



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

11/26/19

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

FROM: Andy Peters, Operations Supervisor, City of Molalla

CC: Gerald Fisher, Public Works Director, City of Molalla
Jake Ehredt, Lead Operator, 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 (4 pages)

Notes:

- Description of changes to treatment facilities: ADDED HEADWORKS SCREEN
- 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



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: 2019
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B. PERMIT INFORMATION

1.	Permit Type (select one): <input checked="" type="checkbox"/> NPDES or <input type="checkbox"/> WPCF	DEQ File No.: 57613
	DEQ Permit No.: 101514	EPA Permit No.:

C. FACILITY INFORMATION

1.	Legal name of facility: Molalla Sewer Treatment Plant	
Physical address		
2.	Street Address: 12424 S. Toliver Rd	
	City: Molalla	State: Or
Mailing address <input type="checkbox"/> Same as physical address.		
3.	Mailing Address: P.O. Box 248	
	City: Molalla	State: Oregon
Facility Type (check all that apply)		
4.	<input type="checkbox"/> Major or Tier 1 facility (design flow of 1 mgd or greater, or serving a population of 10,000 or greater)	
	<input checked="" type="checkbox"/> Minor or Tier 2 facility (design flow less than 1 mgd or serving a population less than 10,000)	
	<input type="checkbox"/> Class I wastewater treatment facility (i.e., facility with a pre-treatment program)	
	<input type="checkbox"/> Other, please specify:	

D. CONTACT INFORMATION

Responsible official		
1.	Name: Gerald Fisher	Title: P.W. Director
	Email Address: gfisher@cityofmolalla.com	Telephone: 503-829-6855
	Mailing Address: P.O. BOX 248	
	City: Molalla	State: Oregon
Recycled water contact <input type="checkbox"/> Same as responsible official		
2.	Name: Andy Peters	Title: Operations Supervisor
	Email Address: apeters@cityofmolalla.com	Telephone: 503-829-6855
	Mailing Address: P.O. BOX 248	
	City: Molalla	State: Oregon

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. <input type="checkbox"/> Primary Clarifier <input type="checkbox"/> Secondary Clarifier <input checked="" type="checkbox"/> DAF <input checked="" type="checkbox"/> Lagoon <input type="checkbox"/> Membrane reactor <input type="checkbox"/> Trickling filter <input type="checkbox"/> Other:	<input type="checkbox"/> Sand filter <input checked="" type="checkbox"/> Mixed media filter <input type="checkbox"/> Bio-filtration <input type="checkbox"/> Artificial wetland <input type="checkbox"/> Other:	<input type="checkbox"/> Ultraviolet <input type="checkbox"/> Chlorine <input type="checkbox"/> Ozone <input type="checkbox"/> Paracetic acid <input type="checkbox"/> Hydrogen peroxide <input checked="" type="checkbox"/> Hypochlorite <input type="checkbox"/> Pasteurization <input type="checkbox"/> Other:

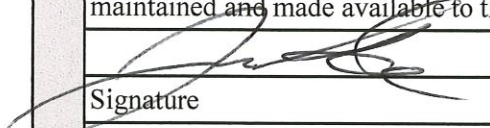
F. RECYCLED WATER SAMPLING and PRODUCTION

Select your facility's regulatory monitoring frequency:					
Water Class	A	B	C	D	Non-disinfected
1. Monitoring frequency	<input checked="" type="checkbox"/> Daily/hourly	<input type="checkbox"/> 3/week	<input type="checkbox"/> 1/week	<input type="checkbox"/> Once per month	<input type="checkbox"/> As specified in permit
Parameters	Total Coliform (daily) Turbidity (hr)	Total coliform	Total coliform	<i>E. coli</i>	As Specified in permit
Please indicate total volume of each class of recycled water produced at your facility.					
2. Total quantity produced (gal)	112.303				

G. SUMMARY OF ATTACHMENTS

1.	Information required with some annual reports:	
	<input type="checkbox"/> Additional copies of tables in Part II for all recycled water produced during the calendar year. <input checked="" type="checkbox"/> Laboratory reports showing analytical results only. <u>NO LAB QA/QC</u>	
2.	Example of documentation held by the permittee and available upon request:	
	<input checked="" type="checkbox"/> Additional land application site information. <input checked="" type="checkbox"/> Daily irrigation and records.	<input type="checkbox"/> Nitrogen loading calculations <input checked="" type="checkbox"/> 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	Lead Operator Title	11-18-19. Date
Print Name: Jake Ehredt		



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

Recycled Water Annual Report
Part II: Sampling and Monitoring Summary

DEQ use only

I. RECYCLED WATER CLASSIFICATION

	Month	Turbidity (NTU)				Total Coliform (organisms/100mL)					E. coli (organisms/100mL)				
		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			0.7	0.5	3	<1	<1	<1	<1					
6.	Jun			0.8	0.5	30	<1	<1	1	<1					
7.	Jul			1.7	0.8	31	<1	<1	1	<1					
8.	Aug			1.5	.9	31	<1	<1	4	1					
9.	Sep			.9	.6	19	<1	<1	4	<1					
10.	Oct			.9	0.8	1	<1	<1	<1	<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	2	7.1	7.4	7.3	3	4.3	5.1	4.7				
6.	Jun	8	7.2	7.5	7.3	30	2.0	10.2	5.6				
7.	Jul	9	7.4	7.7	7.6	31	1.4	10.2	4.0				
8.	Aug	9	7.1	7.9	7.4	31	2.7	6.8	4.0				
9.	Sep	6	7.3	7.7	7.4	19	.8	3.9	1.8				
10.	Oct	1	7.6	7.6	7.6	1	3.1	3.1	3.1				
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.*

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	21.30	21.30	1	1.09	1.09	1	18.4	18.4	1	0.09	0.09			
Jul	1	15.0	15.0	1	1.16	1.16	1	18.90	18.90	1	0.07	0.07			
Aug	1	10.10	10.10	1	1.74	1.74	1	11.30	11.30	1	0.04	0.04			
Sep	1	19.30	19.30	1	1.81	1.81	1	15.80	15.80	1	0.05	0.05			
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

Month	Site Name: North Coleman				Site Name: South Colman				Site Name: Cemetery				Site Name: WWTP			
	Class: A				Class: A				Class: A				Class: A			
	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			
	# 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	1	0.429	0.1	0.1	3	1.510	0.1	0.2								
Jun	26	17.513	0.1	0.1	22	9.812	0.1	0.1					4	0.392	0.1	0.1
Jul	28	19.606	0.1	0.1	24	10.951	0.1	0.1	12	1.760	1.4	0.3	3	0.742	0.1	0.2
Aug	24	16.831	0.1	0.1	23	11.819	0.1	0.2	5	0.716	0.1	0.9	3	0.149	0.1	0.1
Sep	15	10.548	0.1	0.1	15	7.238	0.1	0.2	2	0.161	0.0	0.6				
Oct	2	0.680	0.1	0.1	2	0.680	0.1	0.1								
Nov																
Dec																
Annual																

Attach additional pages as needed to report all sites.

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



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	503.662.7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4946



Data Report

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

Reference Number: 19-19965
 Project: Molalla WWTP

Report Date: 6/18/19

Date Received: 6/4/19

Approved by: bj,svl

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: Ranch
 Lab Number: 39108
 Sample Comment:
 Sample Date: 6/4/19 8:15 am
 Collected By: James Clifton

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
E-14506	ALKALINITY	120	10.0		mg CaCO3/L	1.0	310.2	a	6/16/19	LRS	310.2_190616	
7664-41-7	AMMONIA-N	18.4	0.200	0.0012	mg/L	20.0	350.1	a	6/9/19	LRS	350.1_190609	
E-10264	TOTAL KJELDAHL NITROGEN	21.3	4	0.094	mg/L	20.0	351.2	a	6/11/19	BSP	351.2_190611	
E-10128	TOTAL NITRATE/NITRITE	1.09	0.01	0.0011	mg/L	1.0	SM4500-NO3 F	c	6/4/19	JAL	eno3_190604	
7723-14-0	TOTAL PHOSPHORUS	0.088	0.010	0.0026	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	6/8/19	LRS	TPHOS_190608	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
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 D.F. - Dilution Factor

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Portland, OR	Microbiology/Chemistry (c)	9150 SW Pioneer Ct Ste W	Wilsonville, OR 97070	503.662.7802
Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4646



Data Report

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

Reference Number: 19-25004
 Project: Molalla WWTP

Report Date: 7/26/19

Date Received: 7/9/19

Approved by: bj,svl

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: Ranch
 Lab Number: 48621
 Sample Comment:
 Sample Date: 7/9/19 8:30 am
 Collected By: JE

CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
E-14506	ALKALINITY	118	10.0		mg CaCO3/L	1.0	310.2	a	7/11/19	LRS	310.2_190711	
7664-41-7	AMMONIA-N	18.9	0.100	0.012	mg/L	10.0	350.1	a	7/15/19	BSP	350.1_190715	
E-10264	TOTAL KJELDAHL NITROGEN	15.0	4	0.0047	mg/L	20.0	351.2	a	7/19/19	LRS	351.2_190719	
E-10128	TOTAL NITRATE/NITRITE	1.16	0.01	0.0011	mg/L	1.0	SM4500-NO3 F	c	7/9/19	JAL	cn03_190709	
7723-14-0	TOTAL PHOSPHORUS	0.072	0.010	0.0026	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	7/12/19	LRS	TPHOS_190712	

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Corvallis, OR	Microbiology (d)	540 SW Third Street	Corvallis, OR 97333	541.753.4946



Data Report

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

Reference Number: 19-28873
 Project: Molalla WWTP

Report Date: 8/22/19

Date Received: 8/5/19

Approved by: bj,jal

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: Influent - Headworks										Sample Date: 8/5/19 11:30 am			
Lab Number: 56146					Sample Comment:					Collected By: James Clifton			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	
E-14506	ALKALINITY	151	10.0		mg CaCO3/L	1.0	310.2	a	8/14/19	LRS	310.2_190814		
7664-41-7	AMMONIA-N	31.2	0.500	0.0012	mg/L	50.0	350.1	a	8/9/19	LRS	350.1_190809		
E-10264	TOTAL KJELDAHL NITROGEN	43.6	10	0.0047	mg/L	50.0	351.2	a	8/16/19	LRS	351.2_190816		
7723-14-0	TOTAL PHOSPHORUS	5.56	0.500	0.0026	mg/L	50.0	SM4500-P F/SM4500-P B(5)	a	8/12/19	LRS	TPHOS_190812		

Sample Description: Effluent - Ranch										Sample Date: 8/5/19 9:30 am			
Lab Number: 56147					Sample Comment:					Collected By: James Clifton			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment	
E-14506	ALKALINITY	90.0	10.0		mg CaCO3/L	1.0	310.2	a	8/14/19	LRS	310.2_190814		
7664-41-7	AMMONIA-N	11.3	0.040	0.0012	mg/L	4.0	350.1	a	8/9/19	LRS	350.1_190809		
E-10264	TOTAL KJELDAHL NITROGEN	10.1	4	0.0047	mg/L	20.0	351.2	a	8/16/19	LRS	351.2_190816		
E-10128	TOTAL NITRATE/NITRITE	1.74	0.01	0.0011	mg/L	1.0	SM4500-NO3 F	c	8/6/19	SVL	CNO3_190806		
7723-14-0	TOTAL PHOSPHORUS	0.044	0.01	0.0026	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	8/20/19	LRS	TPHOS_190820		

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 9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.692.7802
 Corvallis, OR *Microbiology/Chemistry (d)*
 1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.763.4946
 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: 19-33564
 Project: Molalla WWTP

Report Date: 9/25/19

Date Received: 9/4/19

Approved by: bj,hkl,svl

Authorized by:

Thanh B Phan
 Lab Manager, Portland

Sample Description: Ranch Eff. - Ranch												
Lab Number: 64930		Sample Comment:							Sample Date: 9/4/19 8:10 am			
Collected By: James Clifton												
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
E-14506	ALKALINITY	105	5		mg CaCO ₃ /L	1.0	310.2	a	9/9/19	BSP	310.2_190909	
7664-41-7	AMMONIA-N	15.8	0.500	0.35	mg/L	50.0	350.1	a	9/16/19	BSP	350.1_190916	
E-10264	TOTAL KJELDAHL NITROGEN	19.3	4	0.094	mg/L	20.0	351.2	a	9/17/19	BSP	351.2_190917	
E-10128	TOTAL NITRATE/NITRITE	1.81	0.01	0.0011	mg/L	1.0	SM4500-NO3 F	c	9/5/19	JAL	eno3_190905	
7723-14-0	TOTAL PHOSPHORUS	0.050	0.010	0.0026	mg/L	1.0	SM4500-P F/SM4500-P B(5)	a	9/13/19	BSP	tphos_190913	

Sample Description: Wastewater Plant - Headwork Inf.												
Lab Number: 64931		Sample Comment:							Sample Date: 9/4/19 11:50 am			
Collected By: James Clifton												
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
E-14506	ALKALINITY	127	5		mg CaCO ₃ /L	1.0	310.2	a	9/9/19	BSP	310.2_190909	
7664-41-7	AMMONIA-N	26.8	0.500	0.35	mg/L	50.0	350.1	a	9/13/19	BSP	350.1_190913	
E-10264	TOTAL KJELDAHL NITROGEN	42.7	10	0.235	mg/L	50.0	351.2	a	9/16/19	BSP	351.2_190916	
7723-14-0	TOTAL PHOSPHORUS	4.88	0.500	0.13	mg/L	50.0	SM4500-P F/SM4500-P B(5)	a	9/13/19	BSP	tphos_190913	

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