Public Works Department
117 N Molalla Avenue
PO Box 248
Molalla, Oregon 97038
Phone: (503) 829-6855
Fax: (503) 829-3676

December 21, 2021

TO: Pat Heins, Recycled Water Program Coordinator
DEQ Water Quality Division
700 NE Multnomah Street, Suite 600
Portland, OR 97232

FROM: Andy Peters, Public Works Div Manager, City of Molalla

CC: Mac Corthell, Community Dev Director, City of Molalla
Dan Huff, City Manager, City of Molalla
Mike Pinney, DEQ

RE: MEMORANDUM OF TRANSMITTAL : Recycled Water Annual Report

Attachments: DEQ Form v. 10-26-2018 (6 pages); Edge Analytics lab reports (2 pages)

Notes:
- Description of changes to treatment facilities: NONE
- Description of changes to processes specific to production of recycled water: NONE
- Weather data: ON FILE
- Results of site inspection reports: ON FILE
- Description of any operational problems (e.g., system upsets, overflows, etc.) and the corrective actions taken: NONE
- Description of changes in the beneficial purpose (e.g., crop changes, water delivery times, supplemental water sources, etc.): NONE
- Location and amount of recycled water used for each beneficial purpose: SEE ATTACHED
- Recycled water volume produced: SEE ATTACHED
- Recycled water characteristics including bacteria and other required monitoring results: SEE ATTACHED
- Results from any site monitoring (e.g., soil monitoring): SEE ATTACHED
- Any planned or anticipated changes to the treatment facility equipment or operations during the next calendar year: NONE
- Description of any proposed or anticipated changes in water reuse operations, including major changes in agricultural practices, such as crops: NONE

Andy Peters
City of Molalla
Public Works Operations Supervisor
(503) 829-6855 x220
Cell: 503-793-0507
apeters@cityofmolalla.com
117 N Molalla Ave
Molalla, OR 97038

State of Oregon
Department of Environmental Quality
700 NE Multnomah St. Suite 600, Portland, OR 97232

DEQ use only

Recycled Water Annual Report
Part I: Recycled water production and disposition

A. REPORTING PERIOD	
1.	This report is for recycled water produced during the calendar year: 2021

B. PERMIT INFORMATION		
1.	Permit Type (select one): ■ NPDES or ☐ WPCF	DEQ File No.: 57613
	DEQ Permit No.: 101514	EPA Permit No.:

C. FACILITY INFORMATION			
1.	Legal name of facility: Molalla Sewer Treatment Plant		
2.	**Physical address**		
	Street Address: 12424 S. Toliver Rd		
	City: Molalla	State: Or	Zip code: 97038
3.	**Mailing address** ☐ Same as physical address.		
	Mailing Address: P.O. Box 248		
	City: Molalla	State: Oregon	Zip code: 97038
4.	**Facility Type (check all that apply)**		
	■ Major or Tier 1 facility (design flow of 1 mgd or greater, or serving a population of 10,000 or greater) ☐ Minor or Tier 2 facility (design flow less than 1 mgd or serving a population less than 10,000) ☐ Class I wastewater treatment facility (i.e., facility with a pre-treatment program) ☐ Other, please specify:		

D. CONTACT INFORMATION			
1.	**Responsible official**		
	Name: Andy Peters	Title: Public Works Div Manager	
	Email Address: Apeters@cityofmolalla.com	Telephone: 503-829-6855	
	Mailing Address: P.O. BOX 248		
	City: Molalla	State: Oregon	Zip code: 97038
2.	**Recycled water contact** ☐ Same as responsible official		
	Name: Jake Ehredt	Title: Lead Waste Water Operator	
	Email Address: Jehredt@cityofmolalla.com	Telephone: 503-793-4238	
	Mailing Address: P.O. BOX 248		
	City: Molalla	State: Oregon	Zip code: 97038

E. RECYCLED WATER TREATMENT PROCESSES

Please indicate the recycled water treatment processes used at your facility (mark all that apply)

	Treatment technology	Filtration technology	Disinfection technology
1.	☐ Primary Clarifier ☐ Secondary Clarifier ■ DAF ■ Lagoon ☐ Membrane reactor ☐ Trickling filter ☐ Other:	☐ Sand filter ■ Mixed media filter ☐ Bio-filtration ☐ Artificial wetland ☐ Other:	☐ Ultraviolet ☐ Chlorine ☐ Ozone ☐ Paracetic acid ☐ Hydrogen peroxide ■ Hypochlorite ☐ Pasteurization ☐ Other:

F. RECYCLED WATER SAMPLING and PRODUCTION

Select your facility's regulatory monitoring frequency:

	Water Class	A	B	C	D	Non-disinfected
1.	Monitoring frequency	☐ Daily/hourly	☐ 3/week	■ 1/week	☐ Once per month	☐ As specified in permit
	Parameters	Total Coliform (daily) Turbidity (hr)	Total coliform	Total coliform	*E. coli*	As Specified in permit
2.	**Please indicate total volume of each class of recycled water produced at your facility.**					
	Total quantity produced (gal)			125.891		

G. SUMMARY OF ATTACHMENTS

Information required with some annual reports:

1. ☐ Additional copies of tables in Part II for all recycled water produced during the calendar year.
   ■ Laboratory reports showing analytical results only. **NO LAB QA/QC**

Example of documentation held by the permittee and available upon request:

2. ■ Additional land application site information.
   ■ Daily irrigation and records.
   ☐ Nitrogen loading calculations
   ■ Daily or hourly sampling results

H. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

I certify that the information in this report is true, correct and representative of the recycled water produced at my facility to the best of my knowledge and belief. Information and records used or referenced with this report will be maintained and made available to the Oregon Department of Environmental Quality on request.

Signature	Title	Date
	Public Works Div Manager	12/21/21

Print Name: Andy Peters

State of Oregon
Department of Environmental Quality
700 NE Multnomah St. Suite 600, Portland, OR 97232

DEQ use only

Recycled Water Annual Report
Part II: Sampling and Monitoring Summary

I. RECYCLED WATER CLASSIFICATION															
		Turbidity (NTU)				Total Coliform (organisms/100mL)					*E. coli* (organisms/100mL)				
	Month	Max 24hr Mean	Avg 24 hr mean	Max	Ave	# of samples	Max 7day median	Avg 7day median	Max	Ave	# of samples	Max 30day log mean	Avg 30day log mean	Max	Ave
1.	Jan														
2.	Feb														
3.	Mar														
4.	Apr														
5.	May			.07	.4	15	<1	<1	8.5	<1					
6.	Jun			1.1	0.5	24	<1	<1	19	<1					
7.	Jul			1.0	.6	28	<1	<1	4.1	<1					
8.	Aug			1.2	.7	27	<1	<1	344.1	<1					
9.	Sep			.7	.4	26	<1	<1	61.3	<1					
10.	Oct			0.3	0.3	17	<1	<1	17.0	<1					
11.	Nov														
12.	Dec														
13.															
14.															
15.	Annual														
	Attach additional pages as needed to report all sampling.														

*** Please attach laboratory report showing sample results only. No lab QA/QC.*

J. RECYCLED WATER CHARACTERIZATION

	Month	pH (SU)				Residual Cl (mg/L)				Sodium (mg/L)			
		# of samples	Min	Max	Ave	# of samples	Min	Max	Ave	# of samples	Min	Max	Ave
1.	Jan												
2.	Feb												
3.	Mar												
4.	Apr												
5.	May	5	7.3	7.8	7.4	18	0.6	5.70	1.68				
6.	Jun	10	7.4	7.6	7.5	27	0.42	4.30	1.12				
7.	Jul	8	7.2	7.5	7.3	28	0.25	8.30	1.16				
8.	Aug	9	7.3	7.7	7.5	28	0.41	4.98	1.49				
9.	Sep	7	7.3	7.6	7.5	26	0.40	3.50	1.71				
10.	Oct	4	7.3	7.5	7.4	17	0.25	3.70	1.85				
11.	Nov												
12.	Dec												
13.													
14.													
15.	Annual												

Attach additional pages as needed to report all sampling.

*** Please attach laboratory report showing sample results only. No lab QA/QC.*

K. RECYCLED WATER NUTRIENT

Month	Nitrogen TKN (mg/L)			Nitrogen NO2 + NO3 (mg/L)			Ammonia NH3-N (mg/L)			Phosphate PO4 (mg/L)			Potassium K (mg/L)		
	# of samples	Max	Ave	# of samples	Max	Ave	# of samples	Max	Ave	# of samples	Max	Ave	# of samples	Max	Ave
Jan															
Feb															
Mar															
Apr															
May															
Jun	1	20.5	20.5	1	2.09	2.09	1	24.3	24.3	1	0.435	0.435			
Jul															
Aug															
Sep	1	13.80	13.80	1	3.35	3.35	1	13.70	13.70	1	.06	.06			
Oct															
Nov															
Dec															
Annual															

Attach additional pages as needed to report all sampling.

*** Please attach laboratory report showing sample results only. No lab QA/QC.*

L. RECYCLED WATER APPLICATION

	Site Name:	North Coleman	Site Name:	South Colman	Site Name:	Cemetery	Site Name:	WWTP
	Class:	C	Class:	C	Class:	C	Class:	C
	Use or Crop:	Pasture	Use or Crop:	Pasture	Use or Crop:	Ornamental	Use or Crop:	Ornamental
	Area (acres):	270	Area (acres):	163	Area (acres):	3.4	Area (acres):	8.1
	Agronomic rate:	3.6 in/ac or 1.9 in/ac	Agronomic rate:	3.6 in/ac or 1.9 in/ac	Agronomic rate:		Agronomic rate:	
	Soil moisture monitoring:	Moisture blocks	Soil moisture monitoring:	Moisture blocks	Soil moisture monitoring:	Moisture blocks	Soil moisture monitoring:	Moisture blocks
	Additional N sources:	56 lb-N/acre	Additional N sources:	57 lb-N/acre	Additional N sources:	57 lb-N/acre	Additional N sources:	55 lb-N/acre

Month	# of days discharging	Total Volume applied	Ave Daily Loading	Max Daily Loading	# of days discharging	Total volume applied	Ave Daily Loading	Max Daily Loading	# of days discharging	Total Volume applied	Ave Daily Loading	Max Daily Loading	# of days discharging	Total Volume applied	Ave Daily Loading	Max Daily Loading
		gal	in	in		gal	in	in		gal	in	in		gal	in	in
Jan																
Feb																
Mar																
Apr																
May	16	10.505	0.1	0.1	10	4.457	0.1	0.1								
Jun	24	15.394	0.1	0.1	20	9.218	0.1	0.1								
Jul	27	20.043	0.1	0.1	19	8.881	0.1	0.1	3	0.098	0.2	0.2				
Aug	26	22.308	0.1	0.1	16	7.797	.01	0.2	10	0.912	0.2	0.9				
Sep	19	11.361	0.1	0.1	10	5.362	0.1	0.2	7	0.134	0.1	0.2				
Oct	12	5.974	0.1	0.1	7	3.434	0.1	0.1	2	0.013	0	0				
Nov																
Dec																
Annual	124	85.585	0.1	0.1	82	39.149	0.1	0.1	22	1.157	0.1	0.3				

Attach additional pages as needed to report all sites.

$$Daily\ Loading\ (inches) = \frac{\text{Volume Applied (gallons)}}{\text{Area (acres)}\ x\ 27{,}152\ (\frac{gallons}{acre\ inches})}$$

EDGE ANALYTICAL

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - 800.755.9295 •

Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

Portland, OR *Microbiology/Chemistry (c)*
9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.682.7802

Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946

Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Data Report

Client Name: Molalla, City of WWTP
12424 S. Toliver Rd.
Molalla, OR 97038

Reference Number: **21-20563**
Project: Molalla WWTP

Report Date: 6/23/21

Date Received: 6/8/21
Approved by: bj,bsp,jdn
Authorized by:

Thanh B Phan
Lab Manager, Portland

Sample Description: City of Molalla E.P.S. Matrix: WW Sample Date: 6/8/21 12:00 pm
Lab Number: 39142 Sample Comment: Collected By: James Clifton

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7664-41-7	**AMMONIA-N**	24.3	0.100	0.0846	mg/L	10.0	350.1	a	6/18/21	TJB	350.1_210618	
E-10264	**TOTAL KJELDAHL NITROGEN**	20.5	10	2.925	mg/L	50.0	351.2	a	6/21/21	TJB	351.2_210621	
E-10128	**TOTAL NITRATE+NITRITE as N**	2.09	0.01	0.0052	mg/L	1.0	SM4500-NO3 F	c	6/8/21	RLV	cno3_210608	
7723-14-0	**TOTAL PHOSPHORUS**	0.435	0.020	0.0086	mg/L	2.0	SM4500-P F/SM4500-P B(5)	a	6/11/21	BSP	TPHOS_210611	

Notes:
ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.
Form: cRslt_2.rpt

EDGE ANALYTICAL

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - **800.755.9295** • 360.757.1400

Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

Portland, OR *Microbiology/Chemistry (c)*
9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.682.7802

Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946

Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Data Report

Client Name: Molalla, City of WWTP
12424 S. Toliver Rd.
Molalla, OR 97038

Reference Number: **21-33975**
Project: Molalla WWTP

Report Date: 9/23/21

Date Received: 9/8/21
Approved by: bj,bsp,rlv
Authorized by:

Thanh B Phan
Lab Manager, Portland

Sample Description: City of Molalla E.P.S. Matrix WW Sample Date: 9/8/21 7:45 am
Lab Number: 65419 Sample Comment: Collected By: MJ

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
NA	**TOTAL NITROGEN**	17.2	0.20		mg/L	1.0	<SUM>	a	9/22/21	TJB	TN_210922	
7664-41-7	**AMMONIA-N**	13.2	0.050	0.0423	mg/L	5.0	350.1	a	9/20/21	TJB	350.1_210920	
E-10264	**TOTAL KJELDAHL NITROGEN**	13.8	1	0.2925	mg/L	5.0	351.2	a	9/21/21	TJB	351.2_210921	
E-14506	**ALKALINITY**	99.3	4.0		mg CaCO3/L	4.0	SM2320 B	a	9/12/21	BCM	ALK_210910	
E-10128	**TOTAL NITRATE+NITRITE as N**	3.35	0.20	0.104	mg/L	20.0	SM4500-NO3 F	c	9/9/21	JDN	cno3_210909	
7723-14-0	**TOTAL PHOSPHORUS**	0.061 J	0.100	0.02682	mg/L	10.0	SM4500-P F/SM4500-P B(5)	a	9/21/21	BSP	TPHOS_210921	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. - Dilution Factor

If you have any questions concerning this report contact us at the above phone number.