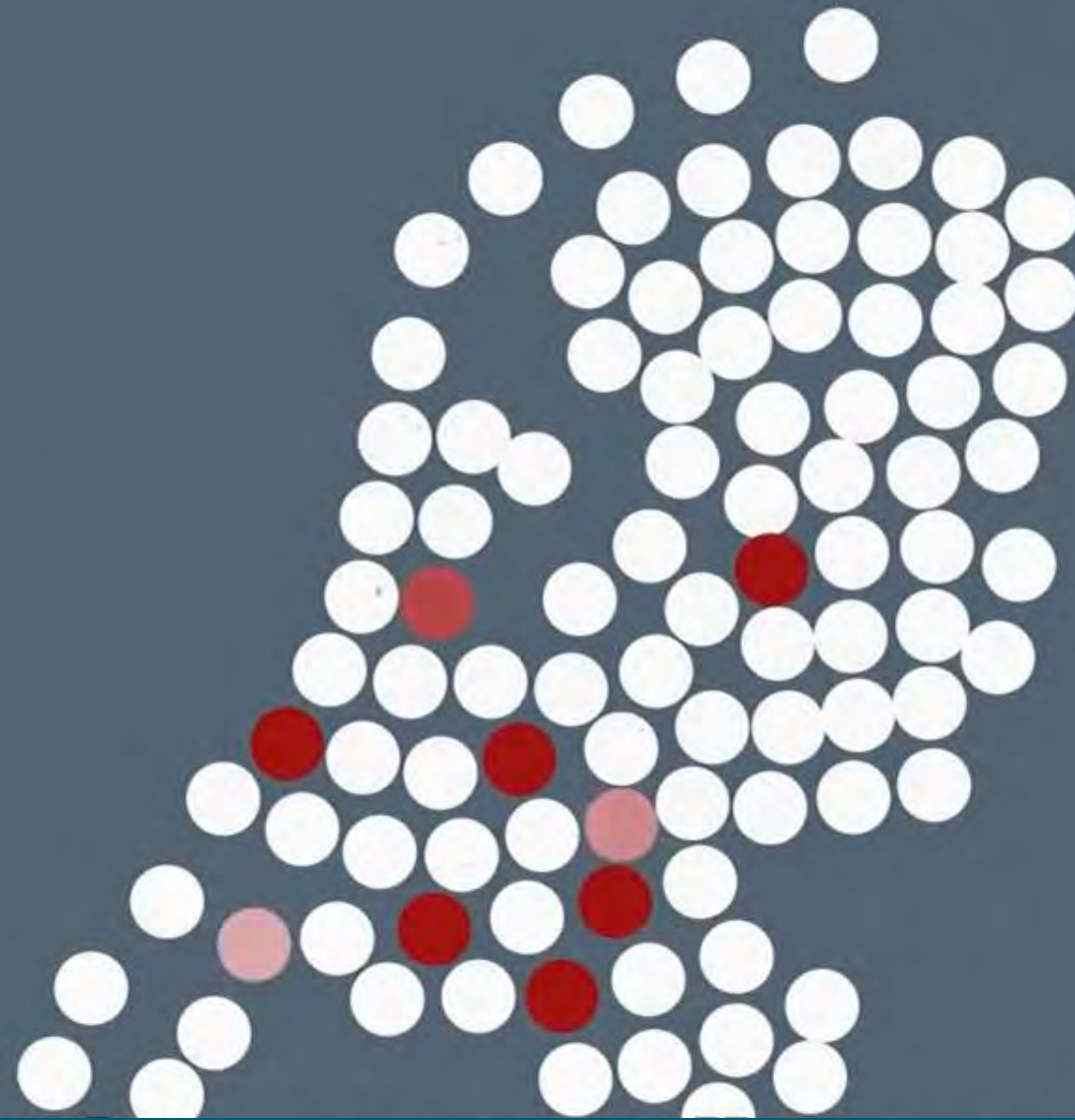
N1 +
N2 -
N3 -
E -

N1 +
N2 -
N3 +
E ±

Apr 1
N1 ++
N2 ++
N3 ++
E ++



Sewage surveillance at 6 WWTP in the Netherlands by KWR



Clinical surveillance: only cases with severe symptoms
Sewage surveillance: understanding of virus circulation



Clinical surveillance: only cases with severe symptoms
Sewage surveillance: understanding of virus circulation



Early warning?

Sensitivity?

Sewage signal already shows when COVID-19 prevalence is low (1-3 reported cases per 100,000)

Two WWTP: sewage signal several days to a week before first reported case



First results indicate sewage surveillance is a sensitive tool to detect virus circulation in cities

Knowledge needs Sewage Surveillance

where water sector may support health sector

- Shortage of supplies in health sector!!
- Quantitative method
- Harmonised protocols/controls GWRC
- Comparative testing between GWRC labs
- Smart design of sewage surveillance
- Compare Sewage vs Clinical surveillance:
 - same trends?
 - sensitivity?
 - early warning?



16-04-2020

WRF second Coronavirus webcast

Thank you for your attention

Bridging Science to Practice

Towards a Water-wise World



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Overview of PPEs and the Current Implications and Applicability to COVID-19

Mark LeChevallier, PhD
Dr. Water Consulting, LLC



- Contact
- Recommendations
- Approach
- Regulations
- Challenge
- Background

An Overview of PPE and the current implications and applicability to COVID-19

Mark W. LeChevallier, Ph.D.
Dr. Water Consulting, LLC



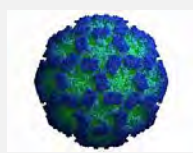
The COVID-19 virus may be present in US Wastewaters, but many other infectious viruses are commonly present!

- Contact
- Recommendations
- Approach
- Regulations

Norovirus

1

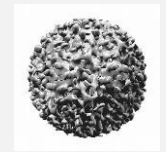
Highly contagious
Vomiting and diarrhea
Transfer from contaminated surfaces
High concentrations in wastewater



HEP A

2

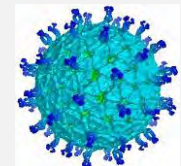
Highly contagious
Nausea, vomiting
Abdominal pain
fever
Dark urine
Joint pain
Yellowing of the skin and eyes
Infects liver cells



Rotavirus

3

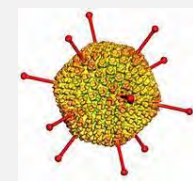
Highly contagious
Affects Infants and young children
Severe watery diarrhea, vomiting, fever, abdominal pain
Severe dehydration



Adenovirus

4

Common in wastewater
Causes a range of illnesses
cold-like symptoms, sore throat, bronchitis, pneumonia, diarrhea conjunctivitis



- Challenge
- Background

Thorn and
Kerekes, 2001

1

Increased prevalence of hepatitis A antibodies in wastewater workers, with odds ratios ranging from 2.0 to 3.73

Oppliger et
al., 2005

2

Workers carrying out special tasks such as cleaning raw sewage tanks, aeration grids, or sludge rakes were exposed to very high levels of endotoxins (>500 EU m³) compared to routine work

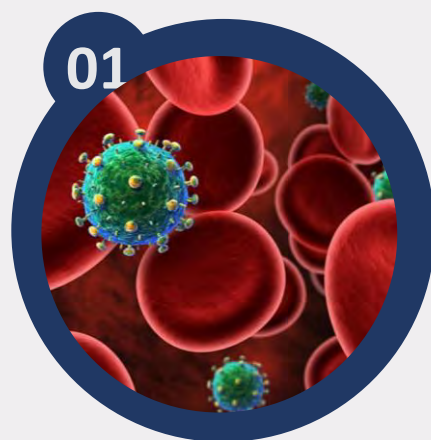
Al-Batanony
and El-Shafie,
2011

3

Antibody levels against hepatitis A virus (HAV) and hepatitis A virus (HEV) and stool results for *L. spirochete* were significantly higher among WWTPs workers than in a comparison group



The Occupational Safety and Health Administration



01

Bloodborne Pathogen Standard

Applies to wastes containing blood or other potentially infectious materials



02

Hazardous Waste

Extensive worker protection requirements at hazardous waste sites.



03

General Duty Clause

Makes employers responsible for worker safety. Free from recognized hazards likely to cause serious harm to employees

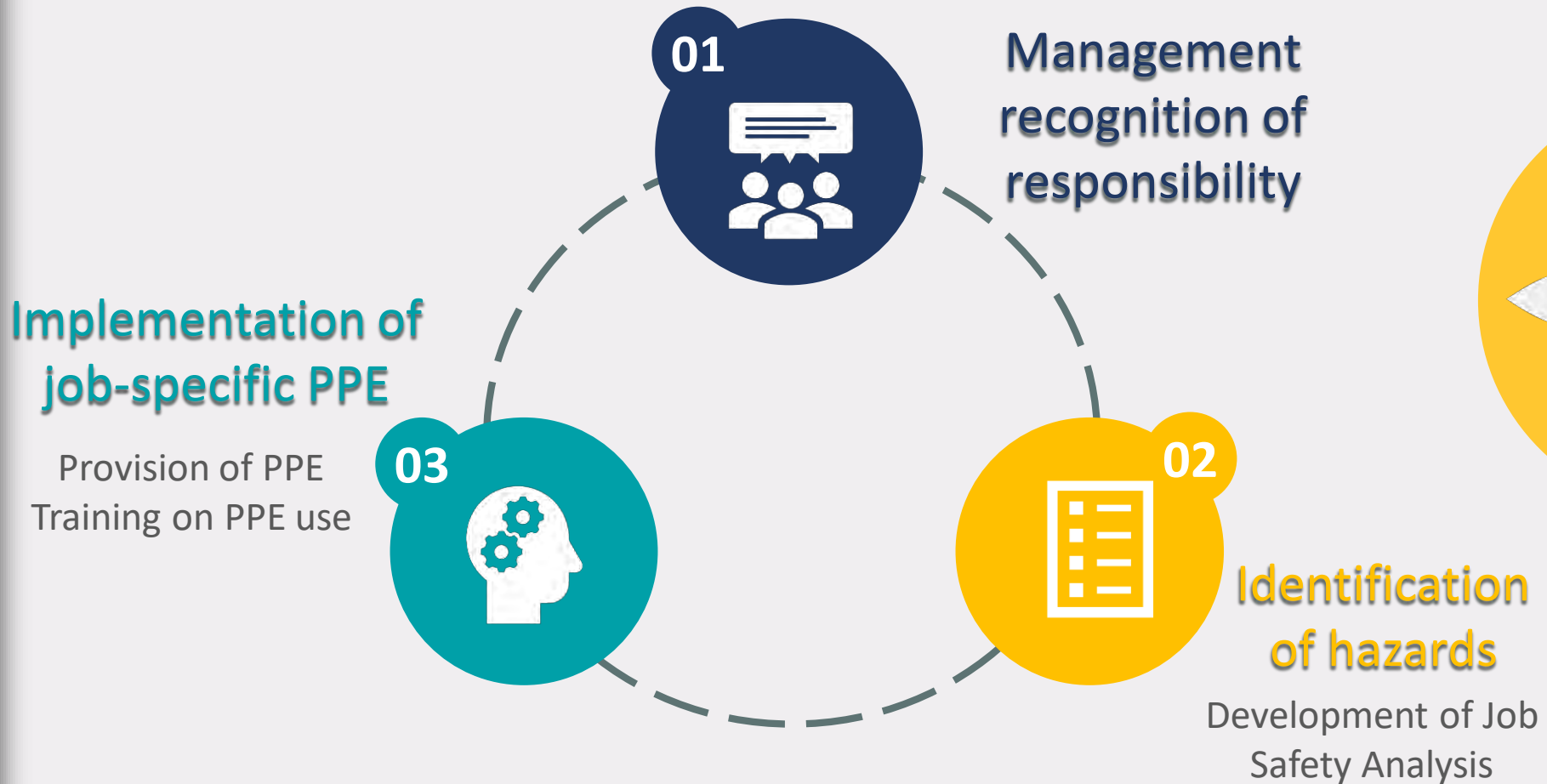


Regulations

Challenge

Background

Hazard Identification and Remediation



Contact

Recommendations

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Job Safety Analysis



What are the specific tasks for each job?

Identify each step, define what are the hazards, outline critical safety practices. Include physical, chemical, biological, electrical, radiological, gas/emissions



Rank potential hazards of the job

Each hazard is ranked by probability, severity, and potential consequence.

- Probability is ranked low, medium, high
- Severity is ranked very low, low, medium, high, very high
- Consequence considers all possible outcomes



Identify hazard control measures

- Administrative controls
- Engineering controls
- Required PPE
- Required training
- Required permits
- Other information

PPE Selection Matrix

AREA / LOCATION	ACTIVITY	Contact Transfer	Splash - Eye/Face	Whole Body Contact	Abrasion, Cut, Puncture	Respiratory
Collection System	Lift Station Inspection	X				
	Vac/Jetter Truck Operation	X	X			C
	Netting Facility/Storm Drain Pretreatment O&M	X	X		X	
	CCTV or Line Cleaning	X	X		X	
	Field Wastewater Sampling	X				
	Sewer Entry (Live)	X	X	X	X	X
	Sewer Entry (By-pass)	X	X		X	
	Man-hole Maintenance	X			X	
	Sewer Pipe Repair Work (Live)	X	X	X	X	X
	Sewer Pipe Repair Work (By-pass)	X	X		X	
Spill Response/SSO/CSO	X	X		X		
Key:	X = recommended, C = conditional depending on specifics of the task					
	Contact transfer PPE includes gloves, boots, and uniform/coveralls					
	Splash hazards PPE includes protection of the eyes/face through safety glasses, face shield or goggles					
	Whole body contact hazards PPE includes Tyvek suits or coveralls					
	Abrasion, cut, or puncture hazards PPE includes durable gloves designed for protection from cuts or punctures					
	Respiratory hazards come from sprays, mists, or dust and PPE includes use of a N95 respirator or dust mask					

contact
Recommendations

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PPE Selection Matrix

contact
Recommendations

AREA / LOCATION	ACTIVITY	Contact Transfer	Splash - Eye/Face	Whole Body Contact	Abrasion, Cut, Puncture	Respiratory
Routine WWTP Operator Activities	Visual Process/Plant Inspections	X				
	Pushbutton Equipment Operation	X				
	Manual Valve Operation	X			X	
	WW Sample Collection (auto)	X				
	WW Sample Collection (grab)	X				
	Field Instrument Calibration (DO)	X	X			
	Sludge Judge	X	X			
	General housekeeping (hose down)	X	X			C
	Dry Sweeping, high pressure power wash	X	X			C
	Lab Activities	X	X		X	
Hand Held DO	X	X				
Key:	X = recommended, C = conditional depending on specifics of the task					
	Contact transfer PPE includes gloves, boots, and uniform/coveralls					
	Splash hazards PPE includes protection of the eyes/face through safety glasses, face shield or goggles					
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Approach
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PPE Selection Matrix

AREA / LOCATION	ACTIVITY	Contact Transfer	Splash - Eye/Face	Whole Body Contact	Abrasion, Cut, Puncture	Respiratory
Maintenance	Facility maintenance/ Daily Rounds	X				
	Active Pump and Line Maintenance	X	X	X	X	C
	Process and Equipment Maintenance with Sewage Contact	X	X			
	Tank Entry (Empty Tank) - Maintenance Activities	X	X	X		C
Preliminary Equipment	Cleaning Bar Screens	X	X		C	C
	Screenings Handling	X	C		C	
	Grit Handling	X	C			
UV Disinfection	Routine Inspection	X				
	Routine Maintenance	X				
	Bulb Replacement	X	X		X	
	Ballast Replacement	X	X			
Key:	X = recommended, C = conditional depending on specifics of the task					
	Contact transfer PPE includes gloves, boots, and uniform/coveralls					
	Splash hazards PPE includes protection of the eyes/face through safety glasses, face shield or goggles					
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Contact
Recommendations

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PPE Selection Matrix

AREA / LOCATION	ACTIVITY	Contact Transfer	Splash - Eye/Face	Whole Body Contact	Abrasion, Cut, Puncture	Respiratory
Biosolids Handling Processes	Gravity Thickening Operation	X				
	Other Thickening (DAF, GBT, Drum) Op	X	X			
	Open Dewatering Eqpt Operation	X	X			
	Enclosed Dewatering Eqpt Operation	X				
	Liquid & Cake Sampling	X				
	Septage/Waste Receiving	X	X			C
	Compost Handling	X				C
	Dewatered Class B Biosolids Handling	X				C
	Dewatered Class A Biosolids Handling	X				
	Thermally Dried Biosolids/Ash Handling	X				

Key:

- X = recommended, C = conditional depending on specifics of the task
- Contact transfer PPE includes gloves, boots, and uniform/coveralls
- Splash hazards PPE includes protection of the eyes/face through safety glasses, face shield or goggles
- Whole body contact hazards PPE includes Tyvek suits or coveralls
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- Respiratory hazards come from sprays, mists, or dust and PPE includes use of a N59 respirator or dust mask

Contact
Recommendations

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Background

Knowledge Gaps



Conduct a prospective epidemiological study of infectious disease incidence among wastewater and collection system workers

- Rigorous statistical data for US wastewater workers is limited
- Compare health outcomes/biomarkers of wastewater workers comparable cohorts
- Examine health outcomes with respect to reported levels of PPE use



Characterize respiratory exposure for typical tasks performed by workers in wastewater collection and treatment operations

- Aerosol exposures in real-world environments is poorly characterized
- Ambient concentrations of aerosols should be measured real work environments
- Time-activity patterns of workers should be assessed to determine exposures



Characterize contact exposure for typical tasks in wastewater collection and treatment operations

- Numerous exposure pathways in water resource recovery facilities and collection systems
- Viable pathogens should be measured on a range of surfaces
- Time-activity patterns of workers can assess cumulative daily contact exposure

Recommendations

Approach

Regulations

Challenge

Background

Knowledge Gaps



Perform cost-benefit analyses of PPE for wastewater and collection system workers

- Risk assessment models should be applied to estimate the costs and benefits of recommended PPE practices
- Monetize health benefits of reductions in infectious disease risks when using PPE



Refine guidance and develop best practices for wastewater and collection system worker PPE

- Workforce education and training
- Translational research will be needed to support effective implementation of PPE
- Guidance regarding special worker limitation rules for certain medical conditions
- Development of training materials and dissemination of best practices



LeChevallier M.W., T.J. Mansfield, J. MacDonald Gibson. 2019. Protecting wastewater workers from disease risks: Personal protective equipment guidelines. *Water Environment Research*, Sep 27 2019, 1–10. <https://doi.org/10.1002/wer.1249>

Mark LeChevallier

Principal
Dr. Water Consulting



lechevallier1@comcast.net



www.drwaterconsulting.com



Poll #4: What kind of research does the water sector need to be conducting immediately in response to the COVID-19 virus outbreak?

- Persistence and viability of the COVID-19 virus in the environment.
- Dose response of the COVID-19 virus in wastewater and feces.
- Airborne exposure and spread from bioaerosols of COVID-19 virus.
- Disinfection efficacy of the COVID-19 virus.
- Understanding the spread of COVID-19 through the use of environmental surveillance of wastewater.
- Other



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Q&A

Dr. Haas and Lola Olabode





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SAVE
THE
DATE



Monday, April 27th
3pm – 5pm ET

Thank You

Comments or questions, please
contact:

lolabode@waterrf.org

For more information, visit

www.waterrf.org

Virtual International Water Research Summit on COVID-19

Upcoming:
APR 27, 2020

Event Type
CONFERENCE



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The Water Research Foundation (WRF) is proud to host a groundbreaking Virtual International Water Research Summit on Environmental Surveillance of COVID-19 Indicators in Sewersheds. The summit will address several technical issues to further advance the work researchers are performing throughout the world.



AGENDA ITEM

Title	Recess to Executive Session
Item No.	12
Date	April 21, 2020

Summary

Convene Executive Session under ORS 192.660(2)(d) to conduct deliberations with persons designated by the governing body to carry on labor negotiations.

AGENDA ITEM

Title	Adjourn Executive Session
Item No.	13
Date	April 21, 2020

Summary

Adjourn Executive Session and make any necessary motions as a result of Executive Session discussions.