FAIRWAYS METROPOLITAN DISTRICT

141 Union Boulevard, Suite 150 Lakewood, Colorado 80228-1898 Tel: 303-987-0835 • 800-741-3254 Fax: 303-987-2032

NOTICE OF REGULAR MEETING AND AGENDA OF THE BOARD OF DIRECTORS OF THE FAIRWAYS METROPOLITAN DISTRICT AND OF THE WASTEWATER UTILITY ENTERPRISE

Board of Dire John Pavlovic Gerald "Jerry" Judith Shinn VACANT VACANT David Solin	,	Office: President/Archivist Treasurer Assistant Secretary Assistant Secretary Assistant Secretary	Term/Expiration: 2022/May 2022 2022/May 2020 2020/May 2020 2022/May 2020 2020/May 2020
	January 12, 2020 (Mar	Secretary	
DATE: TIME:	January 13, 2020 (Mon 5:30 P.M.	iday)	
PLACE:	Lake Valley Golf Club	Clubhouse	
	4400 Lake Valley Driv		
	Longmont, Colorado		
I. ADM	NISTRATIVE MATTE	RS	
A.	Present Disclosures of	Potential Conflicts of Interest.	
В.	Approve Agenda; conf 24-hour posting location	irm location of meeting and posting of non.	neeting notices and
C.	Review and approve (enclosure).	Minutes of the November 11, 2019	Regular Meeting
D.	Discuss Board vacancie	es.	
E.		version of the letter to the Boulder Couning the short-term rentals within the Dist	

Fairways Metropolitan District January 13, 2020 Agenda Page 2

CON A.	MMUNITY COM	MEN	NTS						
	ANCIAL MATTI	ERS							
A.	Review and ra	tify t	he approval	of th	e payment o	f cla	ims as follov	ws (enclo	sures):
	Fund		eriod ending et. 31, 2019		eriod ending ov. 30, 2019		eriod ending ec. 31, 2019		
	General	\$	4,157.00	\$	3,275.18	\$	9,970.78		
	Capital	\$	-0-	\$	-0-	\$	-0-		
	Enterprise	\$	18,856.30	\$	15,017.91	\$	8,709.56		
	Total Claims	\$	23,013.20	\$	18,293.09	\$	18,680.34		
A.	Discuss status		441	······································					
В.	Review and implementation (enclosure).	consi on of	der approva a Consume	ıl of r Pri	correspond ice Index-Ba	ence	e to residen Increase Se	its regard ewer Serv	ling the vice Fee
C.	Confirm desig	nateo	l posting loc	ation	for meeting	noti	ice.		
ENC	GINEERING / OF	ERA	TIONS MA	TTE	RS				
A.	Discuss and General Engire					gine	ering LLC's	s 2020 R	ates for
В.	Discuss and Services (encl			ıl of	ORC for (Эреі	rator in Res	sponsible	Charge

Fairways Metropolitan District January 13, 2020 Agenda Page 3

	C.	Discuss and consider approval of MMI Water Engineers for Regulation 84 Consulting Services (enclosure)
	D.	Regulation 84 Consulting Engineer's Report (enclosure).
	E.	Operator's Report (enclosure).
	F.	On-Call Engineer's Report (enclosure).
VI.	OTH	ER MATTERS
	A.	
VII.	ADJO	DURNMENT <u>THE NEXT REGULAR MEETING IS SCHEDULED FOR</u> <u>APRIL 13, 2020.</u>

MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE FAIRWAYS METROPOLITAN DISTRICT AND THE BOARD OF DIRECTORS OF THE WASTEWATER UTILITY ENTERPRISE HELD NOVEMBER 11, 2019

A Regular Meeting of the Board of Directors of the Fairways Metropolitan District (the "District") and the Board of Directors of the Wastewater Utility Enterprise (referred to hereafter collectively as the "Board") was duly called and held on Monday, the 11th day of November, 2019, at 5:30 p.m., at the Lake Valley Golf Club Clubhouse, 4400 Lake Valley Drive, Longmont, Colorado. The meeting was open to the public.

ATTENDANCE

Directors In Attendance Were:

John Pavlovic Gerald "Jerry" Schram Judith Shinn

Also In Attendance Were:

David Solin and Judy Leyshon; Special District Management Services, Inc.

Tom Schubert; ORC Water Professionals, Inc. ("ORC") (for a portion of the meeting)

Nick Marcotte; Element Engineering (for a portion of the meeting)

Marta Galnick; Resident and liaison between the District and the Golf Course

Brad Simons; MMI Water Engineers (via speakerphone for a portion of the meeting)

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

Disclosure of Potential Conflicts of Interest: Mr. Solin noted that a quorum was present and discussed the requirements of Colorado law to disclose any potential conflicts of interest or potential breaches of fiduciary duty of the Board of Directors to the Secretary of State. The members of the Board were requested to disclose any potential conflicts of interest with regard to any matters scheduled for discussion at this meeting, and incorporated for the record those applicable disclosures made by the Board members prior to this meeting in accordance with

statute. As disclosed in prior meetings, it was confirmed that Director Shinn is a member of the North Rim Homeowners Association Board. There were no additional disclosures made.

ADMINISTRATIVE MATTERS

Agenda: Mr. Solin reviewed with the Board a proposed Agenda for the District's Regular Meeting.

Following discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Agenda was approved, as amended.

<u>Letter on Short-Term Rental</u>: The Board entered into discussion regarding a letter to Boulder County regarding District concerns about short-term rentals.

Following discussion, the Board directed staff to prepare a letter and distribute for review via email. Once reviewed by email is completed, staff was directed to submit the letter to the Boulder County Board of Commissioners.

<u>Minutes</u>: The Board reviewed the Minutes of the September 9, 2019 Regular Meeting.

Following discussion, upon motion duly made by Director Pavlovic, seconded by Director Schram and, upon vote, unanimously carried, the Board approved the Minutes of the September 9, 2019 Regular Meeting.

Board Vacancy: The Board entered into discussion regarding a vacancy on the Board of Directors. Following discussion, it was noted that there were no interested parties at this time.

2020 Meeting Dates: The Board entered into discussion regarding Resolution No. 2019-11-01; Resolution Establishing Regular Meeting Dates, Time and Location, and Designating Location for Posting of 24-Hour Notices.

Mr. Solin reviewed the business to be conducted in 2020 to meet the statutory compliance requirements. The Board, determined to meet on the second Monday of January, April, July and October, 2020 at 5:30 p.m., at the Lake Valley Golf Club Clubhouse; 4400 Lake Valley Drive, Longmont Colorado.

Following discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Board adopted Resolution No. 2019-11-01; Resolution Establishing Regular Meeting Dates, Time and Location, and Designating Location for Posting of 24-Hour Notices. A

copy of the Resolution is attached hereto and incorporated herein by this reference.

<u>Transparency Notice</u>: The Board entered into discussion regarding §32-1-809, C.R.S. – Transparency Notice reporting requirements and mode of eligible elector notification.

Following discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Board determined to post the required information to the Special District Association website.

COMMUNITY COMMENTS

There were no community comments.

FINANCIAL MATTERS

<u>Claims</u>: Mr. Solin then reviewed with the Board the payment of claims through the period ending September 30, 2019, in the amount of \$8,274.70.

Following review and discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Board approved the payment of the claims for the period ending September 30, 2019, as presented.

<u>Unaudited Financial Statements</u>: Mr. Solin presented the unaudited financial statements and cash position schedule for the period ending September 30, 2019.

Following review and discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Board accepted the unaudited financial statements and cash position schedule for the period ending September 30, 2019.

2019 Budget Amendment Hearing: The Board opened the Public Hearing to consider an Amendment to the 2019 Budget and to discuss related issues.

It was noted that publication of Notice stating that the Board would consider adoption of a Resolution to Amend the 2019 Budget and the date, time and location of the Public Hearing was made in a newspaper having general circulation within the District. No written objections were received prior to this Public Hearing. No public comments were received and the Public Hearing was closed.

It was determined that no amendment to the 2019 Budget was necessary.

2020 Budget Hearing: The Board opened the Public Hearing to consider the proposed 2020 Budget and to discuss related issues.

It was noted that publication of Notice stating that the Board would consider adoption of the 2020 Budget and the date, time and location of the Public Hearing was made in a newspaper having general circulation within the District. No written objections were received prior to this Public Hearing. No public comments were received and the Public Hearing was closed.

Mr. Solin reviewed the estimated 2019 expenditures and the proposed 2020 expenditures.

Following discussion, the Board considered the adoption of Resolution No. 2019-11-02; Resolution to Adopt the 2019 Budget and Appropriate Sums of Money, and Resolution No. 2018-11-03; Resolution to Set Mill Levies (for the General Fund at 3.488 mills; for the Debt Service Fund 0.000 mills, for a total mill levy of 3.488 mills). Upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Resolutions were adopted, as discussed, and execution of the Certification of Budget and Certification of Mill Levies was authorized, subject to receipt of final Certification of Assessed Valuation from the County on or before December 10, 2019. Mr. Solin was authorized to transmit the Certification of Mill Levies to the Board of County Commissioners of Boulder County and the Division of Local Government not later than December 15, 2019. Mr. Solin was also authorized to transmit the Certification of Budget to the Division of Local Government not later than January 30, 2020. Copies of the adopted Resolutions are attached hereto and incorporated herein by this reference.

<u>DLG-70 Mill Levy Certification Form</u>: The Board considered authorizing the District Accountant to prepare and sign the DLG-70 Mill Levy Certification form for certification to the Board of County Commissioners and other interested parties.

Following discussion, upon motion duly made by Director Shinn, seconded by Director Schram and, upon vote, unanimously carried, the Board authorized the District Accountant to prepare and sign the DLG-70 Mill Levy Certification form for certification to the Board of County Commissioners and other interested parties.

LEGAL MATTERS

Memorandum of Understanding ("MOU") between the District and Lake Valley Golf Club ("LVGC"): Mr. Solin, Ms. Galnick and the Board discussed a proposed MOU between the District and LVGC to document operational baselines and capacities.

Mr. Solin reported on costs for Badger Cellular ETR for the 3" pipe. No action was taken at this time.

OPERATIONS/ ENGINEERING MATTERS

Element Engineering LLC's 2020 Rates for General Engineering Services: The Board deferred discussion until the January, 2020 meeting.

ORC for Operator in Responsible Charge Services: The Board deferred discussion until the January, 2020 meeting.

MMI Water Engineers for Regulation 84 Consulting Services: The Board deferred discussion until the January, 2020 meeting.

Regulation 84 Consulting Engineer's Report: Mr. Simons provided an update to the Board. See attached.

HOA Irrigation Consumption: Mr. Solin distributed and discussed with the Board a report on water usage. It was noted that water usage in Pebble Beach Park seemed disproportionally higher than the other areas. Director Shinn reported that the HOA had planned to redo the irrigation in the Pebble Beach Park in 2020.

Engineer's Report: Mr. Marcotte reviewed his report with the Board. A copy of the Report is attached hereto and incorporated herein by this reference.

<u>Operator's Report</u>: Mr. Schubert reviewed his report with the Board. A copy of the Report is attached hereto and incorporated herein by this reference.

<u>Filter Building Pipe Repair</u>: Mr. Solin presented a proposal for the leak in the filter building pipe. The Board directed Mr. Solin to obtain a more detailed proposal for repair work.

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There were no other matters.

<u>ADJOURNMENT</u>

There being no further business to come before the Board at this time, upon motion duly made, seconded and, upon vote, unanimously carried, the meeting was adjourned.

Resp	ectfully submitted,	
By:		
_	Secretary for the Meeting	

THESE MINUTES APPROVED AS THE OFFICIAL NOVEMBER 11, 2019 MEETING MINUTES OF THE FAIRWAYS METROPOLITAN DISTRICT BY THE BOARD OF DIRECTORS SIGNING BELOW:
John Pavlovic
Gerald Schram
Judith Shinn

Page 6 FWMD 11-11-19

RESOLUTION NO. 2019-11-01

RESOLUTION OF THE BOARD OF DIRECTORS OF FAIRWAYS METROPOLITAN DISTRICT ESTABLISHING REGULAR MEETING DATES, TIME AND LOCATION, AND DESIGNATING LOCATION FOR POSTING OF 24-HOUR MEETING NOTICE

- A. Pursuant to Section 32-1-903, C.R.S., special districts are required to designate a schedule for regular meetings, indicating the dates, time and location of said meetings.
- B. Pursuant to Section 24-6-402(2)(c), C.R.S., special districts are required to designate annually at the board of directors of the district's first regular meeting of each calendar year, the place at which notice will be posted at least 24 hours prior to each meeting.
- C. Pursuant to Section 32-1-903, C.R.S., all special and regular meetings of the board shall be held at locations which are within the boundaries of the district or which are within the boundaries of any county in which the district is located, in whole or in part, or in any county so long as the meeting location does not exceed twenty (20) miles from the district boundaries unless such provision is waived.
- D. The provisions of Section 32-1-903, C.R.S., may be waived if: (1) the proposed change of location of a meeting of the board appears on the agenda of a regular or special meeting; and (2) a resolution is adopted by the board stating the reason for which a meeting is to be held in a location other than under Section 32-1-903(1), C.R.S., and further stating the date, time and place of such meeting.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Fairways Metropolitan District of the County of Boulder, Colorado:

- 1. That the provisions of Section 32-1-903(1), C.R.S., be waived pursuant to the adoption of this Resolution.
- 2. That the Board of Directors (the "**District Board**") has determined that conducting regular and special meetings pursuant to Section 32-1-903(1), C.R.S., would be inconvenient and costly for the Directors and consultants of the District in that they live and/or work outside the twenty (20) mile radius requirement.
- 3. That regular meetings of the District Board of the Fairways Metropolitan District for the year 2020 shall be held on the second Monday of January, April, July, and October at 5:30 p.m., at the offices of the Lake Valley Golf Club, 4400 Lake Valley Drive, Longmont, in Boulder County, Colorado.
- 4. That special meetings of the District Board shall be held as often as the needs of the District require, upon notice to each Director.

- 5. That, until circumstances change and a future resolution of the District Board so designates, the location of all special and regular meetings of the District Board shall appear on the agenda(s) of said special and regular meetings.
- 6. That the residents and taxpaying electors of the District shall be given an opportunity to object to the meeting(s), location(s) and any such objections shall be considered by the District Board in setting future meetings.
- 7. Notice of Meetings of the District Board required pursuant to Section 24-6-402(2)(c), C.R.S., shall be posted within the boundaries of the District at least 24 hours prior to each meeting at the following location:
- (a) Lake Valley Mailbox Boards Fairways Drive, Niblick Drive, Golf Club Drive, and Spyglass Lane, Longmont, Colorado.
- 8. The District Manager, or his/her designee, is hereby appointed to post the above-referenced notices.

RESOLUTION APPROVED AND ADOPTED on November 11, 2019.

FAIRWAYS METROPOLITAN DISTRICT

	By:	
	President	
Attest:		
Secretary		



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Prepare a binder outlining the applicable information for each User and the Treater to maintain compliance with Regulation 84

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Narrative

binder and added information to Seciton D (User-Related Items for LVGC). Section E (User-Related Items for NRHOA) to be completed the week of October 14 09/05/19 - MMI has outlined the compliance binder and populated it with the treater-related and user-related items available to date. MMI has requested a 10/11/19 - Based upon a September 24, 2019 meeting with ORC Water Professionals, MMI has updated Section C (Treater-Related Items) of the compliance 11/05/19 - Section E (User-Related Items for NRHOA) to be completed the week of November 4 and the binder will be presented for review on November 8. meeting with ORC Water Professionals to review the binder and needed contents (i.e. forms and records) but has yet to meet with Tom/Gabby. and the binder will be presented for review in advance of the November 11 Board meeting.

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Evaluate the necessity of the surface water discharge permit for the wastewater treatment facility and produce a position paper for renewing or terminating the permit.

Approval Warranty Through xx/xx/xx
Test
Materials Const.
Proposal Award
Wilestones Plan Permit

Narrative

discharge permit at this time. MMI also recommends the District evaluate the necessity of the permit based upon the wastewater treatment facility's ability to The position paper, in the form of a memorandum was e-mailed to David Solin on September 3, 2019. MMI recommends the Ditrict maintain its surface water consistently and reliably meet the effluent limitations should a discharge to surface water be required

ORC Water Professionals Inc

X Green On Going 2019 Sample Analysis Data **Original Forecasted Completion** Project #1 Description

Direction NA Revised Completion Date

11 II

Direction

Red

Yellow

Fairways Wastewater Treatment Plant Effluent Sample analysis data for 2019.

Permit Limit: Daily Maximum Total Suspended Solids (TSS) = 30.0 mg/l

Permit Limit: Monthly Maximum E-Coli = 126 mg/l

Permit Limit: Daily Maximum E-Coli = 235 mg/l

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Milestones	Plan	Permit	Proposal	Award	Materials	Const.	Test	Approval	Warranty Through	Through	NA
Narrative											
E. coli	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
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Average	1	1	1	1	2	1	-	-	-	#NOM!	#NCM!
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	16	35	18	38	11	7	13	7	20		
	23	31	11	23	13	10	2	25	18		
	14	32	7	35	5	10	2	12	17		
Weeks 1-5				5			6		14		
Daily Max	23	35	18	41	13	10	13	25	26	0	0
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	Project #2	Description

Broken pipe entering the filter building.

Υ		sue. Each time the #1 pump is called to pump, water and sand is discharged onto the filter building floor
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and flooding the filter building. By prolonging this repair the filter building floor may receive damage caused by the water undermining the floor every time the pumps comes on.

A proposal date September 26th from 911 Rooter and Plumbing to repair the broken pipe entering the filter building to include, Cut and remove cement walk as needed, excavate and replace pipe and fitting as needed, Assure integrity of repair, backfill excavation area, replace cement sidewalk as needed for repair, Haul away and dispose of any debris generated buy our workforce. 2 year warranty. Total cost of the repair: \$9,700.00

ORC Water Professionals Inc

ORC Water Professionals Inc

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Debris, dated pipe and fittings were removed from the pump house building and disposed of. There are two pumps remaining that will require two people to load into a truck for disposal. This will be completed in near future.

ORC Water Professionals Inc

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	Project #4	Description Check Valve
	Proje	Descri Check

The check valve on the discharge pipe in the pump house has been leaking for at least a year. This leak was never addressed because the packing glad is extremely Narrative

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Milestones

worn and unrepairable. Recently, the leakage from this check valve has increased to cause large puddling on the floor. Since this seems to be the original check valve, a recommendation to replace the entire check valve with a new valve.

Upon approval, ORC will purchase a comparable lever and spring check valve and install it for \$4,200.00.



1 Filter Performance Troubleshooting	X Green	Yellow	Red	Direction >>
<u>Description</u> Original Forecasted Completion August, 2019 R	Revised Completion Date		Ongoing Work	rk
Work with Parkson on troubleshooting filter performance.				
Milestones Plan Permit Proposal Award Materials Const. X Test		ipproval	Warranty Th	Approval Warranty Through N/A

Narrative

that has not been adequately backwashing. Parkson recommended the filter be placed on continuous backwash for several weeks to thoroughly clean the filter ested the filter influent, effluent, and reject. As has been reported by Parkson and ORC the influent and effluent TSS concentrations are roughly the same with (approximately 30 - 35 mg/L). The reject TSS concentration, however, is very high (approximately 80 or 90 mg/L). Parkson believes this is indicative of a filter May 2019 Update: On May 14, 2019 the filter was reprogrammed into continuous backwash mode by Parkson's controls consultant. Parkson and ORC have discuss these thoughts and generate a sampling and monitoring plan. Element, ORC and SDMS have both been briefed and ORC has begun the sampling as should improve over time and the filter can slowly be put back into Ecowash mode. Element Engineering held a conference call with Parkson on May 15 to bed. ORC will be taking weekly influent, effluent, and reject TSS concentrations as well as noting air flow on the rotameter. Parkson believes performance

Iuly 2019 Update: The filter had been running on continuous backwash mode as recommended by Parkson. Sampling and monitoring has been taking place as discussed (influent, effluent, reject, air flow). These results have been forwarded to Parkson and a meeting has been set up to discuss our next steps and Parkson's recommendations.

September 2019 Update: In mid-July Element staff completed a filter turnover test and sent the results were emailed to district staff on July 23rd. In summary there was a 30% difference in bed turnover in the four quadrants which we believe to be significant and suggestive of filter channeling. This could explain the ack of filter performance. Element recommends air lancing the filter. A standard operating procedure for air lancing has been developed. During a phone conversation with Parkson where data was discussed Parkson recommended a 5-gallon sample be sent to their laboratory for testing. Element requested waiving of the testing fee and the waiver was approved. A 5-gallon sample was sent on August 13 to Parkson. Results have not been received

October 2019 Update: We have requested an update on the filter bench test from Parkson. We hope to have those at the board meeting.

nitial thoughts are that the original sand Parkson specified may be too large a diameter. They would like to complete their own sampling and testing as well as November 2019 Update: Parkson has reviewed samples and would like to visit the facility and collect additional a samples during the week of 11/11/19. Their a field visit prior to replacing the sand.



Flow Meter Validation / Field Testing		X Green	en Yello	w Red	Direction >>	< <u></u>
on Original Forecasted Completion November, 2019	61	Revised Co	tevised Completion Date	N/A		
Work with Parkson on troubleshooting filter performance.						

The flow meter and piping in the pump house building is antequated and outdated. The check valve is likely the original installed in the 1980's. The flow meter installed with correct upstream and downstream diameters to ensure accurate measurement. In addition, some losses can be eliminated in the piping system is a cheaper variant and appears to be relatively innacurate. It is recommended that new piping and a new flow meter be installed. The flow meter should be allowing for maximum pumping capacity. It is estimated that this may equate to an additional 5 - 10 gallons per minute.

Element can complete the piping diagram for installation by a contractor/plumber for \$4,500. This includes plan and profile sheets and updates to the district's new as-built documentation.



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Jarrative

May 2019 Update: Element has provided a purchase order to begin the process of consolidating the district's as-built information into one location and file. We have started that work and expect it to be complete during the month of July.

completed prior to the district's September board meeting for distribution to the district's staff and board for review. Included in these documents are detailed September 2019 Update: Element has completed the draft as-built documents and they are being reviewed internally. These documents will likely be exhibits and layouts of the effluent system.

October 2019 Udpate: As-built documents have been provided to Ian at the golf course for markup and review.

November 2019 Update: Element has followed up with lan on any final revisions/comments on the as-built documents. Thus far we have had no response.



4 Sanitary Sewer Rehabilitation Plan	X Green	Yellow	Red	Direction >>	^
<u>Description</u> Original Forecasted Completion October, 2019 Rev	Revised Completion Date	i Date	N/A		
Compile a Manhole Rehabilitation List and Obtain Cost for Repairs					
Milestones X Plan Permit Proposal Award Materials Const.	Test	Approval	Warranty Through		N/A
Narrative October 2019 Update: Video and manhole inspection notes from 2016, 2017, and 2018 have been reviewed and compiled. This information has been sent to Guildner Pipeline to provide a proposal for manhole repairs.	n reviewed an	d compiled. T	his informati	ion has been s	ent to
November 2019 Update: We have followed up with Guildner Pipeline by phone one time and with three separate emails to obtian a quote for this work.	h three separa	te emails to o	obtian a quot	te for this worl	نح



5 Process and Instrumentation Control Diagram	X Green Yellow	Red	Direction >>
<u>Description</u> Original Forecasted Completion N/A Re	Revised Completion Date	N/A	
Compile a process and instrumentation control diagram. Indicate key alarms and two-to-three cameras to aid remote operation.	cameras to aid remote oper	ation.	
Milestones Plan Permit x Proposal Award Materials Const.	Test Approval	Approval Warranty Through	y Through N/A
<u>Narrative</u>	-	ī	
November 2019 Update: The district has expressed interest in the development of a process and instrumentation diagram. The purpose of this diagram would be to allow the installation of a system allowing remote view of alarms, potential cameras, and system status. Element can develop a PID diagram along with	nd instrumentation diagram I system status. Element can	. The purpos develop a PI	e of this diagram would D diagram along with
specifications allowing procurement and installation of this system. The fee for this work is estimated at \$4,500 to \$5,500. This would include the PID diagram,	imated at \$4,500 to \$5,500.	This would ir	clude the PID diagram,

preliminary controls design, and documents to obtain costs for installation and startup of equipment.



6 Facility Maintenance	X Green Ye	Yellow Red	ed Direction >>	^
<u>Description</u> Original Forecasted Completion N/A	Revised Completion Date		N/A	
Document Facility Maintenance Necessary During Site Visits				
Milestones X Plan Permit Proposal Award Materials Const.	Test	paraval W	Approval Warranty Through	N/A
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Narrative				
November 2019 Update: The district has requested that Element provide a list of recommended facility maintenance during our periodic site visits to the	ded facility maintenan	ce during our	periodic site visits t	the the
WWTP. This does not include periodic inspections purely for maintenance documentation. Moving forward, any recommendations will be included in this	oving forward, any red	commendation	i will be included i	this
report.				

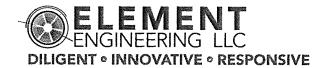
initial recommendations to address maintenance issues would be documentation during the operators visits. Documentation would include a breif observation report of any failures of any equiopment, lighting, component, etc. This could be as easy as a short checklist once per week noting malfunctions or failures

nousekeeping items addressed such as removing old/replaced equipment/items would be reported. More expensive or time consuming items that would down to the changing of light bulbs or ballasts. Checks of meters, gauges, or other telemetry items should be made as well and added to the list. Finally,

require board approval would be brought to the next board meeting. This may cost extra for operator time onsite.



General Engineering	X Green Y	Yellow	Red	Direction >>	^
Description Original Forecasted Completion N/A	Revised Completion Date	ite	N/A		
General Requests for Engineering Tasks					
Milestones X Plan Permit Proposal Award Materials Const.	Test	Approval	Warranty Through	200000	N/A
Natrative No tems to report					



MEMORANDUM

To:

Fairways Metropolitan District

FROM:

Element Engineering, LLC

DATE:

October 2019

SUBJECT:

Effluent Pump Testing

BACKGROUND

Fairways Metropolitan District (FMD) owns, operates, and maintains the wastewater treatment plant (WWTP) and collection system which services the Lake Valley Golf Club and surrounding housing developments. An integral part of their wastewater system is an effluent lift station, which is equipped with a simplex submersible pump by Flygt (model NP 3127 SH) equipped with a variable frequency drive. This pump is responsible for diverting WWTP effluent to one of two separate ponds located on the golf course (Pond 8 and Pond 13), as well as diverting water from one pond to the other (Pond 13 to Pond 8), through two separate force mains. The approximate location and layout for the effluent lift station and force mains is shown in Figure 1.



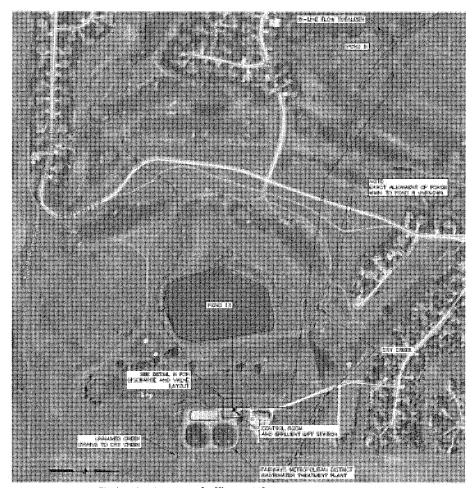


Figure 1 - Layout of Effluent Lift Station Force Mains

The effluent lift station diverts pump discharge to Pond 13 or Pond 8 by configuring yard gate valves #1, #2, and #3. To divert wastewater effluent to Pond 13 from the lift station, yard gate valve #2 must be open, and yard gate valves #1 and #3 must be closed. Under normal operating conditions (according to the operator), the effluent butterfly valve located within the control room building must be set to 30 degrees (partially closed). To divert wastewater effluent from the lift station to Pond 8 (or similarly to convey water from Pond 13 to Pond 8), yard gate valve #1 must be open (as well as yard gate valve #3 for moving water from Pond 13 to Pond 8), and yard gate valve #2 must be closed. Furthermore according to the operator, under normal operating conditions the effluent butterfly valve must be set to 90 degrees (fully open). The yard gate valve configuration is depicted in Figure 2.



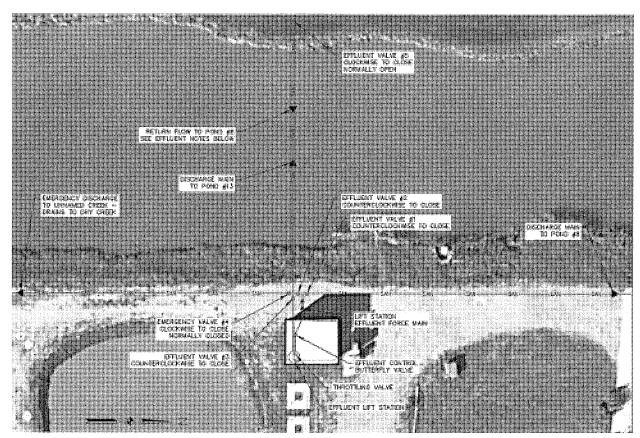


Figure 2 – Effluent Lift Station Yard Valve Layout

TEST PROCEDURE

The purpose of testing the effluent pump was to determine the actual operating parameters of the effluent lift station pump while pumping flows to Pond 13 and to Pond 8, as well as to compare operating parameters to manufacturer pumping curves in order to gauge pump efficiency. Equipment utilized during the test included a standard pressure gauge, an electronic flow meter, and a stop watch. The force main leading to Pond 13 was tested first, followed by testing the force main leading to Pond 8. The force main leading to Pond 13 was tested twice, and the force main leading to Pond 8 was tested three times, for a total of five trials.

Standard testing procedures for both force mains included the flowing sequential steps:

- 1. Ensure adequate volume is available for pumping in the wet well by diverting water from Pond 13.
- 2. Set-up correct effluent pump yard gate valve configuration and fully open butterfly valve (90 degrees).
- 3. Select "AUTO" on the VFD lift station control panel (tested at 60Hz frequency for both ponds).
- 4. Start timer and record the time before flow stabilization (within 10 gpm) on the electronic flow meter and frequency stabilization on the VFD within the control room.



- 5. Record the following: (1) stabilized pump flow on the flow meter, (2) pressure reading from gauge on the discharge line, and (3) pump drive setting on the lift station control panel.
- 6. Repeat for each force main

EFFLUENT LIFT STATION PUMP TEST RESULTS

To determine the total amount of dynamic head for each operating configuration, hydraulic head loss contributed from piping configurations (Crane K-Value method) and friction (Hazen-Williams formula) were calculated prior to the pressure gauge reading. Results from the effluent lift station pump testing are summarized below in Table 1 for Pond 13 and Table 2 for Pond 8. Note, to convert pressure reading from pounds per square inch into feet of dynamic head, a conversion factor of 2.31 is used.

Table 1 – Effluent Lift Station Pump Test Results to Pond 13

	Pond 13								
Date	VFD Setting (Hz)	Flow (gpm)	Pressure Reading (psi)	Head at Pressure Gauge (ft) ¹	TDH Pump to Pressure Gauge (ft) ²	Total TDH (ft) ³			
10/9/2019	60	250	8	18.48	25.01	43.49			
10/9/2019	60	300	8	18.48	30.62	49.10			

Muliply pressure gauge reading (psi) by 2.31 to obtain head at pressure gauge (ft).

Table 2 – Effluent Lift Station Pump Test Results to Pond 8

	Pond 8									
Date	VFD Setting (Hz)	Flow (gpm)	Pressure Reading (psi)	Head at Pressure Gauge (ft) ¹	TDH Pump to Pressure Gauge (ft) 2	Total TDH (ft) ³				
10/9/2019	60	250	17	39.27	25.01	64.28				
10/9/2019	60	240	20 .	46.2	24.00	70.20				
10/9/2019	60	230	22	50.82	23.04	73.86				

Muliply pressure gauge reading (psi) by 2.31 to obtain head at pressure gauge (ft).

The resulting operating parameters obtained from the pump testing were compared to the pump's manufacturer variable frequency pump curves, as well as theoretical system curves which were developed for both force mains leading to Pond 13 and Pond 8. Assumptions were necessary in the theoretical system curves for pipe lengths, invert elevations, and pipe size due to lack of available as-built records on the two force mains. The system curves are then calculated using the same methods used for calculating head loss upstream from the pressure gauge reading (Crane K-values and Hazen-Williams). The parameters used for determining the system curve to Pond 8 are summarized in Table 3 and Pond 8's are summarized below in Table 4. Note, both system curves have identical head loss through the control room piping configuration and differ only in their outlet elevations, force main diameters, and force main lengths.

² Friction and fitting head losses upstream from pressure gauge calculated using K-values and Hazen-Williams

Total TDH = Head at pressure Gauge (ft) + TDH Pump to Pressure Gauge (ft)

² Friction and fitting head losses upstream from pressure gauge calculated using K-values and Hazen-Williams

Total TDH = Head at pressure Gauge (ft) + TDH Pump to Pressure Gauge (ft)



Table 3 – System Curve Variables to Pond 8

	Pon	d 8	
Starting	End Elevation	Force Main	Force Main
Elevation (ft)	(ft)	Diameter (in)	Length (ft)
5218	5257	6	3150

Table 4 - System Curve Variables to Pond 13

\$2.1 2.1	Pond	j 13	
Starting	End Elevation	Force Main	Force Main
Elevation (ft)	(ft)	Diameter (in)	Length (ft)
5218	5227.5	4	785

The effluent lift station pump VFD curves were plotted against the theoretical system curves for pumping to Pond 8 and Pond 13, as well as the testing result points. The blue points are testing data corresponding to Pond 8, and the green points are testing data corresponding to Pond 13. This graph can be seen in Figure 3.



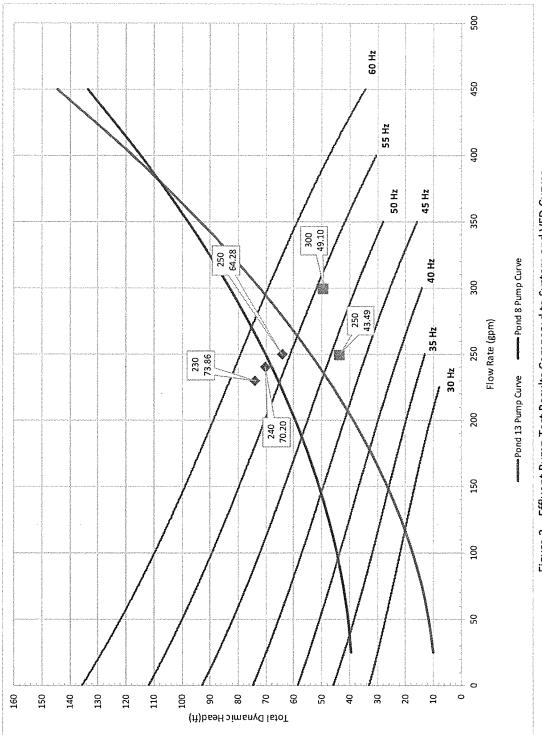


Figure 3 — Effluent Pump Test Results Compared to System and VFD Curves



EFFLUENT PUMP TEST RESULT DISCUSSION

Comparing the results of the effluent lift station pump test to the system and VFD curves reveals some minor variability. The Pond 8 test data points align well with the system curve, suggesting that the effluent lift station pump is working as intended. The Pond 13 test data points lie somewhat below the system curve, however this is likely due to insufficient time for the pump to stabilize at 60 Hz before automatically shutting off when the wet well is pumped down to the low water level. This wasn't an issue for the Pond 8 test, as a constant flow of water diverted into the wet well from Pond 13 was possible. The Pond 13 force main shares the same line as the return flow for Pond 13, so a constant flow was impossible (see Figure 2 for valve and line configuration).

The resulting pump test data points for both ponds should lie on the manufacturer's VFD 60 Hz curve, however this is not the case as apparent in Figure 3. There are several possible explanations for the discrepancy, including: (1) improper check valve operation, (2) pressure gauge reading accuracy, and (3) flow meter accuracy.

A 4-inch cast iron check valve exists upstream from the pressure gauge on the effluent lift station pump's piping within the control room. This spring loaded check valve was excessively corroded on visual examination during the pump testing, as well as actively leaking when the effluent pump is running. The check valve was likely installed during the wastewater treatment plant's initial construction, and is stamped with the year 1986, making it over 30 years old and heavily used throughout that time frame. When a spring loaded check valve isn't operating correctly due to corrosion, an excessive amount of head loss can occur as water passes through it. This head loss cannot be estimated utilizing the Crane K-value method, as the K-value associated with check valves are meant for those in good working condition. This check valve can be seen in Figure 4, as well as the pool of water that leaks from it when the pump is operating.



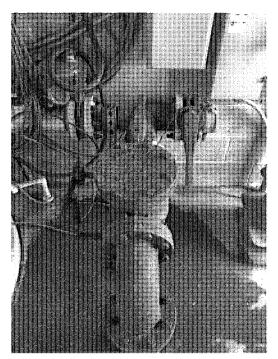


Figure 4 – Effluent Pump Corroded Check Valve

The pressure gauge utilized during the pump test is another possible source of variability for the test data points compared to the system and VFD curves. As seen in Figure 5, the pressure gauge has pressure reading indicator lines for every two (2) pounds per square inch (psi). Standard laboratory methods state that the accuracy of a measurement is within one standard deviation (equal to the precision of the device) above or below a result. This means a resulting pressure reading for a test data point could be +/- two (2) psi. As previously mentioned, a multiplication factor of 2.31 is used to convert psi to feet dynamic head which compounds the issue. Therefore, our testing data points could have hydraulic head values +/- 4.62 feet from the TDH values reported in Tables 1 and 2.



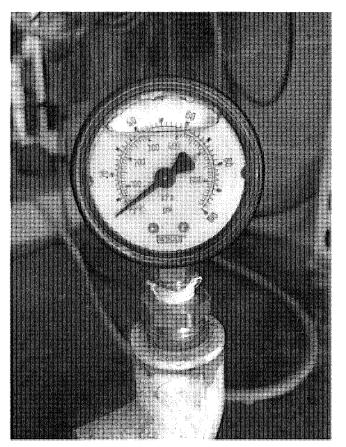


Figure 5 – Pressure Gauge Utilized for Pump Test

Lastly, the flow meter which is installed upstream from the pressure gauge, and utilized during the pump test is a potential source of variability for the test data points compared to the system and VFD curves. Flow meters must typically be calibrated on a semi-regular basis in order to verify their accuracy. It is unknown when the flow meter utilized in the test was last calibrated. The flow meter model is also outdated. Additionally, the constant flow of water diverted from Pond 13 to the wet well during the Pond 8 test led to a variable water level in the wet well, which in turn leads to the pump turning on and off using the drive to slowly ramp up and down respectively.

In summary, there was typically not adequate flow from the WWTP discharge into the wet well during the Pond 13 tests to allow the pump to operate at a constant 60-HZ. Note in this condition the only water entering the wet well is the WWTP effluent (no return flows from Pond 13). During testing the pump would ramp up, pump the wet well dry, and ramp down to shutoff.

Historically the district has pumped water to Pond 13 at a slower speed, as only WWTP effluent is pumped to Pond 13 for storage. Flows into the wet well from the WWTP average from 55 to 80 gpm. The pump is usually run at 30 HZ in this condition as there is no need or operational value in pumping water to Pond 13 quicker than it is produced by the WWTP.



On the contrary, the golf course wishes to receive as much as possible to Pond 8 during irrigation season. Our flow tests show that if adequate return water is provided from Pond 13 to the wet well, and the pump is allowed to run at a full 60-HZ that 250 gpm is achievable.

CONCLUSION

For Pond 8, the pump test data points lie in close proximity to the theoretical system curve, and are reasonably close to the manufacturer's VFD curve at 60 Hz. The minor discrepancies between the pump test data points with the system and VFD curves can be reasonably contributed to the previously discussed inaccuracies such as the flow meter, the corroded check valve, and uncertainties linked to the visual reading on the pressure gauge.

For Pond 13, the pump test data points lie in close proximity to the theoretical system curve, but lie below the manufacturer's VFD curve at 60 Hz. This result is due to the wet well conditions, which have a large impact on the pumping rate. The effluent lift station pump has a soft start that, if the wet well cannot stay full, will not allow the pump to fully ramp up the motor. Minor discrepancies between the pump test data points with the theoretical system curve can similarly be contributed to the previously discussed inaccuracies which affected the Pond 8 test results.

Based on the results of the pump test, the known areas of possible inaccuracies, and the limiting condition of having adequate influent water to the wet well, the effluent lift station pump is working as expected and is capable of providing a pumping rate up to 250 gpm to Pond 8 if sufficient water is provided from Pond 13 to allow the pump to maintain 60-HZ motor speed.

FAIRWAYS METROPOLITAN DISTRICT

141 Union Boulevard, Suite 150 Lakewood, Colorado 80228-1898 Tel: 303-987-0835 • 800-741-3254 Fax: 303-987-2032

November 21, 2019

Dear Honorable Board of County Commissioners,

I am writing you today on behalf of the Board of Directors of the Fairways Metropolitan District. The District is concerned by the application for Limited Impact Special Use at 6366 Fairways Drive (Docket #LU-19-0034) to allow for short-term rentals in an owner-occupied dwelling within the District.

The Fairways Metropolitan District was created in 1964 for the purpose of providing sanitary sewer collection and treatment services to the residents of the District. The District operates by permit issued through the Colorado Department of Public Health & Environment (CDPHE) under Regulation 84. As such, the District is responsible for reclaiming sewage to be collected, treated and reused for irrigation purposes. The District must comply with CDPHE's rules and regulations governing the District's operations, facilities, and maximum collection and output capacities.

Currently, the District provides sanitary sewer collection and treatment to 342 customers within the District, which, according to the District's Professional Engineer, is near the maximum capacities of the District's permitted Wastewater Treatment Plant and Water Storage Ponds. The District is concerned that short-term rentals in the District would create an uncontrollable risk that homes calculated to generate certain levels of sewage could add indeterminate increases in volume to the District's closed-system. This potential for unknown increases in demand could pose operational challenges to the District's ability to continue serving the volume for which the system was designed under CDPHE permit, and with current resources.

In the event of a system failure, the 342 customers of the Fairways Metropolitan District have no other options available for sanitary sewer services.

The Board appreciates the difficulty that the Board of County Commissioners faces in trying to balance homeowners' rights and economic development opportunities. Unfortunately, the District is concerned that the risks posed to all residents of the District, by allowing for short-term rentals within the District, far outweigh any potential benefits to individual homeowners.

Please let me know of any questions, or for additional assistance, at the number above or at dsolin@sdmsi.com.

Thank you,

David Solin

District Manager

Fairways Metro District 19-Oct

	15 00			
Vendor	Invoice #	Date	Amount	Account Number
Century Link	031B 10/19	9/7/2019	82.27	4-790
DPC Industries, Inc	DE73000774-19	8/31/2019	140.00	4-782
Element Engineering, LLC	1	10/3/2019	1,200.00	4-677
Element Engineering, LLC	6	11/2/2019	1,752.50	4-677
Element Engineering, LLC	2	11/1/2019	1,485.00	4-677
Element Engineering, LLC	1.2	10/4/2019	4,975.00	4-677
Element Engineering, LLC	5	10/4/2019	1,415.00	4-677
Freedom Mailing Services, Inc	36900	10/7/2019	191.48	1-616
Lake Valley Golf Club	10/1/2019	10/1/2019	550.00	4-786
Marchetti & Weaver, LLC	16190	8/31/2019	1,079.58	1-612
ORC Water Professionals, Inc	218596	5/31/2019	1,697.55	4-755
ORC Water Professionals, Inc	219000	8/31/2019	2,322.55	4-755
RLI Surety	LSM0936189	10/3/2019	250.00	1-670
Special District Management Services	9/30/2019	9/30/2019	1,475.00	1-614
Special District Management Services	9/30/2019	9/30/2019	402.00	1-616
Special District Management Services	9/30/2019	9/30/2019	210.00	1-612
Special District Management Services	9/30/2019	9/30/2019	169.94	1-690
Spencer Fane, LLP	707426	10/4/2019	379.00	1-675
UNCC	219090458	9/30/2019	18.46	4-790
Xcel Energy	653661749	10/3/2019	2,692.97	4-790
911 Rooter and Plumbing	3083	9/26/2019	525.00	4-750

23,013.30

Fairways Metropolitan District October-19

	 General	Capital	Enterprise	Totals
Disbursements	\$ 4,157.00	\$ *	\$ 18,856.30	\$ 23,013.30
Payroll	\$ -			\$ -
Payroll Taxes (Annually)	\$ -			\$ -
Total Disbursements from Checking Acct	\$ 4,157.00	\$ -	\$ 18,856.30	\$ 23,013.30

Fairways Metro District 19-Nov

Vendor	Invoice #	Date	Ar	nount	Account Number
Century Link	031B 11/19	10/7/2019	\$	82.36	4-790
Colorado Special District P&L	POL-0000222	10/30/2019	\$	400.00	1-140
DPC Industries, Inc	DE73000986-19	10/31/2019	\$	140.00	4-782
DPC Industries, Inc	DE73000880-19	9/30/2019	\$	140.00	4-782
Element Engineering, LLC	2	11/3/2019	\$	2,300.00	4-677
Element Engineering, LLC	7	11/2/2019	\$	2,354.35	4-677
John Pavlovic	44154	12/1/2019	\$	47.49	1-685
Lake Valley Golf Club	44154	11/1/2019	\$	550.00	4-786
MMI Water Engineers, LLC	1194	11/18/2019	\$	1,711.85	4-677
MMI Water Engineers, LLC	1185	10/22/2019	\$	883.50	4-677
MMI Water Engineers, LLC	1184	10/22/2019	\$	1,473.42	4-677
ORC Water Professionals, Inc	220001	9/30/2019	\$	1,815.05	4-755
Prairie Mountain Media	211752	10/31/2019	\$	38.28	1-685
Special District Management Services	102919	10/29/2019	\$	1,637.00	1-614
Special District Management Services	102919	10/29/2019	\$	196.00	1-612
Special District Management Services	102919	10/29/2019	\$	714.00	1-616
Special District Management Services	102919	10/29/2019	\$	131.41	1-690
Spencer Fane, LLP	711484	11/4/2019	\$	111.00	1-675
UNCC	219100464	10/31/2019	\$	994.00	4-790
Xcel Energy	657543705	10/15/2019	\$	2,573.38	4-790

\$ 18,293.09

Fairways Metropolitan District November-19

	General	Capital	Enterprise	Totals
Disbursements	\$ 3,275.18	\$ -	\$ 15,017.91	\$ 18,293.09
Payroll	\$ -			\$ -
Payroll Taxes (Annually)	\$ -	 		\$ -
Total Disbursements from Checking Acct	\$ 3,275.18	\$ -	\$ 15,017.91	\$ 18,293.09

Fairways Metro District

19-Dec

Invoice #	Date	Due Date	Αn	nount	Expense Account	Account Number
661454078	11/12/2019	12/3/2019	\$	2,472.65	Utilities	4-790
031B 12/19	11/14/2019	11/28/2019	\$	82.63	Utilities	4-790
POL-0001771	11/20/2019	11/20/2019	\$	2,015.00	Prepaid Expenses	1-140
DE73001091-19	11/30/2019	11/30/2019	\$	140.00	Chemicals	4-782
8	12/1/2019	12/17/2019	\$	1,382.50	Engineering	4-677
Dec-19	12/17/2019	12/17/2019	\$	550.00	LVGC Maintenance Agreement	4-786
16372	10/31/2019	10/31/2019	\$	616.15	Accounting	1-612
16325	9/30/2019	9/30/2019	\$	1,085.57	Accounting	1-612
16477	11/30/2019	11/30/2019	\$	1,099.95	Accounting	1-612
220002a	10/31/2019	10/31/2019	\$	2,077.55	Plant Operator	4-755
220002	10/31/2019	10/31/2019	\$	1,998.55	Plant Operator	4-755
113019	11/30/2019	11/30/2019	\$	217.11	Supplies and Expenses	1-690
113019	11/30/2019	11/30/2019	\$	473.50	Billing Service	1-616
113019	11/30/2019	11/30/2019	\$	392.00	Accounting	1-612
113019	11/30/2019	11/30/2019	\$	2,207.50	Administrative Services	1-614
717926	12/6/2019	12/6/2019	\$	1,369.00	Legal	1-675
7718	11/24/2019	12/17/2019	\$	495.00	Insurance & Bonds	1-670
219110444	11/30/2019	11/30/2019	\$	5.68	Utilities	4-790
			\$	18,680.34		
	661454078 031B 12/19 POL-0001771 DE73001091-19 8 Dec-19 16372 16325 16477 220002a 220002 113019 113019 113019 717926 7718	661454078 11/12/2019 031B 12/19 11/14/2019 POL-0001771 11/20/2019 DE73001091-19 11/30/2019 B 12/17/2019 Dec-19 12/17/2019 16372 10/31/2019 16375 9/30/2019 16477 11/30/2019 220002a 10/31/2019 220002 10/31/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019 113019 11/30/2019	661454078 11/12/2019 12/3/2019 031B 12/19 11/14/2019 11/28/2019 POL-0001771 11/20/2019 11/20/2019 DE73001091-19 11/30/2019 11/30/2019 8 12/1/2019 12/17/2019 Dec-19 12/17/2019 12/17/2019 16372 10/31/2019 10/31/2019 16325 9/30/2019 9/30/2019 16477 11/30/2019 11/30/2019 220002a 10/31/2019 10/31/2019 220002a 10/31/2019 10/31/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019 113019 11/30/2019 11/30/2019	661454078 11/12/2019 12/3/2019 \$ 031B 12/19 11/14/2019 11/28/2019 \$ POL-0001771 11/20/2019 11/20/2019 \$ DE73001091-19 11/30/2019 11/30/2019 \$ 8 12/1/2019 12/17/2019 \$ Dec-19 12/17/2019 12/17/2019 \$ 16372 10/31/2019 10/31/2019 \$ 16325 9/30/2019 9/30/2019 \$ 16477 11/30/2019 11/30/2019 \$ 220002a 10/31/2019 10/31/2019 \$ 220002a 10/31/2019 10/31/2019 \$ 113019 11/30/2019 11/30/2019 \$ 113019 11/30/2019 11/30/2019 \$ 113019 11/30/2019 11/30/2019 \$ 113019 11/30/2019 11/30/2019 \$ 717926 12/6/2019 12/6/2019 \$ 7718 11/24/2019 12/17/2019 \$ 219110444 11/30/2019 11/30/2019 \$	661454078 11/12/2019 12/3/2019 \$ 2,472.65 031B 12/19 11/14/2019 11/28/2019 \$ 82.63 POL-0001771 11/20/2019 11/20/2019 \$ 2,015.00 DE73001091-19 11/30/2019 11/30/2019 \$ 1,382.50 Dec-19 12/17/2019 12/17/2019 \$ 550.00 16372 10/31/2019 10/31/2019 \$ 1,085.57 16477 11/30/2019 11/30/2019 \$ 1,085.57 16477 11/30/2019 11/30/2019 \$ 1,099.95 220002a 10/31/2019 10/31/2019 \$ 2,077.55 220002 10/31/2019 10/31/2019 \$ 1,998.55 113019 11/30/2019 11/30/2019 \$ 2,077.55 113019 11/30/2019 11/30/2019 \$ 27.11 113019 11/30/2019 11/30/2019 \$ 473.50 113019 11/30/2019 11/30/2019 \$ 2,207.50 113019 11/30/2019 11/30/2019 \$ 2,207.50 113019 11/30/2019 11/30/2019 \$ 2,207.50 113019 11/30/2019 11/30/2019 \$ 1,369.00 7718 11/24/2019 12/6/2019 \$ 1,369.00	661454078 11/12/2019 12/3/2019 \$ 2,472.65 Utilities 031B 12/19 11/14/2019 11/28/2019 \$ 82.63 Utilities POL-0001771 11/20/2019 11/20/2019 \$ 2,015.00 Prepaid Expenses DE73001091-19 11/30/2019 11/30/2019 \$ 1,382.50 Engineering Dec-19 12/17/2019 12/17/2019 \$ 550.00 LVGC Maintenance Agreement 16372 10/31/2019 10/31/2019 \$ 616.15 Accounting 16325 9/30/2019 9/30/2019 \$ 1,085.57 Accounting 16477 11/30/2019 11/30/2019 \$ 1,099.95 Accounting 220002a 10/31/2019 10/31/2019 \$ 2,077.55 Plant Operator 113019 11/30/2019 11/30/2019 \$ 217.11 Supplies and Expenses 113019 11/30/2019 11/30/2019 \$ 473.50 Billing Service 113019 11/30/2019 11/30/2019 \$ 392.00 Accounting 113019 11/30/2019 11/30/2019 \$ 2,207.50 Administrative Services 717926 12/6/2019 12/6/2019 \$ 1,369.00 Legal 7718 11/24/2019 12/17/2019 \$ 495.00 Insurance & Bonds 219110444 11/30/2019 11/30/2019 \$ 5.68 Utilities

Fairways Metropolitan District December-19

	General	Capital	Enterprise	Totals
Disbursements	\$ 9,970.78	\$ -	\$ 8,709.56	\$ 18,680.34
Payroll	\$ -		,	\$ •
Payroll Taxes (Annually)	\$ -			\$ •
Total Disbursements from Checking Acct	\$ 9,970.78	\$	\$ 8,709.56	\$ 18,680.34

November 30, 2019		Enterprise	
	General Fund	Fund	Total
ASSETS			
CASH			
First Bank Checking	35,918		35,918
First Bank Liquidity Account ColoTrust	53,703 276,154		53,703
Inter-Fund Balances	(255,403)	255,393	276,154 (10)
TOTAL CASH	110,371	255,393	365,765
OTHER CURRENT ASSETS		·	
Accounts Receivable		5,428	5,428
Due From County Treasurer	-		-
Property Taxes Receivable	-		<u>.</u>
Prepaid Expenses AR - Certified to County	2,905		2,905
TOTAL OTHER CURRENT ASSETS	2,905	5,428	8,333
	2,505	5,426	6,333
FIXED ASSETS Construction in Progress			
Sewer Treatment System		4,055,533	4,055,533
Accumulated Depreciation		(1,613,085)	(1,613,085)
TOTAL FIXED ASSETS	•	2,442,447	2,442,447
TOTAL ASSETS	113,276	2,703,269	2,816,545
LIABILITIES & DEFERED INFLOWS CURRENT LIABILITIES Accounts Payable Director Fees Payable Payroll Liabilities Retainage	16,132 185 141	-	16,132 185 141 -
TOTAL CURRENT LIABILITIES	16,458	•	16,458
DEFERRED INFLOWS Deferred Property Taxes	-		-
TOTAL DEFERRED INFLOWS	-	_	•
LONG-TERM LIABILITIES			
2013 CWPA Loan		1,133,678	1,133,678
2016 CWPA Loan		298,800	298,800
2018 CWPA Loan		175,750	175,750
TOTAL LONG-TERM LIABILITIES	-	1,608,228	1,608,228
TOTAL LIAB & DEF INFLOWS	16,458	1,608,228	1,624,686
NET POSITION			
Net Investment in Capital Assets		2,442,447	2,442,447
Amount to be Provided for Debt		(1,608,228)	(1,608,228)
Fund Balance- Nonspendable	2,905		2,905
Fund Balance- Restricted Fund Balance- Unassigned	2,325 91,589	260,822	2,325 352,410
TOTAL NET POSITION	96,818	1,095,041	1,191,859
TO THE REAL POSITION	50,010	1,000,071	1,101,000

Fairways Metropolitan District Statement of Revenues, Expenditures, & Changes In Fund Balance Modified Accrual Basis For the Period Indicated

Print Date: 01/03/20

Modified Accrual Basis For the Period Indicated	Indicated								
	2018	2019	Variance	0700	YTD Thru	YTD Thru	Variance	2020	
	Audited	Adopted Budget	(Unfavor)	Forecast	Actual	11/30/19 Budget	(Unfavor)	Adopted Budget	Notes/Assumptions
GENERAL FUND									
Assessed Valuation	20,104,885	20,077,138 0%	•	20,077,138				21,820,335 8.68%	Nov Final Valuation % Change in Valuation
Mill Levy Breakdown:									
Operating Mill Levy	3.722	3.651		3.651				3.545	Adjusted for Limit
Temporary Mill Levy Reduction	,	(0.071)		(0.071)				1	None for 2020
Refunds & Abatements	•	0.000		0.000				0.000	Only \$13 abated in 2019
Total General Fund Levy	3.722	3.580		3.580				3.545	
REVENUE									
1-510 · Froperty Taxes	74,809	71,876	1	71,876	71,876	71,876	0)	77,353	AV * Mill Levy / 1000
1-515 · Specific Ownership Taxes 1-560 · Interest Income	3,989	4,313 700	(503) 1,100	3,809	3,114 2,115	3,594 642	(479)	3,868	5% of Taxes Lower rates in 2020
TOTAL REVENUE	79,961	76,889	597	77,486	77,105	76,112	994	82,221	
EXPENDITURES									
1-612 · J Accounting	21,107	15,514	(5,486)	21,000	18,781	13,790	(4,991)	15,000	M&W costs only in 2020
1-614-, Administrative Services	33,084	28,500	1,500	27,000	23,641	26,125	2,485	25,000	Fewer Meetings
1-615 ./ Audit	7,913	8,000	3,285	4,715	4,714	8,000	3,286	5,000	Based on 2019 forecast
1-616 · 1 Billing Service	8,097	6,500	(1,000)	7,500	6,738	5,958	(780)	6,500	Based on 2019 forecast
	2,600	3,000	1,300	1,700	1,205	2,500	1,295	2,000	Fewer Meetings
	1,290			•		1	•	1,250	Only in even years
	6,032	6,500	2,497	4,003	4,003	6,500	2,497	4,000	Move Ppty & Equip to Ent Fund
	11,467	7,000	, (7,000	5,759	6,417	658	7,000	Lower- construction complete
	199	230	66 ¢	130	92	191	66	153	FICA & Medicare
	1,383	1 0	(600)	009	561	1 1	(561)	200	Based on 2019 forecast
1-690 · : Supplies and Expenses	2,804	3,000	900	2,500	1,8/5	2,750	8/5	2,500	Based on 2019 forecast
J	., .	20,000	20,000	20.	<u>.</u>	18,333	18,333	20,000	L.3 % of Floperty Taxes Unforeseen needs
	1	•		,		. •	. 1	1	
TOTAL EXPENDITURES	97,099	99,321	22,094	77,227	68,448	91,643	23,195	90,063	
REVENUE OVER / (UNDER) EXP	(17,138)	(22,433)	(21,497)	258	8,657	(15,531)	24,188	(7,843)	
OTHER SOURCES / (USES)	ı	ı	ı	į	,	ı	ı	ŧ	Plan to hold funds in GF
TOTAL OTHER SOURCES / (USES)	•	1	•	1	•	2	1	1	
CHANGE IN FUND BALANCE	(17,138)	(22,433)	22,691	258	8,657	(15,531)	24,188	(7,843)	(7,843) Nearly \$0 w/out Contingency
1-450 · FBEGINNING FUND BALANCE	105,299	101,291	(13,130)	88,161	88,161	101,291	(13,130)	86,620	
ENDING FUND BALANCE	88,161	78,858	9,561	88,419	96,818	85,760	11,058	78,777	
	1	1							

Fairways Metropolitan District

Statement of Revenues, Expenditures, & Changes In Fund Balance

Print Date: 01/03/20

Modified Accrual Basis For the Period Indicated

342 @ \$205/qtr (from \$200)- Start Q2 Notes/Assumptions 2018 was insurance proceeds Full year at increased values Balances certified to County Increased in 2019 for plant Project complete in 2019 Project complete in 2019 Based on 2019 forecast Based on 2019 forecast Based on 2019 forecast Based on 2019 forecast Based on 2019 forecast Based on 2019 forecast 1 pump & Other Needs Aerator clogging, etc 15,000 ft @ \$1.10/ ft Rental fee + Usage Required payment Required payment Unforeseen needs Unforeseen needs Required payment Per David 10,000 78,185 16,600 20,000 3,000 15,000 8,250 17,000 15,000 (8,905)278,730 15,000 15,000 9,500 6,600 9,250 (8,905)200 281,730 35,000 151,600 104,035 15,000 198,641 207,546 35,000 290,635 Adopted Budget (394) (3,087)13,151) (658)(2,754)(16,538) 5,210 17,000 0 (7,742)(1,069) 42,550 2,292 6,000 16,542 16,542 1,677 726 15,934 14,865 26,008 Favorable 9,167 (Unfavor) Variance 273,600 1,375 7,333 6,600 78,185 17,500 6,000 218,272 13,750 13,750 17,000 2,292 6,050 27,500 9,167 16,600 9,250 23,500 29,332 29,332 274,975 118,108 104,035 245,643 188,940 YTD Thru 11/30/19 Budget 273,206 3,446 14,408 6,607 6,328 6,050 30,254 02,175 78,185 16,600 9,250 16,538 7,742 24,569 45,874 3,087 26,901 8,540 45,874 214,948 260,822 276,652 104,035 230,778 YTD Thru 11/30/19 Actual 273,600 3,800 15,000 16,500 9,500 8,000 2,500 78,185 16,538 7,742 44,280 (18,602) 30,000 500 009'9 9,250 277,400 3,087 500 17,000 33,500 5,000 147,687 20,000 296,002 (18,602)214,948 196,346 104,035 Forecast 2019 2,300 (1,500) (1,500) (1,300)(3,500) 5,000 (16,538) (7,742) 15,000 (21,280)(15,000)(17,800)(5,780)6,000 26,008 2,300 Favorable (Unfavor) (23,580)(24,367)1,641 Variance 273,600 1,500 15,000 8,000 16,600 188,940 15,000 2,500 30,000 78,185 9,250 17,500 6,000 15,000 5,765 5,765 15,000 6,700 17,000 6,600 10,000 126,800 38,500 275,100 104,035 269,335 194,705 Adopted Budget 2019 244,156 4,375 25,000 29,575 9,709 123,683 78,185 16,600 4,604 296,543 (23,012)12,600 9,226 6,600 4,625 99,410 34,506 34,341 73,451 411,396 388,384 (173,436)1,157 8,177 4,601 214,948 273,531 411,396 Audited Actual **FOTAL OTHER SOURCES / (USES)** LVGC Maintenance Agreement REVENUE OVER / (UNDER) EXP Capital Imp Collection System **ENTERPRISE FUND** Plant Maintenance & Repair CHANGE IN FUND BALANCE 4-450 · I BEGINNING FUND BALANCE 2016 CWPA Loan Principal 2013 CWPA Loan Principal 2018 CWPA Loan Principal 4-582 · Transfer From General Fund Eff. Line 13 Valve Repairs Plant & System Upgrades Collection System Repair OTHER SOURCES / (USES) **ENDING FUND BALANCE** Supplies and Expenses TOTAL EXPENDITURES WWTF Improvements 4-573 · CWPA Loan Proceeds Delinquent Accounts Permits and Testing Jetting & Televising Total Debt Service 4-531 · Sewer Service Fees Treasurer's Fees Total Operating TOTAL REVENUE Plant Operator EXPENDITURES **Total Capital** 2575 · Cther Income Contingency Debt Service Contingency Engineering Engineering Chemicals Operating Insurance REVENUE Utilities 4-560 · Interest Capital 4-755 - } 4-828 · [4-690 · 1 4-782 · (4-786 - 1 4-790 · (1-795 - 1 4-680 · 5 4-780 - 8 1-814 4-808 . 1 4-677 - [1-052-1 4-785 · (1-806 4-811 4-810 · F 4-825 · (4-824 . 1 4-700 4-783

Na accuration is provided an these financial statements:

FAIRWAYS METROPOLITAN DISTRICT

141 Union Boulevard, Suite 150 Lakewood, Colorado 80228-1898 Tel: 303-987-0835 • 800-741-3254 Fax: 303-987-2032

February XX, 2020

Dear Neighbor,

Your Fairways Metropolitan District is dedicated to providing reliable and safe wastewater services. The existing wastewater treatment plant, originally constructed in 1986, underwent upgrades in 2006, 2016 and 2018 to improve treatment efficiency and to meet Colorado Department of Public Health and Environment regulations. A Capital Improvement Program dedicated to meeting these improvements in a timely and cost-effective manner was adopted to address updates to aging portions of our wastewater treatment plant and address regulatory requirements. The District's objective is to invest in projects that maintain the facility in the most efficient and economically-viable manner, while helping us all to protect our property values.

Following appropriate notification, and a hearing at a public meeting held on February XX, 2020, the District's Board of Directors considered and approved a Sewer Fee increase to allow for enough revenue to pay for increased operating costs.

Therefore, effective April 1, 2020 the Fairways Metropolitan District will implement a Consumer Price Index-based increase of \$6 per quarter/per household to the current \$200 per quarter/per household Sewer Fee. The new fee of \$206 per quarter/per household will appear on your quarterly sewer service fee invoice.

The increase was not an action that the Board of Directors took lightly. However, based upon the relatively small size of the District, the District does not benefit from the economies of scale that some Districts enjoy. In order to help keep future Fee increases reduced, each household can take certain steps to minimize the District's expenses. The introduction of solid materials other than human waste and toilet paper is the cause of the most serious and costly problems. Flushing of synthetic cleaning wipes and cloth products have caused blockages that result in the process equipment shutting down at a cost of \$7,500 to repair, per occurrence. Please ensure that your household staff and guests also know what is allowed to be flushed. All of us working together, diligently, should help our wastewater treatment plant to operate well into the future.

Should you have any questions, please contact me at 303-987-0835 or dsolin@sdmsi.com.

Sincerely,

David Solin District Manager

cc: Board of Directors



November 4, 2019

Mr. David Solin District Manager Fairways Metropolitan District 141 Union Boulevard, Suite 150 Lakewood, CO 80228

RE: On-Call Engineering Services

Dear Mr. Solin:

Element Engineering, LLC is pleased to present this letter as a formal indication of our interest in continuing to provide On-Call Engineering Services to the Fairways Metropolitan District. We believe our firm is assisting the district, along with its other consultants and operators, in realizing positive change and progress.

UNDERSTANDING

We understand that the Fairways Metropolitan District wishes to retain a consulting engineering firm to provide comprehensive on-call engineering services for projects as determined by the district.

SCOPE OF WORK

- Attend district board meetings either in person or by phone as directed by the board and provide guidance to the board on various items as they arise.
- Provide engineer's reports at each board meeting listing the activities of the previous month and the progress on projects and tasks.
- Review district infrastructure and provide recommendations for improvement.
- Assist the board in strategizing, ranking, and planning of capital improvements throughout the system.
- Assist the district in updating mapping of infrastructure.
- Provide cost estimates for desired projects including construction and nonconstruction costs.
- Provide engineering, system layout, permitting, bidding, and construction management of system improvements.



- Provide engineering and services to the district for duties on projects yet to be determined.
- Perform other work as requested by the district board.

FEE STRUCTURE

Element proposes no changes to our already accepted rate/fee structure for the 2020 calendar year. Also, we propose no changes to our already executed owner-engineer agreement.

Sincerely,

ELEMENT ENGINEERING, LLC

Nicholaus Marcotte, P.E.

President

ORC Water Professionals Inc. 11919 W. I - 70 Frontage Road, Ste. 116A Wheat Ridge, Colorado 80033 Office: 720 287-0605 Fax: 720 287-0874



Dear David Solin,

ORC Water Professionals would be pleased to provide services for your facility in 2020.

We have grown exponentially since last year by acquiring Treatment Technologies, a company with similar talents and goals. This expansion has allowed us to develop our knowledge base of facilities as well as staffing personnel available to assist with any and all dilemmas facing utilities in 2020! We appreciate your patience as we work through the transitions of this big step. We are excited for this acquisition and hope you will join us.

In striving for consistency, we have chosen to maintain previous years pricing. We believe in delivering a quality service at a fair price and hope that you agree with your terms. Always let us know if there is anything further that you require from us at any time. We strive to have coherent communications with clients as necessary.

Please find the professional services agreement for 2020, scope of services, compensation schedule and rate sheet within this packet. To approve this agreement, please sign the signature page (page 7) and kindly return it via email to <u>info@orcwater.com</u>. You may also request a paper copy of this packet mailed to you.

Please contact me if you have questions and we look forward to continuing our professional relationship.

Sincerely,

Tom Schubert

ORC Water Professionals Inc

Touschet

Office: 720 287-0605 Cell: 303 912-2087



PROFESSIONAL SERVICES AGREEMENT

CLIENT:

Fairways Metro District c/o CRS David Solin 141 Union Blvd., Ste. 140 Lakewood, CO 80228

CONSULTANT:

ORC Water Professionals Inc.

11919 West I-70 Frontage Rd Ste. 116A

Wheat Ridge, CO 80033 Phone: 720-287-0605

TERM:

January 1, 2020 – December 31, 2020

INITIAL TERM:

The initial term of this Agreement shall be from January 1, 2020 to December 31, 2020. The Client and Consultant may negotiate to extend the term of this Agreement and the terms and conditions under which the relationship shall continue.

If the Commencement Date is other than the first of the month, the Monthly Service Fee for any partial month during the Term shall be prorated and calculated on a daily basis.

SECTION 1 - ENGAGEMENT: Client agrees to employ Consultant and Consultant accepts such engagement on the terms and conditions set forth in this Professional Services Agreement (this "Agreement").

Employment Eligibility: The Agreement is subject to, and Consultant shall comply with, the provisions of CRS 8-17.5-101 et seq. Consultant certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who shall perform work under this Contract and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Consultant shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a subcontractor that fails to certify to Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Consultant (a) shall use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Contract is being performed, (b) shall notify the subcontractor and the contracting State agency within three days if Consultant has actual knowledge that a subcontractor is employing or contracting with an illegal alien for work



under this Contract, (c) shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Consultant participates in the State program, Consultant shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Consultant has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Consultant fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the contracting State agency, institution of higher education or political subdivision may terminate this Contract for breach and, if so terminated, Consultant shall be liable for damages.

SECTION 2 - SCOPE OF SERVICES: Consultant agrees to perform Basic Services and Additional Services, if requested (collectively, "Services"), in accordance with the following descriptions, definitions, terms and conditions:

- 2.1. "Monthly Operations and Maintenance" shall mean those services described and set forth in Addendum "A" [Scope of Services] attached hereto and made a part hereof.
- 2.2 "Additional Services" shall mean those services performed by Consultant not described in Addendum "A" and which have been expressly authorized by Client pursuant to a written or verbal request for Additional Services.
- 2.3 "Reimbursable Expenses" shall mean reasonable out-of-pocket costs incurred by Consultant in the performance of Consultant's Services, including postage, delivery charges, parts, equipment, analysis etc.
- 2.4 "Facilities" shall mean Client's Water System, Wastewater System, grounds, appurtenances, and/or site where work is to be performed by Consultant hereunder.
- 2.5 "Work" shall mean any Services to be performed by Consultant hereunder.

SECTION 3 - COMPENSATION: Client agrees to pay Consultant in accordance with the following descriptions, definitions, terms and conditions:

- 3.1 **Monthly Operations and Maintenance:** Compensation for Monthly Operations and Maintenance (O&M), will be as defined in Addendum "B" [Compensation Schedule] attached hereto and made a part hereof, plus Reimbursable Expenses.
- Additional Services: Compensation for Additional Services will be charged (i) on a lump sum basis to be agreed upon in writing by Client and Consultant prior to the commencement of the Additional Services, or (ii) at Client's option, on the basis of actual hours expended by Consultant's personnel and billed at Consultant's Standard Hourly Rates set forth in Addendum "C" [Rate Sheet] attached hereto and made a part hereof, plus in either case Reimbursable Expenses.
- 3.3. Reimbursable Expenses: All Reimbursable Expenses will be itemized on Consultant's invoices.
- 3.4 **Regulatory Adjustments:** The Monthly Service Fee may also be adjusted as a result of changes in any legal requirement. Should the Operation and Maintenance Costs increase solely as a direct



result of changes in any Legal Requirement which occur and become effective during the Term, the Monthly Service Fee shall be increased by an amount equal to the actual costs necessary to comply appropriately with such legislative or regulatory changes, as determined by the Consultant and approved by the Client. The Consultant shall not proceed with changes to operations without the express direction of the Client, unless mandated by State or Federal Rules and Regulations.

- 3.5 **Facility Operation:** If the Client does not provide adequate resources to legally operate the facilities, the Client will be notified by mail and will have seven days to rectify the situation. If the situation is not rectified, the Consultant will have the option of increasing their services at a proportional fee or relieving themselves of the client. It is the Consultant's hope that communications would proceed to resolve any issues.
- Regulation 100 requires that all operational decisions are reserved to the certified operator in responsible charge, in this case the Consultant. The Client must ensure that all process control and/or facility integrity decisions about water quality or quantity or wastewater effluent quality or quantity that may affect public health or environment are made by either a certified operator in responsible charge or by another operator certified at a level equal to or above the classification of the facility he or she is operating in accordance with the facility's written operating plan.

SECTION 4 - INVOICING: Consultant will invoice Client monthly, based on Services completed. Invoices will show the percentage of Services completed and the percentage of Services remaining to be performed, if applicable. Client will remit payment to Consultant within thirty days following receipt of Consultant's invoice. If Client fails to make any payment owing to Consultant within said 30-day period and such failure is not cured by Client within five (5) days following written notice thereof, Consultant may suspend its performance under this Agreement.

SECTION 5 - PERFORMANCE STANDARDS: Services performed by Consultant will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of Consultant's profession. Consultant will be responsible for all data, interpretations and recommendations made by Consultant. Consultant shall not be responsible for modifications made by others to Consultant's data or for loss or damages resulting from Client's failure to follow Consultant's interpretations and recommendations.

SECTION 6 - SUBORDINATION OF LIENS: Consultant acknowledges and agrees that all liens, rights and interest, if any, owned, claimed or held, or to be owned, held or claimed by Consultant against the Facilities, or any improvements, fixtures or furnishings now or hereafter constituting part of the Facilities, are and shall be subordinate and inferior to the liens and security interests of any mortgage, deed of trust, assignment or other security instrument now or hereafter encumbering the Facilities, and all amendments, renewals, modifications, consolidations, refinancing or extensions thereof.

SECTION 7 - INSURANCE: Consultant shall maintain (and shall cause all sub-consultants engaged by Consultant to maintain) throughout the performance of the Services insurance with companies acceptable to Client in the following types and amounts (or such additional amounts as Client may require) Consultant shall cause each sub-consultant employed by Consultant to purchase and maintain insurance of the type specified in this Section. When requested by Client, Consultant shall furnish copies of certificates of insurance evidencing coverage for each sub-consultant.



- 7.1 Workmen's Compensation and Employer's Liability Insurance: Consultant shall maintain Workers Compensation and Employers Liability insurance as required by statute. Employers Liability limits shall not be less than \$1 million each accident for bodily injury by accident or \$1 million each employee for bodily injury by disease.
- 7.2 Commercial General Liability (CGL) Insurance: Consultant shall maintain Commercial General Liability (CGL) insurance with a limit of not less than \$1 million each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to the Work as evidenced by ISO Endorsement CG 25 03 or equivalent. CGL insurance shall by written on the current version of the ISO occurrence form CG 00 01 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises operations, independent Consultants, products/completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
- 7.3 **Automobile Liability Insurance**: Consultant shall maintain Automobile Liability Insurance in a form to include coverage for all owned and non-owned and hired automobiles with liability limits for bodily injury and for property damage of \$1,000,000 per occurrence.
- 7.4 **Professional Liability/Errors and Omissions Insurance**: Consultant shall maintain limits of \$1,000,000 for each claim, and \$1,000,000 aggregate limit for all claims.
- 7.5 Additional Insured: Prior to the commencement of the Work, Consultant shall furnish to Client with certificates of all insurance required hereunder. All such insurance, except the Worker's Compensation Policy, Professional Liability/Errors and Omissions Policy and the Workmen's Compensation and Employer's Liability Insurance, shall name Client as an additional insured. Additional insured coverage as required in this subparagraph shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to Consultant or Client. A copy of the endorsement will be submitted with the Certificate of Insurance.
- 7.6 Cancellation: Client shall be notified in writing at least thirty (30) days prior to any cancellation or alteration of such insurance policies. Failure to maintain the required insurance may result in termination of this Agreement at the Client's option. Failure of Client to demand such certificate or other evidence of full compliance with these insurance requirements or failure of Client to identify a deficiency from evidence that is provided shall not be construed as a waiver of Consultant's obligation to maintain such insurance. By requiring insurance herein, the Client does not represent that coverage and limits will necessarily be adequate to protect Consultant or its sub-consultants and such coverage and limits shall not be deemed as a limitation of Consultant's or its sub-contractors' liability under the indemnities granted by Consultant in this Agreement.
- 7.7 **Subrogation Waiver:** Consultant waives all rights against Client and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the Commercial General Liability, Business Automobile, or Workers Compensation insurance required by Consultant pursuant to this Agreement. Further, Consultant shall indemnify and hold Client harmless from any and all claims, losses, damages or expenses, including but not limited to, attorney's fees and increased insurance premiums, arising out of any Consultant's failure to secure the required insurance coverages.



SECTION 8 - INDEMNITY: To the fullest extent permitted by law, Consultant shall indemnify, defend, protect and hold harmless Client, and its officers, employees, shareholders, partners and members (collectively, the "Indemnitees") from and against all losses, claims, fines, penalties, causes of action, liabilities, injuries, damages, losses and expenses, including attorneys' fees and expenses (collectively, "Losses"), that the Indemnitees, or any of them, may incur that arises out of, or occurs in connection with, the negligent acts or omissions of the Consultant, its sub-consultants, agents or employees or anyone directly or indirectly employed by any one of them. Such obligation shall not, however, extend to any Losses which are the result of the sole negligence or willful misconduct of an Indemnitee nor to the portion of any Losses which are attributable to, or the result of, the willful misconduct of an Indemnitee.

SECTION 9 - OWNERSHIP AND USE OF CONSULTANT'S WORK PRODUCT: All documents, including electronic files, drawings and specifications, prepared by Consultant pursuant to this Agreement, or other instruments of service in respect of the Work (collectively, "Work Product"), whether completed or partially completed, shall immediately become the property of Client upon payment of all fees owing to Consultant under this Agreement with respect to the preparation of such Work Product, or partially completed portion thereof. Client shall be entitled to use and to rely upon, and may allow others to use and rely upon, the Work Product, or partially completed portion thereof, so long as (i) Consultant has received payment for the Work Product being used or relied upon and (ii) the use of or reliance upon such Work Product is limited to the Work described in this Agreement. Client acknowledges and agrees that any use or reuse of the Work Product in connection with work outside the scope of this Agreement will be at Client's sole risk and without liability or legal exposure to Consultant.

SECTION 10 - TERMINATION OF SERVICES: Either party may terminate this Agreement upon a breach by the other party giving written notice of the breach (including reasonable detail of the same) to the breaching party; provided however that, except for non-payment of Consultant's invoices when due (in which case Consultant may terminate immediately) and non-compliance by Consultant which causes or threatens to cause a violation of any term or condition in a permit for any of the Facilities (in which case Client may terminate immediately), the breaching party shall have thirty (30) days to cure such breach or commence reasonable steps to cure such breach before termination provided in the above-referenced notice shall become effective. Either party may also terminate this Agreement without cause on thirty (30) days written notice. If this Agreement is terminated without cause, the Consultant shall be paid in full for services rendered though the date of termination.

SECTION 11 - INDEPENDENT CONSULTANT: Consultant shall be deemed to be an independent Consultant. Nothing contained in this Agreement shall be regarded as creating any other relationship between the parties including, but not limited to, any relationship of employer - employee.

SECTION 12 - NON-SOLICITATION, NO-HIRE OF EMPLOYEES: This Non-Solicitation, No-Hire Agreement is entered into by the Consultant and the Client named on page one (1) of this Professional Services Agreement.

12.1 Solicitation of Client's Employees. During the Term of this Agreement, and for one (1) year thereafter, Consultant shall not (a) offer employment to or employs any Client employee either full-time or part-time, or (b) hire or offer to hire any Client employee as a consultant, intern, trainee, or the equivalent of Consultant, to provide services or products having the same general nature as those provided by Client to its customers under this Agreement; Consultant shall not request, cause, or induce the Client employees to breach any agreement between the employee



and Client; and Consultant shall not request, cause, or induce the employee to leave the employ of Client.

12.2 Solicitation of Consultant's Employees. During the Term of this Agreement, and for one (1) year thereafter, Client shall not (a) offer employment to or employs any Consultant employee either full-time or part-time, or (b) hire or offer to hire any Consultant employee as a consultant, intern, trainee, or the equivalent of Client, to provide services or products having the same general nature as those provided by Consultant to its customers under this Agreement; Client shall not request, cause, or induce the Consultants employees to breach any agreement between the employee and Consultant; and Client shall not request, cause, or induce the employee to leave the employ of Consultant.

SECTION 13 - BINDING AGREEMENT/COUNTERPARTS: Subject to Section 13 hereof, this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement may be executed in one or more counterparts, all of which together shall constitute a single agreement and each of which shall be an original for all purposes.

SECTION 14 - ASSIGNMENT: Except for a Permitted Assignment (hereafter defined), neither Client nor Consultant shall assign or transfer its interest in this Agreement without the written consent of the other. For purposes hereof, a Permitted Assignment shall mean (i) any assignment by Client of this Agreement or Client's rights under this Agreement to another person or entity who takes over the development, management, and/or construction of the Facilities; or (ii) any assignment by Client in favor of any lender or equity investor providing financing for the Facilities or the Work.

SECTION 15 - AUTHORITY: Client and Consultant each represent to the other that the person signing below has full authority to bind such party to this Agreement.

SECTION 16 - MEDIATION; ATTORNEYS' FEES: Client and Consultant agree that all claims, disputes, and other matters in question between the parties arising out of or relating to this Agreement or breach thereof first shall be submitted to mediation. Any party hereto may initiate mediation and the parties agree to fully cooperate and participate in good faith to resolve their dispute(s). The cost of mediation shall be shared equally by the parties. If following mediation either party makes a claim or brings an action against the other party for any act arising out of the performance of this Agreement, the non-prevailing party shall pay all legal and other costs (including reasonable attorneys' fees) incurred by the prevailing party.

SECTION 17 - GOVERNING LAW: This Agreement shall be construed and enforced in accordance with the laws of the state where the Work is located.

SECTION 18 - PARAGRAPH TITLE: Paragraph titles in this Agreement are for convenience only and are not intended to detract from or limit the effect of any language in this Agreement.

SECTION 19 - MODIFICATION: No modification of this Agreement shall be binding on either party unless reduced to writing and signed by the party to be bound.



SECTION 20 - ENTIRE AGREEMENT: This Agreement and the Addenda attached hereto contain the entire agreement between Client and Consultant.

SECTION 21 - NOTICES: All notices and any other communications permitted or required under this Agreement must be in writing and will be effective (i) immediately upon delivery in person, email or by facsimile, provided delivery is made during regular business hours or receipt is acknowledged by a person reasonably believed by the delivering party to be employed by the recipient; or (ii) 24 hours after deposit with a commercial courier or delivery service for overnight delivery, provided delivery is made during regular business hours or receipt is acknowledged by a person reasonably believed by the delivering party to be employed by the recipient; or (iii) three days after deposit with the United States Postal Service, certified mail, return receipt requested, postage prepaid. The inability to deliver because of a changed address of which no notice was given, or rejection or other refusal to accept any notice, shall be deemed to be the receipt of the notice as of the date of such inability to deliver or rejection or refusal to accept. Any notice to be given by any party hereto may be given by the counsel for such party. All notices must be properly addressed and delivered to the parties at the addresses set forth on page 1 of this Agreement, or at such other addresses as either party may subsequently designate by written notice given in the manner provided in this Section.

SECTION 22 – RESPONSIBILITIES OF THE FACILITY OWNER: Support the Operator in Responsible Charge (ORC) in implementing and enforcing the Colorado Department of Environment and Public Health's Regulation No. 100 5 CCR 1003-2. The owner acknowledges that the "Operator in Responsible Charge", the Consultant, has ultimate responsibility for decisions regarding the daily operational activities of the facility that will directly impact the quality and/or quantity of drinking water, treated wastewater, or treated effluent. The Consultant may draft SOP's regarding proper operations, and limitations of intervention to be followed by any individual/s who are working within the facilities.

IN WITNESS WHEREOF,

Consultant and Client have executed this Agreement as of the date first above written.

CLIENT:	CONSULTANT:
By:	By: ORC Water Professionals Inc
Name:	Name:
Title:	Title:
Date:	Date:



ADDENDUM A – Scope of Services

Operator in Responsible Charge - Wastewater Treatment and Collection

ORC Water Professionals will provide Client with the appropriate Operator in Responsible Charge (ORC) as determined and mandated by the Colorado Department of Public Health and Environment (CDPHE). This operator will provide the listed scope of services to include but not limited to, the following:

- The operator in responsible charge of the wastewater facility will hold a valid certificate equal to or greater than the classification of the wastewater facility he or she operates.
- The operator in responsible charge shall protect the public health and the environment in the conduct of his or her duties. These duties shall include the following:
 - o Management or administration of the operation of the wastewater facility;
 - Accountability for the proper operation and maintenance of the wastewater facility for compliance with applicable regulations and/or permit requirements, including monitoring and reporting requirements;
 - o Control of, supervision over, or active participation in the planning, operation or maintenance of the wastewater facility;
 - o Availability to make decisions and initiate actions regarding the operation of the wastewater facility in a timely manner;
- Process control and/or facility integrity decisions with respect to effluent quality or quantity that may affect the public health or the environment are reserved to the Consultant.
- Maintain accurate and complete records on the operation and laboratory data as required by CDPHE and submit and fulfill all operating reporting requirements.
- Provide checks on all pertinent equipment and document the operational status or maintenance requirements thereof in a logbook that will be kept on site.
- Conduct all compliance sampling as required and present those samples to the certified laboratory for analysis. Laboratory costs are specified in Addendum C.
- Actively pursue improvements in effectiveness and efficiency with regard to the operation and maintenance of the facility. Suggested improvements will be presented to the Client for pre-approval.
- Maintain adequate chemical levels. Order and fill chemical reserves as needed.
- Coordinate with client to ensure a safe, efficient operation and conduct inspections to detect malfunctions. If malfunctions are detected, Consultant will notify Client of necessary repairs or replacements and if authorized by the Client, Consultant will initiate corrective actions.



Operator in Responsible Charge - Wastewater Treatment and Collection (continued)

Certified operators shall protect the public health and the environment by properly performing and/or supervising the activities pertinent to controlling the operation of a wastewater facility, including but not limited to the following:

- o controlling the selection of or flow from a source to a wastewater facility and controlling the selection of or flow from a wastewater facility to a receiving body or system;
- o controlling the processing of raw and/or treated wastewater;
- o preparing and/or controlling chemical addition for wastewater treatment;
- o observing and taking necessary actions in response to variations in operating conditions;
- o interpreting meter and/or gauge readings and adjusting facility processes based on such interpretations;
- o operating valves and/or gates either manually or by remote control;
- o starting and/or stopping pumps;
- o maintaining logs and/or records;
- o collecting and/or analyzing process control samples;
- o ensuring proper inspection and testing of new, modified, or repaired facilities prior to placing or returning such facilities into service;
- o developing and implementing preventative maintenance programs and performing routine maintenance functions for facilities;
- o over seeing compliance with laws and regulations and reporting as appropriate to facility owners and the CDPHE.
- Develop collections system maintenance schedules, review conditions, suggest implementation schedule for repair of collection system components.
- ORC Water Professionals will provide 24-hour emergency response for all wastewater related issues.
- ORC will work with the Clients management company and/or Engineering consultants to review and consult on any capital or operational improvements.
- ORC Water Professionals will present a professional image to the public as a representative of the Client at all times.



ADDENDUM B - Compensation Schedule

The base Monthly Operations and Maintenance (O&M) fees include mileage, travel time, fuel surcharges as well as normal routine operations as defined in Addendum A, Scope of Services.

Operator in Responsible Charge:

- Fee is based on an estimated number of hours spent on the project per month with a minimum of one (1) field visit to the site during a week for chemical optimization process control, operations oversight and compliance sampling.
- Monthly Operations and Maintenance Base Fee:

\$1,082.55

Monthly Regulatory Compliance:

- The ORC Water Professional's Regulatory Compliance Officer will monitor the facilities permitted regulatory requirements and maintain accurate and complete records for all laboratory analysis data. Complete and submit the monthly reporting requirements mandated by the Colorado Department of Public Health and Environment (CDPHE).
- Base Monthly Regulatory Compliance Fee:

Included in Base Fee

Additional Services:

- Monthly compliance analysis is based on the CDPHE issued facility permit and/or monitoring schedule. These required regulatory samples and all other sample analysis costs are reflected on the attached 2020 Rate Sheet.
- Additional Services and Rates if Applicable:

2020 Rate Sheet



ADDENDUM C -2020 Rate Sheet

Hourly Rate	Over Tir	ne *		
\$80.00	\$120	.00		
\$97.00				
Gross Alpha	\$203.00	SOC/VOC	\$1,551.00	
Inorganics	\$361.00	Specific Conductance	\$33.00	
Iron	\$36.00	Sulfate	\$36.00	
Influent Screen	\$1,575.00		\$438.00	
Langlier Index	\$130.00	TDS	\$34.00	
Lead	\$27.00	TIN	\$75.00	
Manganese	\$40.00	TKN	\$56.00	
MPA (excluding laborate	or) \$924.00	TOC and Alkalinity	\$75.00	
Nickel	\$23.00	Total Coliform	\$44.00	
Nitrate	\$41.00	TSS	\$34.00	
Nitrite	\$41.00	TTHM and Haa5	\$380.00	
Phosphorus	\$39.00	Uranium	\$37.00	
Radium 226	\$155.00	VOC	\$227.00	
Radium 228	\$215.00	WET (acute/chronic)	Cost Plus 25%	
Selenium	\$23.00	Zinc	\$19.00	
Silver	\$23.00	Other Laboratory Tests	Cost Plus 25%	
			Cost Plus 20%	
		.T. T. 11	** ** ** * * * * * * 	
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^{*}Unless specified in the contract, labor overtime rates will be charged for work performed on non-regularly scheduled weekends, emergency callouts, repairs and all federally recognized holidays. These rates are billed on a port-to-port basis.

^{**} Unless specified in the contract, additional labor may apply.



October 14, 2019

Mr. David Solin, District Manager Fairways Metropolitan District 141 Union Boulevard, Suite 150 Lakewood, Colorado 80228 (via e-mail: dsolin@sdmsi.com)

Re: Rate Increase – General Engineering Services

Dear Mr. Solin:

MMI Water Engineers, LLC (MMI) will increase its hourly charge rates and reimbursable expenses on January 19, 2020. Below is MMI's 2020 Rate Schedule.

2020 Rate Schedule (effective January 19, 2020)

Principal\$	160.00 per hour
Mileage	Current IRS rate
Direct Costs (i.e. job-related expenses)	Cost + 10%
Subcontracted Expenses	Cost + 10%

Should you have any comments or questions, please contact me at 720-234-8398.

Sincerely,

MMI WATER ENGINEERS, LLC

Bradley A. Simons, P.E.

Principal

Fairways Metropolitan District Monthly Status Report 1/7/2020



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Prepare a binder outlining the applicable information for each User and the Treater to maintain compliance with Regulation 84

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Varrative

meeting with ORC Water Professionals to review the binder and needed contents (i.e. forms and records) but has yet to meet with Tom/Gabby. 09/05/19 - MMI has outlined the compliance binder and populated it with the treater-related and user-related items available to date. MMI has requested a

and the binder will be presented for review in advance of the November 11 Board meeting. binder and added information to Seciton D (User-Related Items for LVGC). Section E (User-Related Items for NRHOA) to be completed the week of October 14 10/11/19 - Based upon a September 24, 2019 meeting with ORC Water Professionals, MMI has updated Section C (Treater-Related Items) of the compliance

Professionals. 11/05/19 - Section E (User-Related Items for NRHOA) to be completed the week of November 4 and the binder will be presented for review on November 8 Residents" that is posted. Based upon this information, MMI will complete the binder and schedule a review of its use with David Solin and ORC Water 12/09/19 - MMI has consulted NRHOA regarding access to its website. The access has not been granted, but Judi provided information regarding a "Notice to All

01/07/20 - Electronic copy of the Regulation 84 Compliance Binder prepared to support the 2019 report submitted to David Solin. David is attempting to schedule a meeting with ORC Water Professionals to review the binder and populate the operational components.

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Narrative

consistently and reliably meet the effluent limitations should a discharge to surface water be required. discharge permit at this time. MMI also recommends the District evaluate the necessity of the permit based upon the wastewater treatment facility's ability to The position paper, in the form of a memorandum was e-mailed to David Solin on September 3, 2019. MMI recommends the Ditrict maintain its surface water

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support the District's Regulation 84 compliance efforts.

01/06/20 - Brad contacts Tom George, of Spencer Fane, per David Solin't direction and leaves a voice message regarding LVGC MOU and NRHOA document(s).

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Narrative

counsel for the roles and responsibilities associated with the MOU with LVGC. MMI will outline the key points of the contractual arrangments for the NRHOA's use of the effluent. MMI will also provide guuidance to the District's legal

RECORD OF CONVERSATION

Client: Fairways Metropolitan District
Subject: Regulation 84 Compliance Matters

Date: December 23, 2019 **Time:** 9:00 a.m. – 10:15 p.m.

Location: CDPHE-WQCD

Participants: Brad Simons, Liz Lemonds, and Bradi Honeycutt

Background:

As a result of MMI Water Engineers' preparation of the Regulation 84 compliance binder, MMI
contacted Liz Lemonds, WQCD Reclaimed Water Compliance Specialist, for clarification of several
items. Brandi Honeycutt, WQCD Environmental Protection Specialist, joined us as she will be
helping Liz administer the Reclaimed Water program.

Discussion Topics:

- 1. Liz indicated there are several non-compliance matters associated with the District's wastewater treatment facility permit (CO0048411) and the Notice of Authorization for the Treatment and Delivery of Reclaimed Water (COE009000).
- 2. Liz indicated the Division's compliance assurance for Regulation 84 facilities has historically lacked resources, but that this will change in 2020.
- **3.** Liz noted the District is responsible to oversee the use of reclaimed water by users to ensure, to the maximum extent practicable, that users attain and maintain compliance with Regulation 84.
- **4.** Liz indicated she will be conducting an inspection of the District's wastewater treatment facility and each user's system and records. Brad asked to be notified of the inspection date and time.
- **5.** Liz indicated she is frequently chasing information from the District and she is concerned about the safety of the reclaimed water use.
- **6.** Liz indicated there is a current stakeholder process for revisions to Regulation 84. MMI has signed up for notifications of upcoming meetings.
- 7. Liz indicated the District may have processed a change of contact for David Solin for the wastewater treatment facility permit (CO0048411), but it also needs to process a change of contact for the Notice of Authorization for the Treatment and Delivery of Reclaimed Water (COE009000).
- **8.** Liz acknowledged receipt of the District's annual report for the 2018 operating year, but she indicated the Division had not received annual reports for the 2016 and 2017 operating years. The annual report for the 2019 operating year is due to the Division by March 31, 2020.
- **9.** Brad, Liz, and Brandi reviewed a process schematic of the wastewater treatment facility, the reclaimed water point of compliance, the two storage impoundments (Pond 13 and Pond 8), and the user arrangements.
- **10.** Liz indicated the District may be required to sample the wastewater treatment facility effluent at three locations:
 - a. 001A is the permitted feature reflected in the wastewater treatment facility permit (CO0048411) and is a point following disinfection and prior to mixing with the receiving

- stream (Dry Creek). The latitude and longitude of 001A is the effluent pump station wet well.
- **b.** 002A would be a permitted feature representative of the wastewater effluent pumped to Pond 13 or to Pond 8 with no contribution from the Pond 8 impoundment.
- **c.** 003A would be a permitted feature representative of the wastewater effluent pumped to Pond 8 with contribution from the Pond 13 impoundment.
- **11.** Liz and Brandi were appreciative of the information discussed at the meeting and indicated the District needs to focus on the following items moving forward:
 - a. Submittal of the annual reports for the 2016 and 2017 operating years.
 - **b.** Compliance with the Notification Reporting Requirements of the Notice of Authorization for the Treatment and Delivery of Reclaimed Water (COE009000), specifically, but not limited to, E. coli limitations exceedances.
 - **c.** Records associated with any discharges exceeding permit limits.
 - **d.** Updated agronomic rate calculations for both the Lake Valley Golf Club and the North Rim Estates Home Owner Association.
 - e. The points of compliance for both permits the wastewater treatment facility permit (CO0048411) and the Notice of Authorization for the Treatment and Delivery of Reclaimed Water (COE009000).
 - f. The permeability of Pond 13 and Pond 8 in consideration of potentially unpermitted discharges to ground water/surface water from these impoundments. (Liz indicated the District needs to stop reporting "no discharge" if effluent is conveyed to Pond 13 and/or Pond 8).
 - g. Records reflecting daily logs, equipment maintenance, and operator training.

Follow-ups:

- Review the meeting discussion topics with David Solin.
- Disseminate the meeting discussion topics to Board members, operations staff, and Element Engineering representatives based upon David Solin's input.
- Respond to the Division's September 11, 2019 request for information (attached) by April 30, 2020.
- Review WQCD on-line environmental records for annual reports, change of contact forms, etc. and provide/produce as necessary.

Distribution: David Solin, ORC Water Professionals, and Element Engineering



9/11/2019

Lisa Jacoby, District Manager Fairways Metropolitan District 141 Union Boulevard, Suite 150 Lakewood, Colorado 80228

RE: Reclaimed Water Impoundments

NOA-COE009000

Fairways Metropolitan District

Dear Reclaimed Water Treater Representative,

The Water Quality Control Division is providing this letter to require the above listed authorized reclaimed water treater (the treater) to submit information to the division demonstrating compliance with the treater Notice of Authorization (NOA) and Reclaimed Water Control Regulation 84. The division is requiring information regarding recreational activities that may be occurring in and around reclaimed water impoundments on use sites or within treater distribution systems authorized per an NOA to for reclaimed water under Regulation 84.

Within the last year, the division has identified two reclaimed water impoundments where fishing, with likely fish consumption, was occurring. The Colorado Water Quality Control Commission, through the requirements of Regulation 84, has limited the allowable uses for reclaimed water and required best management practices for the safe use of reclaimed water. None of the approved uses for reclaimed water allow for exposure pathways and associated risks similar to what would occur with recreation uses of, or consumption of fish from, reclaimed water impoundments. Additional Water Quality Control Commission regulations identify extensive water quality criteria for the protection of human health associated with recreational uses of surface waters and fish consumption from those waters. The provisions regarding water quality criteria can be found in Regulation 31, Basic Standards and Methodologies for Surface Water. These standards far exceed the limited indicator standards provided for reclaimed water in Regulation 84. Therefore, it is incorrect to assume that because reclaimed water requirements include limitations for E. coli that this water can be considered absent of other pathogens, metals, and organics that can be harmful for human health.

Note that a treater may obtain a CDPS discharge permit to discharge reclaimed water into a surface water of the state, which would result in the receiving pond no longer being a reclaimed water impoundment since the point of compliance would be prior to the discharge. In this case, the CDPS permitting process would include an evaluation of pollutants and the permit would include effluent limits as determined necessary to protect for all designated uses, which may include recreation and fish consumption. If the treater is interested in this option, please contact the division. However, a response to this letter is still required. Current ponds that are filled with effluent discharged through a CDPS permit do not need to include these impoundments in the response to this letter.

Part II.B.2 of your Treater Notice of Authorization (NOA), requires the treater to provide information to the division "to determine compliance with [the] NOA and Regulation 84." The division is separating this request into two deadlines to provide reasonable time to submit the required information.

For the following requirements, recreation uses of a reclaimed water impoundment include any fishing or uses that would invite non-incidental contact with the reclaimed water by humans or pets, including but not limited to boating, swimming, dog swimming areas, or areas constructed or maintained to promote wading.

1) Notification Regarding Unauthorized Uses - October 30, 2020

84.6(D) requires that "(t)reaters and users planning to use reclaimed water shall have or obtain an NOA from the division prior to any use of reclaimed water." The recreational use of a reclaimed water impoundment would be a "use" subject to this provision of Regulation 84. Since no NOAs have been issued for the use of reclaimed water impoundments for recreation, a treater providing or a user using a reclaimed water impoundment for a recreational use is a violation of Regulation 84 and the Colorado Water Quality Control Act. In addition, Part I.C.1.a.ii of the treater NOA requires the treater to implement oversight "to ensure, to the maximum extent practicable, that users attain and maintain compliance with Regulation 84." All treaters in compliance with their NOA should already be aware of any potential recreational uses of reclaimed water impoundments, whether within their distribution system or at use sites. Therefore, an extended deadline is not be provided for submittal of information regarding any noncompliant use of reclaimed water impoundments for recreation.

No later than October 30, 2020, the treater shall provide to the division, either the information required in (a) or (b), relevant to reclaimed water impoundments located either within the treater distribution system or at a use site for which the treater provides reclaimed water:

- a) A notification of any reclaimed water impoundment where information or amenities are being provided to promote or invite a recreational use.
 - i) Specifically evaluate and identify:
 - (1) is information being provided (signs, internet, etc) that are in evidence at the use site or for which either the user or treater is aware that identifies that the impoundment is available for recreational uses or provide direction for those uses (e.g., rules for fishing, swimming, or boating).
 - (2) Are any scheduled fishing events (e.g., fishing derbies) planned.
 - (3) Are any amenities present at the impoundment to encourage recreational uses, including but not limited to: fishing piers, boat rentals, boat ramps/launch areas, or areas maintained for swimming or other access into the water.
 - ii) For any impoundment identified per subpart (i), provide:
 - (1) The user NOA number for the site with a reclaimed water impoundment, or indicate if it is within the treater distribution system.
 - (2) The common name for the impoundment if applicable (e.g., how is the impoundment identified on maps).
 - (3) Location of the impoundment (if not identified on a User Plan to Comply)
 - (4) A description of the recreational use and the actions implemented or planned to resolve the violation and ensure no recreational uses of the impoundment are ongoing. Include the date(s) the actions have been, or will be completed. Note that any corrective actions to cease the unauthorized use of reclaimed water for recreation must be taken as soon as possible to address the potential human health impacts and noncompliance with the treater NOA and Regulation 84.
- b) A notification that no impoundments requiring identification in accordance with subpart (a) were identified.

2) Inventory of Reclaimed Water Impoundments - April 30, 2020

Complete an inventory of all user sites with impoundments filled with reclaimed water to ensure compliance with the Treater NOA and Regulation 84, including the requirement in Part I.C.1.a.ii of the treater NOA requiring oversight to ensure compliance by users . Information must address reclaimed water impoundments located either within the treater's distribution system or at a use site for which the treater provides reclaimed water. No later than April 30, 2020, the treater shall provide to the division the following information for each location where reclaimed water is present in an



impoundment, lake, or otherwise stored in a location that where public access is allowed, including at golf courses or similar locations where access occurs but is controlled.

- a) The user NOA number for the site with a reclaimed water impoundment, or indicate if it is within the treater distribution system.
- b) The common name for the impoundment if applicable (e.g., how is the impoundment identified on maps).
- c) Location of the impoundment if not identified on a User Plan to Comply (address with narrative description of location, or latitude and longitude).
- d) Are there signs located around the impoundment as required by the user NOA and Regulation 84.11(D)(3), includes posting of signs of sufficient size to be clearly read in all use areas; and with appropriate wording in the dominant language(s) expected to be spoken at the site.
- e) Potential for Fishing:
 It is not required to answer affirmative to these questions if for carp and minnows, unless the treater or user is aware of fishing occurring.
 - i) Are recreational (game) fish present in the impoundment?
 - ii) Has the impoundment ever been stocked with recreational fish?
 - iii) If recreational fish are still present, what measures are taken by the treater and/or user to prevent fishing? The user and treater must implement measures as necessary to comply with the prohibition against unauthorized uses in Regulation 84. The user and treater are responsible for ensuring that no fishing occurs. Identify the measures that will ensure compliance, including practices to be implemented. The division's position is that some level of signage informing the public of the prohibition against fishing and recreation would be necessary to meet this requirement if recreational fish are present in a lake with public access. Note that that practices must be documented in the reuse system management plan.
- f) Does an outfall exist from the impoundment? If yes, to the knowledge of the treater and user? When was the most recent occurrence that the impoundment discharged via surface flows?
- g) Is the impoundment lined? Does the treater or user have any information available regarding if the pond would meet the required maximum seepage rate in regulation 61.14(9) for exclusion from CDPS discharge permitting (seepage from the impoundment does not exceed 1 X 10-6 cm/sec)? In accordance with Regulation 61.14 (5 CCR 1002- 61), a CDPS discharge permit is required for discharges of treated domestic wastewater, including reclaimed water from impoundments. Impoundments do not fall under the discharge permit exemption 61.14(1)(a)(v) for landscape irrigation with reclaimed water. Therefore, a CDPS discharge permit is required for the reclaimed water impoundments located at this site, or a waiver must be issued by the division in accordance with 61.14(9). At this time, the division is providing no deadline for action regarding potential groundwater discharge from reclaimed water impoundments.
- h) If additional impoundments with recreational uses are identified during this full inventory that were missed during the reporting required in Part 1 above (Notification Regarding Unauthorized Uses due October 30, 2019); provide the information for that impoundment as required under Part 1.a at this time, along with an explanation of why the information was not provided by October 30, 2019.

The information required above must be provided by the required deadlines, to: Colorado Department of Public Health and Environment, WQCD-CW-B2, 4300 Cherry Creek Drive South, Denver, CO 80246-1530, Attn: Liz Lemonds. If you have any questions, you may contact me at 303-692-3515 or Liz.Lemonds@state.co.us.

Sincerely,

Clizabeth Lemonds Elizabeth Lemonds



ORC Water Professionals Inc

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Fairways Wastewater Treatment Plant Effluent Sample analysis data for 2019.

Permit Limit: Daily Maximum Total Suspended Solids (TSS) = 30.0 mg/l

Permit Limit: Monthly Maximum E-Coli = 126 mg/l

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Broken pipe entering the filter building.

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911 Rooter and Plumbing has not returned calls to schedule repair to the broken pipe entering the filter building.

ORC will try to locate additional contractors interested in submitting a quote for these repairs.

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to load into a truck for disposal. Additional debris, dated pipe and fittings were removed from the pump house building and disposed of. There are two pumps remaining that will require two people

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The VFD's and Surge Protectors that were damaged by a lighting strike were replaced with new components.



Work with Parkson on troubleshooting filter performance.	Ø	
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thoughts and generate a sampling and monitoring plan. Element, ORC and SDMS have both been briefed and ORC has begun the sampling as requested ORC will be taking weekly influent, effluent, and reject TSS concentrations as well as noting air flow on the rotameter. Parkson believes performance should (approximately 30 - 35 mg/L). The reject TSS concentration, however, is very high (approximately 80 or 90 mg/L). Parkson believes this is indicative of a filter that the filter influent, effluent, and reject. As has been reported by Parkson and ORC the influent and effluent TSS concentrations are roughly the same with May 2019 Update: On May 14, 2019 the filter was reprogrammed into continuous backwash mode by Parkson's controls consultant. Parkson and ORC have tested improve over time and the filter can slowly be put back into Ecowash mode. Element Engineering held a conference call with Parkson on May 15 to discuss these has not been adequately backwashing. Parkson recommended the filter be placed on continuous backwash for several weeks to thoroughly clean the filter bed

discussed (influent, effluent, reject, air flow). These results have been forwarded to Parkson and a meeting has been set up to discuss our next steps and Parkson's July 2019 Update: The filter had been running on continuous backwash mode as recommended by Parkson. Sampling and monitoring has been taking place as recommendations.

of filter performance. Element recommends air lancing the filter. A standard operating procedure for air lancing has been developed. During a phone conversation there was a 30% difference in bed turnover in the four quadrants which we believe to be significant and suggestive of filter channeling. This could explain the lack September 2019 Update: In mid-July Element staff completed a filter turnover test and sent the results were emailed to district staff on July 23rd. In summary fee and the waiver was approved. A 5-gallon sample was sent on August 13 to Parkson. Results have not been received with Parkson where data was discussed Parkson recommended a 5-gallon sample be sent to their laboratory for testing. Element requested waiving of the testing

October 2019 Update: We have requested an update on the filter bench test from Parkson. We hope to have those at the board meeting

November 2019 Update: Parkson has reviewed samples and would like to visit the facility and collect additional a samples during the week of 11/11/19. Their field visit prior to replacing the sand. initial thoughts are that the original sand Parkson specified may be too large a diameter. They would like to complete their own sampling and testing as well as a

December 2019 Update: Parkson has collected their samples and will provide further guidance upon analysis.

January 2020 Update: Element has followed up with Parkson and has requested a meeting where results and recommendations will be presented



Milestones Plan Permit Proposal Award Materials Const. X Test A	Verify Flow Metering	<u>Description</u> Original Forecasted Completion November, 2019 Revised Completion Date	2 Flow Meter Validation / Field Testing X Green Y	
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can be provided to the golf course is 250 gpm. If sufficient water is not flowing back from Pond 13 to the wet well, the pump will ramp up to start and down to stop to the district. Our field testing shows that the effluent pump is capable of providing approximately 250 GPM to Pond 8 if sufficient water is flowing to the wet well November 2019 Update: Element has completed flow testing and evaluation of the effluent flow meter. A detailed memorandum dated October 2019 was provided and will not maintain 60 HZ and therefore will not maintain the maximum pumping capacity. from Pond 13. This allows the pump to run at a full 60HZ and pump the maximum capacity at that head condition. Therefore, the maximum instantaneous flow that

maximum pumping capacity. It is estimated that this may equate to an additional 5 - 10 gallons per minute. cheaper variant and appears to be relatively innacurate. It is recommended that new piping and a new flow meter be installed. The flow meter should be installed with correct upstream and downstream diameters to ensure accurate measurement. In addition, some losses can be eliminated in the piping system allowing for The flow meter and piping in the pump house building is antequated and outdated. The check valve is likely the original installed in the 1980's. The flow meter is a

Element can complete the piping diagram for installation by a contractor/plumber for \$4,500. This includes plan and profile sheets and updates to the district's new as-built documentation.

December 2019 Update: No update to report

January 2020 Update: No update to report



3 System Maps and As-Built Updates		X Green	Yellow	Red	Direction :	٧
Description Original Forecasted Completion July, 2019	Revis	Revised Completion	Date	November, 2019	2019	
Consolidate District As-Built Documentation						
Milestones Plan X Permit Proposal Award Materials C	Const.	Test	Approval	Warranty Through		N/A
Narrative						
May 2019 Update: Element has provided a purchase order to begin the process of consolidating the district's as-built information into one location and file. We have started that work and expect it to be complete during the month of July.	lidating th	e district's as-b	uilt informatio	n into one lo	cation and fi	le. We
september 2019 Update: Element has completed the draft as-built documents and they are being reviewed internally. These documents will likely be completed prior to the district's September board meeting for distribution to the district's staff and board for review. Included in these documents are detailed exhibits and	are being board for	reviewed interr review. Include	າally. These do d in these docເ	cuments will	likely be cor letailed exhib	npleted
layouts of the effluent system.						
October 2019 Udpate: As-built documents have been provided to lan at the golf course for markup and review.	for markup	and review.				
November 2019 Update: Element has followed up with lan on any final revisions/comments on the as-built documents. Thus far we have had no response.	ents on the	as-built docum	າents. Thus far	we have hac	d no responsi	.e
December 2019 Update: No update to report						
January 2020 Update: No update to report						



4 Sanitary Sewer Rehabilitation Plan	X Green	Yellow	Red	Direction >>
<u>Description</u> Original Forecasted Completion October, 2019 Revi	Revised Completion	Date	N/A	
Compile a Manhole Rehabilitation List and Obtain Cost for Repairs				
Milestones X Plan Permit Proposal Award Materials Const.	Test	Approval	Warranty Through	Through N/A
<u>Narrative</u>				
October 2019 Update: Video and manhole inspection notes from 2016, 2017, and 2018 have been reviewed and Guildner Pipeline to provide a proposal for manhole repairs.		compiled. This	informatior	compiled. This information has been sent to
November 2019 Update: We have followed up with Guildner Pipeline by phone one time and with three separate	three separate	emails to obtian a quote for this work.	ian a quote	for this work.
December 2019 Update: We have not received a quote from Guildner on this work. Will continue to follow up. No	o follow up. N	o update to report.	port.	
January 2020 Update: We have followed up with Guildner and have not received a quote.				



5 Process and Instrumentation Control Diagram	X	X Green	Yellow	Red	Direction >>	>
Description Original Forecasted Completion N/A	Revise	Revised Completion Date	Date	N/A		
Compile a process and instrumentation control diagram. Indicate key alarms and two-to-three cameras to aid remote operation.	o-three came	ras to aid rem	note operatio	٦.		
Milestones Plan Permit x Proposal Award Materials	Const.	Test	Approval	Warranty Through		N/A
<u>Narrative</u>						
November 2019 Update: The district has expressed interest in the development of a process and instrumentation diagram. The purpose of this diagram would be to allow the installation of a system allowing remote view of alarms, potential cameras, and system status. Element can develop a PID diagram along with	rocess and ins i, and system i	trumentatior status. Eleme	i diagram. The nt can develo	purpose o p a PID diag	f this diagram gram along wit	would be h
specifications allowing procurement and installation of this system. The fee for this work is estimated at \$4,500 to \$5,500. This would include the PID diagram,	rk is estimate	d at \$4,500 to	\$5,500. This	would inclu	ıde the PID dia	gram,
preliminary controls design, and documents to obtain costs for installation and startup of equipment.	of equipment					
December 2019 Update: No update to report.						
January 2020 Update: No update to report						



Milestones X Plan	Document Facility Mainter	<u>Description</u> Origina	6
Permit Proposal Award	Document Facility Maintenance Necessary During Site Visits	Original Forecasted Completion N/A	Facility Maintenance
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This does not include periodic inspections purely for maintenance documentation. Moving forward, any recommendations will be included in this report. November 2019 Update: The district has requested that Element provide a list of recommended facility maintenance during our periodic site visits to the WWTP.

approval would be brought to the next board meeting. This may cost extra for operator time onsite. to the changing of light bulbs or ballasts. Checks of meters, gauges, or other telemetry items should be made as well and added to the list. Finally, housekeeping items addressed such as removing old/replaced equipment/items would be reported. More expensive or time consuming items that would require board report of any failures of any equiopment, lighting, component, etc. This could be as easy as a short checklist once per week noting malfunctions or failures down Initial recommendations to address maintenance issues would be documentation during the operators visits. Documentation would include a breif observation

December 2019 Update: No update to report.

January 2020 Update: No update to report



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Document solids handling strategies to improve TSS removal at the facility (not including filter as it is covered und	Description	
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the board. It is recommended that the Parkson complete their filter changes/upgrades BEFORE other improvements are installed to remove TSS. a very simple site application, process design report, and plans and specs to CPDHE for approval. Proposal for engineering work can be provided at the request of what the duckweed does but throughout the year. Also, you wouldn't have a duckweed die-off with the resulting biological settling. Installation of covers requires generated out of this conversation. One suggestion that would be cost effective and easy would be to install floating covers on the settling pond. This would do November 2019 Update: ORC is documenting reported TSS values to the board for regular tracking. The filter was designed as a failsafe if the settling and wetlands pond had to be taken offline. The board at the time was worried they had no backup if these cells were to be taken out of service. The filter project was

December 2019 Update: No update to report.

January 2020 Update: No update to report



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8	General Engineering	X Green	Yellow	Red	Direction >>	V
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December 2019	December 2019 Update: No items to report.					
January 2020 U	January 2020 Update: No update to report					
