WATER SYSTEMS MGT., INC.
WSM, Inc.
67 Wild Horse Trail
Sandpoint, ID 83864
(208) 265-4270 (phone)
(208) 265-5243 (fax)
wsmibob@aol.com (e-mail)

Water System Management/Operation
Wastewater System Management/Operation
Backflow Prevention Assembly Testing
Cross Connection Control Inspection
Consulting

January 27, 2023

Katy Baker-Casile
State of Idaho – DEQ
2110 Ironwood Parkway
Coeur d'Alene, ID 83814-2648

RE: ANNUAL REPORT, Bayview Water and Sewer District, WASTEWATER REUSE PERMIT, M-105-04 – Including Minor Permit Modifications No. 1 & No. 2

Dear Ms. Baker-Casile,

The following is a summary of activities at Bayview Water and Sewer District (District) municipal wastewater facilities for the period of November 1, 2021 through October 31, 2022.

The current permit, #M-105-04, was issued on July 1, 2015 and expires on July 1, 2025. M-105-04 – Modification 1 was issued on June 4, 2018. M-105-04 – Modification 2 was issued on December 31, 2018.

The District contracted with Water Systems Management, Inc. (Bob Hansen) to operate the wastewater system starting on August 16, 2017. WSM does provide appropriately licensed personnel to fulfill requirements for both responsible-charge and substitute responsible-charge operation of the Districts collection, treatment and reuse land application activities.

During this reporting period, November 1st through October 31st the District's collection and treatment systems have been operated in substantial compliance with the current Department issued Permit. WSM continues to be retained as the District contract operating firm providing appropriately licensed operating personnel. The District remains in a pro active posture in reviewing potential system upgrades and addressing aging infrastructure.

2021 Annual Report Response

There were no recommendations by DEQ in the review of the 2021 report.

6. Reporting Requirements

6.1.1 Due Date

The Annual Report covering the previous reporting period is being submitted as required, no later than January 31.

6.1.2 Required Contents

The Annual Report shall include the following:

1. *A brief interpretive discussion of all required monitoring data. The discussion shall address data quality objectives, validation, and verification; permit compliance; and reuse facility environmental impacts. The reporting year for this permit is specified in section 4.5.*

   The only monitoring data for the reporting year that was not consistent with previous year's results was the nitrate result for the top 12"of soil in MU 10502. The result of 26.3 mg/kg is substantially higher than last years result of 6.24 mg/kg. There were no other results which would raise concerns about data quality or warrant additional validation of the results. There were no observed environmental impacts.

2. *Results of the required monitoring as described in section 5 of this permit. If the permittee monitors any parameter for compliance purposes more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Report. The report shall present all monitoring data in organized data summary tables to expedite review.*

   5.1.1 Constituent Monitoring

	TKN (mg/l)	Nitrate (mg/l)	Nitrite (mg/L)
August	12.6	31.5	ND
September	Missed Sampling		

   A result of 2 MPN/100 ml for Total Coliforms was obtained on 9/7/22. All other results were non-detect.

   Weekly sampling for total coliforms on 9/14/22 and monthly nitrogen sampling for September was missed. The PLC failed on that day and was not able to be repaired in time to continue irrigating in September.

   5.1.2 Management Unit and Other Flow Monitoring

   Daily flow to MU's can be found in the attached monthly logs.

	Volume Applied (MG)		
	MU-10501	MU-10502	MU-10503
August	0.310	0.436	0.379
September	0.056	0.125	0.210

	Inches/Acre Applied		
	MU-10501	MU-10502	MU-10503
August	1.64	3.24	1.61
September	0.30	0.93	0.89

5.2.2 Ground Water Monitoring, Sampling, and Analyses

	Depth to Groundwater (inches)		
	GW-10501	GW-10502	GW-10503
August	73	75	76
September	73	75	76

5.3.2 Soil Monitoring, Sampling, and Analyses

	Nitrate (mg/kg)		
	SU-10501	SU-10502	SU-10503
0-12"	0.335	26.30	6.50
12-24"	ND	4.52	0.35
24-36"	ND	0.951	ND

	Ammonia (mg/kg)		
	SU-10501	SU-10502	SU-10503
0-12"	2.580	1.22	6.46
12-24"	ND	1.27	2.25
24-36"	0.802	1.56	1.12

3. Status of all work described in section 3 of this permit.

3. Compliance Schedule for Required Activities - STATUS

Compliance Activity (CA) Number and Completion Due Date	Compliance Activity Description
CA-105-01 Within 6 months of permit issuance	**Plan of Operation (PO):** The permittee shall submit for review and approval a Plan of Operation that reflects current operations and incorporates the requirements of this permit. The PO shall comply with the applicable requirements stated in IDAPA 58.01.17.300.05 and shall address applicable items in the Plan of Operation Checklist in the DEQ Guidance. The PO shall include the following site management plans or the permittee may submit the site management plans individually: 1. Buffer zone plan; 2. Emergency operating plan; 3. Irrigation management and scheduling plan;

	4. Runoff management plan The PO shall be undated as needed to reflect current operations. The permittee shall notify DEQ of material changes to the PO and copies shall be kept on site and made available to DEQ upon request.
STATUS: <u>COMPLETE</u> - The Plan of Operation (PO) was submitted to DEQ by T-O Engineers and approved.	

Compliance Activity (CA) Number and Completion Due Date	**Compliance Activity Description**
CA-105-02 Within 6 months of permit issuance	**Quality Assurance Project Plan (QAPP):** The permittee shall prepare and implement a QAPP that incorporates all monitoring and reporting required by this permit. A copy of the QAPP along with written notice that the permittee has implemented the QAPP shall be provided to DEQ. The QAPP shall be designed to assist in planning for the collection, analysis, and reporting of all monitoring in support of this permit and in explaining data anomalies when they occur. At a minimum, the QAPP must include the following: 1. Details on the number of measurements, number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection, and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements. 2. Maps indicating the location of each monitoring, and sampling point. 3. Qualification and training of personnel. 4. Names, addresses, and telephone numbers of the laboratories used by or proposed to be used by the permittee 5. Example formats and tables that will be used by the permittee to summarize and present all data in the annual report. The format and content of the QAPP should adhere to the recommendations and references in the Quality Assurance and Data Processing sections of the DEQ Guidance. The permittee shall amend the QAPP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP. The permittee shall notify DEQ of material changes to the QAPP and copies shall be kept on site and made available to DEQ upon request.
STATUS: <u>COMPLETE</u> - The Quality Assurance Project Plan (QAPP) was submitted to DEQ by T-O Engineers and approved.	

<table>
<tr><th>Compliance Activity (CA) Number and Completion Due Date</th><th>Compliance Activity Description</th></tr>
<tr><td>CA-105-03
As specified</td><td>Seepage Testing: The following table shows the date by which the permittee shall complete seepage testing on the specified lagoons;
<table>
<tr><td>Lagoon:</td><td>Seepage Test Due Date:</td></tr>
<tr><td>Storage Lagoon</td><td>June 30, 2019</td></tr>
</table>
Submit to DEQ for review and approval a proposed schedule and procedure for performing the required seepage tests at least 42 days prior to the planned seepage test. Guidance for developing seepage test procedures are available at: http://www.deq.idaho.gov/water-quality/wastewater/laggoon-deepage-testing .aspx The seepage test procedures shall be sealed by the Idaho licensed professional engineer or professional geologist in responsible charge for the test.

Seepage tests shall be completed in accordance with the procedures approved by DEQ. The seepage test report shall be sealed by the person in responsible charge and submitted within 90 days after completion of the seepage test.

For municipal lagoons, the leakage rate for lagoons constructed after April 15, 2007 shall be no more than zero point one hundred twenty-five (0.125) inches (1/8 inch) per day. The leakage rate for existing lagoons constructed prior to April 15, 2007 shall be no more than zero point twenty-five (0.25) inches (1/4 inch) per day. See IDAPA58.01.16.493.03. Requirements for lagoons leaking above the allowable amount are outlined in IDAPA 58.01.16.493.04.</td></tr>
<tr><td colspan="2">STATUS: COMPLETE - Seepage Testing, in accordance with the DEQ approved plan was initialed in 2019 and the lagoon was found to be leaking in excess of allowable limits. Testing was halted and DEQ, Mr. Chris Westerman, was notified on June 3, 2019 by Mr. Brett Converse, JUB Engineering. After numerous efforts to identify leaks in the lagoon liner, we were finally successful and repairs were made. The lagoon was seepage tested and the final seepage test results report was submitted to DEQ by Brett Converse, P.E., J-U-B Engineers on October 14, 2020, Michael Stambulis, P.E. at DEQ, acknowledged we had “satisfactorily met the requirements of the Wastewater Rules (IDAPA 58.01.16.493.03) of reuse permit M-105-04 for the storage lagoon.”</td></tr>
<tr><td>CA-105-04
By December 31, 2019</td><td>Silvicultural Plan: An updated silvicultural plan for the reuse site prepared by a professional silviculturist shall be submitted to DEQ. This plan shall include the dominant vegetation species occupying the application site, estimated percentage of the application site occupied by each of the dominant species, land management activities that will maximize ET and nutrient uptake, harvesting schedules, and nutrient uptake estimates with literature references for the dominant species present.. Once completed the silvicultural plan shall be implemented and included in the updated plan of operation.</td></tr>
<tr><td colspan="2">STATUS: COMPLETE –The required Silvicultural Plan was completed by Shaun Hoover, Forester and William Love, Certified Forester with Inland Forest Management. The Report was submitted to Matt Plaisted, P.E., DEQ on July 24, 2020 by: Bob Hansen, WSM.</td></tr>
</table>

<table>
<tr><th>Compliance Activity (CA) Number and Completion Due Date</th><th>Compliance Activity Description</th></tr>
</table>

CA-105-05 1 year prior to permit expiration	**Pre-Application Workshop:** If the permittee intends to continue operating the reuse facility beyond the expiration date of this permit, the permittee shall contact DEQ and schedule a pre-application workshop to discuss the compliance status of the facility and the content required for the reuse permit application package.
STATUS: The permittee will contact DEQ, 1 year prior to permit expiration, and schedule a pre-application workshop to discuss the compliance status of the facility and the content required for the reuse permit application package.	
CA-105-06 6 months prior to permit expiration	**Renewal Permit Application:** The permittee shall submit to DEQ a complete permit renewal application package, which fulfills the requirements specified at the pre-application workshop identified in CA-105-05.
STATUS: The permittee will submit to DEQ, 6 months prior to permit expiration, a complete permit renewal application package which fulfills the requirements specified at the pre-application workshop identified in CA-003-05.	

4. *Results of all backflow testing, repairs, and replacements required by Section 9.1.1 of this permit.*

   There are no backflow prevention assemblies at the reuse land application site.

5. *Discussion of major maintenance activities such as major equipment replacement, lagoon liner maintenance, and wastewater treatment and reuse facility maintenance.*

   Repair of the failed PLC which failed in September was the only major maintenance for the year.

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6. *A summary of all noncompliance events that occurred during the reporting year. Examples of noncompliance events that must be discussed include, but are not limited to: exceedance of permit limits, complaints, missed monitoring events, incorrect monitoring dates or frequencies, dry monitoring wells, uncontained spills causing runoff, construction without DEQ engineering plan approval, construction without engineering inspection, and reporting incorrect acreage.*

   The missed sampling of nitrates, nitrites, and TKN in September is the only noncompliance event. Results from August were used for September loading calculations.

7. *Submittal of the calculations and observations for hydraulic management units specified in the table below.*

   See item 9 below.

8. *Laboratory analytical reports for monitoring specified in Section 5 of the permit. Chain of custody forms, supporting information for laboratory analytical reports and quality assurance documentation shall be available for review upon request by DEQ.*

   All analytical reports are attached.

9. The parameters in the following table:

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Monitoring Point Serial Number	Parameter (Calculate for each MU)	Units

MU-10501 MU-10502 MU-10503	Recycled water loading rate	Million gallons/month Inches/month
	Irrigation water requirement (IWR) for each crop grown	Inches/month Inches/GS
	Recycled water nitrogen loading rates	Pounds N/acre-year

Recycled Water Loading Rates

	Volume Applied (MG)		
	MU-10501	MU-10502	MU-10503
August	0.310	0.436	0.379
September	0.056	0.125	0.210

	Inches/Acre Applied		
	MU-10501	MU-10502	MU-10503
August	1.64	3.24	1.61
September	0.30	0.93	0.89

Irrigation Water Requirement

	Calculated IWR (inches/acre)		
	MU-10501	MU-10502	MU-10503
August	7.45	7.45	7.45
September	4.37	4.37	4.37

Growing Season Calculated IWR (in/acre)		
MU-10501	MU-10502	MU-10503
28.61	28.61	28.61

Pounds Nitrogen /Acre-Year

Pounds Nitrogen Applied/Acre-Year		
MU-10501	MU-10502	MU-10503
19.31	41.65	25.04

6.1.3 Submittals

This annual report is being submitted in accordance with:

2. Annual reports and other information required by this permit is being signed by the a duly Authorized Representative of the Responsible Official in accordance with:
   a. The authorization is made in writing by the responsible official;
   b. The authorization specified an individual or position having responsibility for the overall operation of the regulated facility.
   c. The written authorization is submitted to DEQ.

As always, if you have any questions, please feel free to contact me at any time.

"I certify that the information provided in this submittal was prepared in conformance with the Quality Assurance Project Plan required by permit M-105-04, and is to the best of my knowledge, true, accurate and complete and I acknowledge that knowing submission of false or incomplete information may result in permit revocation as provided for in IDAPA-58.01.17.920.01 or other enforcement action as provided for under Idaho law."

Sincerely,

Bob Hansen
Bayview RCO

c: BWSD Board, bwsd637@gmail.com
Kyle Meschko, P.E. kmeschko@Kellerassociates.com
Jeff Cowley, Operator, WSMI, jeff.cowley@usa.com
DEQ, croplansubmittal@deq.idaho.gov

Attachments: Operation Logs, Certificates of Analysis

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - APRIL 2022

PERMIT MAX			306,670			217,920		380,481		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	1.77 PRESIP in.	WEEKLY GrndwtrDepth(in.)		
			#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.00			
2		0											0.13			
3		0											0.25			
4		0											0.42			
5		0											0.18			
6		0											0.00			
7		0											0.00			
8		0											0.00			
9		0											0.00			
10		0											0.00			
11		0											0.06			
12		0											0.00			
13		0											0.00			
14		0											0.00			
15		0											0.00			
16		0											0.00			
17		0											0.08			
18		0											0.00			
19		0											0.22			
20		0											0.02			
21		0											0.08			
22		0											0.11			
23		0											0.00			
24		0											0.01			
25		0											0.00			
26		0											0.33			
27		0											0.13			
28		0											0.04			
29		0											0.00			
30		0											0.00			
31																
TOTAL (ZONE) GALLONS			0	0	0	0	0	0	0							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	0.00	0.00	0.00	0.00	0.00							
TOTAL (MU) GALLONS			0			0		0				TOTAL PRECIP.	2.06			
TOTAL (MU) ACRE INCHES			0.00			0.00		0.00				Precip.Adjustment	-0.29			
TOTAL NITROGEN - LBS/ACRE MONTH			0.00			0.00		0.00								
TOTAL NITROGEN - LBS/ACRE CUM. YR			0.00			0.00		0.00								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)		MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)		

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	251,708
MU-10502 Calculated Adjusted IRW	178,864
MU-10503 Calculated Adjusted IRW	312,290

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - MAY 2022

PERMIT MAX			820,638			583,147		1,018,155		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	2.03 PRESIP in.	WEEKLY GrndwtrDepth(in.)		
			#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.01			
2		0											0.00			
3		0											0.00			
4		0											0.00			
5		0											0.04			
6		0											0.52			
7		0											1.04			
8		0											0.41			
9		0											0.00			
10		0											0.02			
11		0											0.00			
12		0											0.00			
13		0											0.31			
14		0											0.00			
15		0											0.00			
16		0											0.00			
17		0											0.00			
18		0											0.00			
19		0											0.18			
20		0											0.00			
21		0											0.00			
22		0											0.00			
23		0											0.00			
24		0											0.17			
25		0											0.05			
26		0											0.00			
27		0											0.19			
28		0											0.33			
29		0											0.01			
30		0											0.88			
31		0											0.00			
TOTAL (ZONE) GALLONS			0	0	0	0	0	0	0							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	0.00	0.00	0.00	0.00	0.00							
TOTAL (MU) GALLONS			0			0		0				TOTAL PRECIP.	4.16			
TOTAL (MU) ACRE INCHES			0.00			0.00		0.00				Precip.Adjustment	-2.13			
TOTAL NITROGEN - LBS/ACRE MONTH			0.00			0.00		0.00								
TOTAL NITROGEN - LBS/ACRE CUM. YR			0.00			0.00		0.00								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)		MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)		

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	416,952
MU-10502 Calculated Adjusted IRW	296,287
MU-10503 Calculated Adjusted IRW	517,307

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - JUNE 2022

PERMIT MAX			1,104,403			784,790		1,370,219		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	1.89 PRESIP in.	WEEKLY GrndwtrDepth(in.)		
			#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.00			
2		0											0.00			
3		0											0.25			
4		0											1.32			
5		0											0.29			
6		0											0.37			
7		0											0.00			
8		0											0.00			
9		0											0.03			
10		0											0.12			
11		0											0.64			
12		0											0.37			
13		0											0.83			
14		0											0.69			
15		0											0.14			
16		0											0.00			
17		0											0.00			
18		0											0.00			
19		0											0.02			
20		0											0.00			
21		0											0.00			
22		0											0.00			
23		0											0.00			
24		0											0.00			
25		0											0.00			
26		0											0.00			
27		0											0.00			
28		0											0.00			
29		0											0.00			
30		0											0.02			
31																
TOTAL (ZONE) GALLONS			0	0	0	0	0	0	0							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	0.00	0.00	0.00	0.00	0.00							
TOTAL (MU) GALLONS			0			0		0		TOTAL PRECIP.			5.09			
TOTAL (MU) ACRE INCHES			0.00			0.00		0.00		Precip.Adjustment			-3.20			
TOTAL NITROGEN - LBS/ACRE MONTH			0.00			0.00		0.00								
TOTAL NITROGEN - LBS/ACRE CUM. YR			0.00			0.00		0.00								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)		MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)		

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	497,927
MU-10502 Calculated Adjusted IRW	353,827
MU-10503 Calculated Adjusted IRW	617,772

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - July 2022

PERMIT MAX			1,652,985			1,174,614		2,050,838		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	0.94 PRESIP in.	MONTHLY GrndwtrDepth(in.)		
			#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.00			
2		0											0.00			
3		0											0.05			
4		0											0.08			
5		0											0.02			
6		0											0.09			
7		0											0.08			
8		0											0.00			
9		0											0.00			
10		0											0.00			
11		0											0.00			
12		0											0.00			
13		0											0.04			
14		0											0.00			
15		0											0.00			
16		0											0.09			
17		0											0.00			
18		0											0.03			
19		0											0.00			
20		0											0.00			
21		0											0.00			
22		0											0.00			
23		0											0.00			
24		0											0.00			
25		0											0.00			
26		0											0.00			
27		0											0.00			
28		0											0.00			
29		0											0.00			
30		0											0.00			
31		0											0.00			
TOTAL (ZONE) GALLONS			0	0	0	0	0	0	0							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	0.00	0.00	0.00	0.00	0.00							
TOTAL (MU) GALLONS			0			0		0		TOTAL PRECIP.			0.48			
TOTAL (MU) ACRE INCHES			0.00			0.00		0.00		Precip.Adjustment			0.46			
TOTAL NITROGEN - LBS/ACRE MONTH			0.00			0.00		0.00								
TOTAL NITROGEN - LBS/ACRE CUM. YR			0.00			0.00		0.00								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)		MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)		

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	1,740,166
MU-10502 Calculated Adjusted IRW	1,236,565
MU-10503 Calculated Adjusted IRW	2,159,002

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - AUGUST 2022

PERMIT MAX			1,383,511			983,126		1,716,505		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	1.02 PRESIP in.	MONTHLY Grndwtr Depth(in.)		
			#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.00			
2		0											0.00			
3	7641000	0											0.00			
4	7718000	77,000			77,000					1.7	45	ND	0.00			
5	7765000	47,000				47,000				3.8	47		0.00			
6	7828000	63,000					63,000			4.5	44		0.00			
7	7835000	7,000						7,000		4.6	30		0.00			
8	7900000	65,000						65,000		3.6	35		0.00			
9	7900000	0							55,000	3.7	47		0.00			
10	7954000	54,000			54,000					3.1	33	ND	0.02			
11	8000000	46,000				46,000				3.2	42		0.00			
12	8061000	61,000					61,000			2.9	46		0.00			
13	8080000	19,000						19,000		2.0	42		0.00			
14	8080000	0							66,000	3.8	54		0.00			
15	8143000	63,000			63,000					1.9	55		0.00			
16	8191000	48,000				48,000				2.3	44		0.00			
17	8234000	43,000					43,000			2.1	33	ND	0.00			
18	8278000	44,000						44,000		8.4	52		0.00			
19	8278000	0							46,000	2.1	36		0.00			
20	8336000	58,000			58,000					6.0	44		0.01			
21	8382000	46,000				46,000				1.8	36		0.00			
22	8439000	57,000					57,000			3.5	43		0.00			
23	8463000	24,000						24,000		3.2	56	ND	0.00			
24	8463000	0							53,000	5.6	42		0.00	73	75	76
25	8521000	58,000			58,000					1.8	35		0.00			
26	8546000	25,000				25,000				2.9	41		0.84			
27		0											0.00			
28		0											0.00			
29		0											0.00			
30		0											0.00			
31		0											0.00			
TOTAL (ZONE) GALLONS			0	0	310,000	212,000	224,000	159,000	220,000							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	4.92	3.15	3.33	1.35	1.87							
TOTAL (MU) GALLONS			310,000			436,000		379,000		TOTAL PRECIP.			0.87			
TOTAL (MU) ACRE INCHES			1.64			3.24		1.61		Precip.Adjustment			0.15			
TOTAL NITROGEN - LBS/ACRE MONTH			16.35			32.37		16.11								
TOTAL NITROGEN - LBS/ACRE CUM. YR			16.35			32.37		16.11								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)	12.60	MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)	31.55	

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	1,411,940
MU-10502 Calculated Adjusted IRW	1,003,327
MU-10503 Calculated Adjusted IRW	1,751,776

BAYVIEW WATER AND SEWER DISTRICT - WASTEWATER LAND APPLICATION LOG - SEPTEMBER 2022

PERMIT MAX			765,275			543,806		949,468		N/A		23/100mL	AVG.	3 FEET (36")		
DATE	LA-METER READING	Land Ap TOTAL VOLUME	MU-10501-AREA 1-6.98 Acres VOLUME TO ZONE			MU-10502-Area 2-4.96 VOLUME TO ZONE		MU-10503-Area 3-8.66 VOLUME TO ZONE		CHLORINE		WEEKLY TOTAL Bac-T	1.18 PRESIP in.	MONTHLY GrndwtrDepth(in.)		
	8546000		#1 (2.33)	#2 (2.33)	#3 (2.32)	#4 (2.48)	#5 (2.48)	#6(4.33)	#7 (4.33)	FREE	TOT			501	502	503
1		0											0.00			
2		0											0.00			
3		0											0.00			
4		0											0.05			
5		0											0.00			
6	8607000	61,000					61,000			1.3	41		0.00	73	75	76
7	8630000	23,000						23,000		1.6	42	2	0.00			
8	8630000	0							79,000	3.2	37		0.00			
9	8686000	56,000			56,000					1.0	25		0.00			
10	8730000	44,000				44,000				2.4	28	`	0.00			
11	8750000	20,000					20,000			5.1	17		0.00			
12	8820000	70,000						70,000		3.4	28		0.00			
13	8820000	0							38,000	1.9	47		0.00			
14		0											0.02			
15		0											0.10			
16		0											0.00			
17		0											0.00			
18		0											0.00			
19		0											0.00			
20		0											0.00			
21		0											0.00			
22		0											0.00			
23		0											0.07			
24		0											0.00			
25		0											0.00			
26		0											0.00			
27		0											0.00			
28		0											0.00			
29		0											0.03			
30		0											0.58			
31																
TOTAL (ZONE) GALLONS			0	0	56,000	44,000	81,000	93,000	117,000							
TOTAL (ZONE) ACRE INCHES			0.00	0.00	0.89	0.65	1.20	0.79	1.00							
TOTAL (MU) GALLONS			56,000			125,000		210,000		TOTAL PRECIP.			0.85			
TOTAL (MU) ACRE INCHES			0.30			0.93		0.89		Precip.Adjustment			0.33			
TOTAL NITROGEN - LBS/ACRE MONTH			2.95			9.28		8.93								
TOTAL NITROGEN - LBS/ACRE CUM. YR			19.31			41.65		25.04								

NOTE: 50% of the Practical Quantitation Limits (PQL) for all ND Lab results have been added for these calculations

Total Kjeldahl nitrogen, as N-PQL = 0.09 (0.045 @ 50%)	12.60	MONTHLY
Nitrite+Nitrate-nitrogen,as N-PQL=0.1/ea (0.05@50%)	31.55	

IRW BASED ON PRECIPITATION ADJUSTMENT	
MU-10501 Calculated Adjusted IRW	827,818
MU-10502 Calculated Adjusted IRW	588,249
MU-10503 Calculated Adjusted IRW	1,027,064

Accurate Testing Labs, LLC
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Certificate of Analysis

Order No.: **2022080136**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: Bayview Sewer

Date Received: 08/04/2022 15:00

Sample: **1**
Location: Land App Tap
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 08/04/2022 14:05
Collected by: Bob Kuchenski

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Total Coliform Bacteria	ND	MPN/100mL	SM 9221B	1.8	08/06/22	WM
Temperature (Sample Received)	5.5	deg. C	Infrared		08/04/22	JM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/08/22

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Certificate of Analysis

Order No.: **2022080243**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: Bayview Water & Sewer

Date Received: 08/10/2022 14:55

Sample: **1**
Location: Land App Tap
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 08/10/2022 13:55
Collected by: Bob Kuchenski

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Total Coliform Bacteria	ND	MPN/100mL	SM 9221B	1.8	08/14/22	WM
Temperature (Sample Received)	6.4	deg. C	Infrared		08/10/22	JM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/15/22

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Certificate of Analysis

Order No.: **2022080466**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: Bayview Water & Sewer

Date Received: 08/17/2022 14:05

Sample: **1**
Location: Land App tap
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 08/17/2022 13:00
Collected by: Bob Kuchenski

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Total Coliform Bacteria	ND	MPN/100mL	SM 9221B	1.8	08/19/22	ME
Temperature (Sample Received)	4.7	deg. C	Infrared		08/17/22	JM

Sample: **2**
Location: Land App tap
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 08/17/2022 13:00
Collected by: Bob Kuchenski

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Nitrite-N	ND	mg/L	EPA 300.0	0.1	08/19/22	WM
Nitrate-N	31.5	mg/L	EPA 300.0	0.1	08/19/22	WM
Total Kjeldahl Nitrogen (N)	12.6	mg/L	SM 4500NORG B	0.11	08/26/22	GF

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/29/22

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Certificate of Analysis

Order No.: **2022080571**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: Bayview Water & Sewer

Date Received: 08/23/2022 12:50

Sample: **1**
Location: Land App Tap
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 08/23/2022 11:50
Collected by: Bob Kuchenski

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Total Coliform Bacteria	ND	MPN/100mL	SM 9221B	1.8	08/25/22	ME
Temperature (Sample Received)	7.1	deg. C	Infrared		08/23/22	JM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 08/25/22

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Certificate of Analysis

Order No.: **2022090142**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: BAYVIEW WATER & SEWER DISTRICT

Date Received: 09/07/2022 14:00

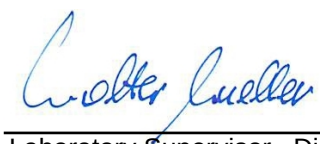
Sample: **1**
Location: LAND AP TAP
Sample Type: Grabs

Matrix: Waste Water
D/T Collected: 09/07/2022 13:00
Collected by: BOB K

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Total Coliform Bacteria	2	MPN/100mL	SM 9221B	1.8	09/10/22	WM
Temperature (Sample Received)	6	deg. C	Infrared		09/07/22	JM

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:



Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 09/12/22

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Certificate of Analysis

Order No.: **2022100266**

Bayview Water & Sewer Distr.
P.O. Box 637
Bayview , ID 83803

Project: Soil- Bayview Land Application

Date Received: 10/12/2022 12:55

Sample: **1**
Location: Soil, SU-10501-0"-12"
Sample Type: Composites

Matrix: Soil
D/T Collected: 10/12/2022 09:00
Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	2.58	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	0.335	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	90.91	%	SM 2540G		11/10/22	ME

Sample: **2**
Location: Soil, SU-10501- 12"-24"
Sample Type: Composites

Matrix: Soil
D/T Collected: 10/12/2022 09:00
Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	ND	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	ND	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	90.39	%	SM 2540G		11/10/22	ME

Sample: **3**
Location: Soil, SU-10501- 24"-36"
Sample Type: Composites

Matrix: Soil
D/T Collected: 10/12/2022 09:00
Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	0.802	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	ND	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	90.38	%	SM 2540G		11/10/22	ME

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 11/23/22

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Order No.: **2022100266**

Sample: **4** Matrix: Soil
Location: Soil, SU-10502- 0"-12" D/T Collected: 10/12/2022 10:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	1.22	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	26.3	mg/Kg	S-3.10	0.1	11/22/22	GF
Total Solids	67.02	%	SM 2540G		11/10/22	ME

Sample: **5** Matrix: Soil
Location: Soil, SU-10502- 12"-24" D/T Collected: 10/12/2022 10:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	1.27	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	4.52	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	73.91	%	SM 2540G		11/10/22	ME

Sample: **6** Matrix: Soil
Location: Soil, SU-10502- 24"-36" D/T Collected: 10/12/2022 10:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	1.56	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	0.951	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	81.48	%	SM 2540G		11/10/22	ME

Sample: **7** Matrix: Soil
Location: Soil, SU-10503- 0"-12" D/T Collected: 10/12/2022 11:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	6.46	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	6.5	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	80.07	%	SM 2540G		11/10/22	ME

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 11/23/22

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Order No.: **2022100266**

Sample: **8** Matrix: Soil
Location: Soil, SU-10503- 12"-24" D/T Collected: 10/12/2022 11:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	2.25	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	0.348	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	90.45	%	SM 2540G		11/10/22	ME

Sample: **9** Matrix: Soil
Location: Soil, SU-10503- 24"-36" D/T Collected: 10/12/2022 11:00
Sample Type: Composites Collected by: Claire Hansen

Analyte	Result	Unit	Method	PQL	Analysis Date	Analyst
Ammonia-N (KCl Extract)	1.12	mg/Kg	S-3.50	0.25	11/17/22	GF
Nitrate-N (KCl Extract)	ND	mg/Kg	S-3.10	0.1	11/17/22	WM
Total Solids	91.68	%	SM 2540G		11/10/22	ME

If the RESULT is 'ND' (Not Detected) or 'Absent', that means the concentration is less than the PQL (Practical Quantitation Limit for this method).

Comments:

Laboratory Supervisor, Digitally signed by: Walter Mueller Date: 11/23/22