



Recycled Water Reuse Program
Idaho Department of Environmental Quality
Coeur d'Alene Regional Office

Outlet Bay Sewer District

M-018-05

2024 Annual Report Review

Date Completed: January 14, 2026

Completed by: Nathan Costner, Reuse Permit Writer

Department of Environmental Quality - Reuse Program
Reuse Permit: Annual Report Review Form

1 Preliminary Information	
1.1 Reviewer	
1.1.1 Name and Title	Nathan Costner - Reuse Permit Writer
1.1.2 Office (Workstation)	<input type="checkbox"/> Technical Services <input type="checkbox"/> BRO <input type="checkbox"/> CRO <input type="checkbox"/> IFRO <input checked="" type="checkbox"/> State Program Office <input type="checkbox"/> LRO <input type="checkbox"/> PRO <input type="checkbox"/> TFRO
1.1.3 Address	1410 N. Hilton St. Boise, ID 83706
1.1.4 Phone; email	Phone: (208) 373-0125 email: Nathan.costner@deq.idaho.gov
1.2 Annual Report	
1.2.1 Document Date:	January 4, 2025
1.2.2 Received Date:	January 10, 2025
1.2.3 Time Period Covered:	Beginning Date: November 1, 2023 End Date: October 31, 2024
1.2.4 Received by Due Date?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Comments: Received prior to January 31, 2025
1.3 Date of last Annual Report Review and Reviewer	Date: January 20, 2024 Reviewer Name: Emma Wooldridge
1.4 Reuse Summary Data: Recycled Water and Constituents applied to reuse site	Recycled Water applied: 16.09 million gallons Nitrogen: 2096 pounds
1.5 Signature of Reviewer and Date	 _____ Date: January 14, 2026

2 Facility Information	
2.1 Permittee Name	Outlet Bay Sewer District
2.2 Permit Number	M-018-05
2.3 Permit Expiration Date	November 1, 2026
2.4 Facility Type	<input checked="" type="checkbox"/> Slow Rate <input type="checkbox"/> Rapid Infiltration <input type="checkbox"/> Overland Flow <input type="checkbox"/> Aquifer Recharge <input type="checkbox"/> Other
2.5 Recycled Water Type	Municipal -> <input type="checkbox"/> Class A <input type="checkbox"/> Class B <input checked="" type="checkbox"/> Class C <input type="checkbox"/> Class D <input type="checkbox"/> Class E Industrial -> <input type="checkbox"/> Potato <input type="checkbox"/> Cheese <input type="checkbox"/> Sugar Beet <input type="checkbox"/> Other:
2.6 Facility Contact Information	
2.6.1 Facility Contact (name and title)	Mr. Fritz Broschet, Operator
2.6.2 Address	149 Outlet Bay Road Priest Lake, ID 83856
2.6.3 Phone and email	Phone: (208) 443 - 3831 email: outletbaysewer@gmail.com
2.7 Regional Office Jurisdiction	<input type="checkbox"/> BRO <input checked="" type="checkbox"/> CRO <input type="checkbox"/> IFRO <input type="checkbox"/> LRO <input type="checkbox"/> PRO <input type="checkbox"/> TFRO

3 Hydraulic Loading (Recycled Water and Supplemental Irrigation Water)

3.1 Is the land application site hydraulically loaded within permit limits?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: The permit limits hydraulic loadings to substantially at or below the irrigation water requirement (DEQ 2017, section 4.2). During the growing season, OBSD applied approximately 16.09 million gallons (MG) of Class C recycled water over the 46-acre management unit.

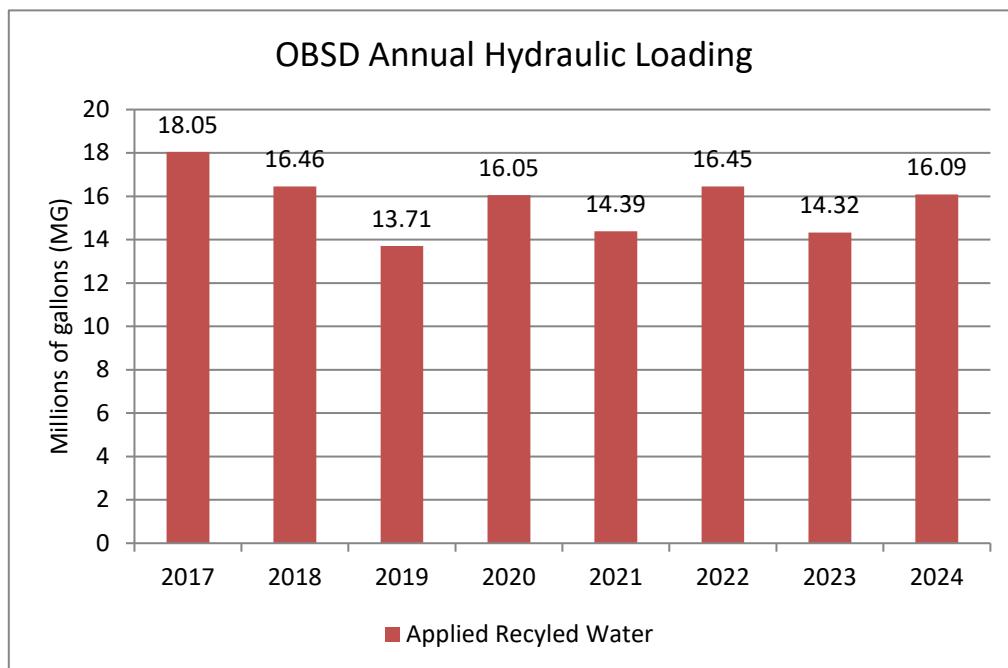


Figure 1: OBSD hydraulic loading data from 2017 to 2024

3.2 Are hydraulic loading calculations correct?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: The hydraulic calculations presented in the annual report appear to match DEQ calculations.

There was a computer error that affected influent flow for 8 days, but did not affect effluent calculations (OBSD 2025).

3.3 Are only permitted sites being used for land application?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: It appears only permitted sites are used for land application.

3.4 Is the growing season hydraulic loading substantially at the irrigation water requirement (IWR)?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: Permit M-018-05 requires OBSD to irrigate the native forest site substantially at or below the irrigation water requirement during the growing season (DEQ 2016, section 4.2). During the 2024 growing season, OBSD irrigated below the IWR as depicted in Figure 2.

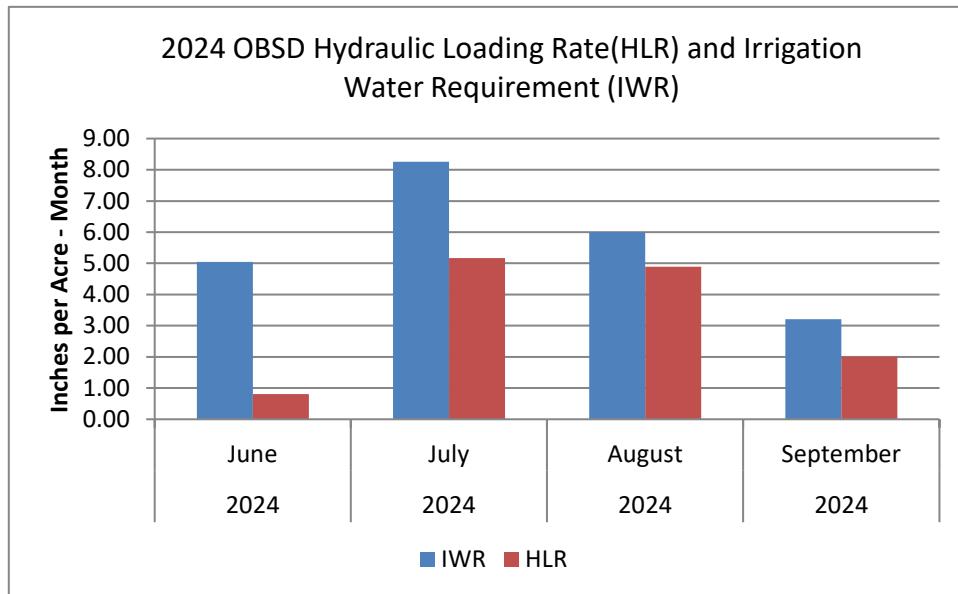


Figure 2: 2024 Hydraulic loading rate compared to irrigation water requirement.

3.5 Are non-growing season recycled water loading rates within permitted limits?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: OBSD is not permitted to apply recycled water during the non-growing season (DEQ 2016).

4 Nutrient / Constituent Loading and Cropping					
4.1 Which nutrients and/or constituents have loading limits in the permit?		<input checked="" type="checkbox"/> Nitrogen <input type="checkbox"/> Phosphorus <input type="checkbox"/> COD <input type="checkbox"/> BOD <input type="checkbox"/> Salt (i.e. NVDS, TDS, TDIS) <input type="checkbox"/> Other <input type="checkbox"/> None			
Comments: The permit limits nitrogen loading to 72 lbs./acre (DEQ 2016, section 4.3).					
4.2 Are nutrients / constituents land applied within limits of the permit?		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Comments: OBSD applied approximately 45.6 lbs/acre of nitrogen over the growing season below the permit limit of 72 lbs/acre. OBSD notes the 2024 nitrogen loading is up from last years total of 30.09 lbs/acre (OBSD 2025).					

4.3 Are nutrient / constituent loading calculations correct?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: The OBSD nutrient loading calculations match DEQ's calculations.	
4.4 Are crops grown on recycled water land treatment acreage?	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: OBSD is permitted to irrigate 46 acres of native forest (DEQ 2016).	
4.5 Are crop yields typical for the region?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable.	
4.6 Are crop uptake calculations done correctly?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable.	

<h2>5 Monitoring</h2>	
5.1 Which media are required to be sampled in the permit during this reporting period?	<input type="checkbox"/> Wastewater <input checked="" type="checkbox"/> Recycled Water <input type="checkbox"/> Groundwater <input type="checkbox"/> Plant Tissue <input type="checkbox"/> Irrigation Water <input checked="" type="checkbox"/> Soils <input checked="" type="checkbox"/> Other
Comments: (DEQ 2016, section 5).	
<ul style="list-style-type: none"> • Recycled water monitoring when irrigating <ul style="list-style-type: none"> ○ Total coliform grab samples are required monthly. ○ Total chlorine residual is required as a daily grab sample. ○ Total Kjeldahl-nitrogen, nitrite + Nitrate-nitrogen are required as grab samples the first month of irrigation, July, and September. ○ The volume of recycled water irrigated requires daily meter readings. • Soil monitoring in October of the fifth year of the permit <ul style="list-style-type: none"> ○ Composite samples obtained from three depths requires analysis of nitrate-nitrogen, ammonium-nitrogen, pH, and plant available phosphorus. • Forest harvest monitoring <ul style="list-style-type: none"> ○ Each timber harvest must document the harvest date and yield in board feet. 	
<h3>5.2 Groundwater Monitoring</h3>	
5.2.1 Is the facility reporting monitoring data as required in the permit?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	
5.2.2 Are correct analytical methods used?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	

<p>5.2.3 Do monitoring data indicate compliance with permit limits (and Ground Water Quality Rule IDAPA 58.01.11 standards where applicable)?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	
<p>5.2.4 Has the facility provided analyses/interpretation of ground water data? If yes, summarize interpretation and/or add DEQ comments below.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	
<h3>5.3 Recycled Water / Irrigation Water</h3>	
<p>5.3.1 Is the facility reporting monitoring data as required in the permit?</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: The annual report indicates irrigation began on June 25 th . The June monthly irrigation report submitted with the annual report identifies two days (6/5, 6/13) with flow which do not present corresponding total chlorine residual data in the comments.	
The July 10 th constituent sampling event was assessed as June sampling data with a second July sampling occurring on July 31 st .	
<p>5.3.2 Are correct analytical methods used?</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Sample analysis is performed by Accurate Testing Labs, LLC. Methods used are in accordance with the OBSD Quality Assurance Project Plan's Table 12 listed methods (OBSD 2017).	
<p>5.3.3 Are current recycled water characteristics still as described in permit application materials?</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: The permit application presented an average nitrogen loading per acre of 31.4 using five years of data with a low of 17.4 lbs/acre and high of 48.8 lbs/acre (JSA 2015, Table 5). The 2024 nitrogen loading of 45.5 lbs/acre is aligned with the permit application materials.	
OBSD reflecting on their process, "I believe our Nitrogen went up due to the fact that we were not running the plant as we normally due because of the leak test." (OBSD 2025).	
<p>5.3.4 Which recycled water constituents have concentration limits in the permit?</p>	<input type="checkbox"/> Nitrogen <input type="checkbox"/> Phosphorus <input type="checkbox"/> Turbidity <input type="checkbox"/> TSS <input checked="" type="checkbox"/> Total Coliform <input type="checkbox"/> Other Microbial <input type="checkbox"/> Other <input type="checkbox"/> None
Comments: Permit M-018-05 specifies Class C disinfection limits; the median number of total coliform organisms does not exceed 23 total coliform organisms/100 mL, as determined from the bacteriological results of the last 3 days for which analyses have been completed. No sample shall exceed 230 total coliform organisms/100mL in any confirmed sample. If total coliform concentrations are above 23 total coliform organisms/100 mL in any one sample, then additional samples should be collected at a minimum weekly until the most recent sample is equal to or less than 23 total coliform organisms/ 100mL (DEQ 2016, section 4.5).	

<p>5.3.5 Are constituent concentrations within limits of the permit?</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Four total coliform samples were collected during the reporting year. Two coliform samples were analyzed slightly above the practical quantitation limit and two other samples yielded non-detect results.	
<p>5.3.6 Has the facility provided analyses/interpretation of recycled water/irrigation water data? If yes, summarize interpretation and/or add DEQ comments below.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: OBSD states the Total Coliform analyses "came back good with no issues". The total nitrogen loading is up from last years total, but below the permit limit. OBSD states they believe the nitrogen went up due to the fact that they were not running the plant as normal due to the seepage testing. Total influent flow for the year was down from last years total with speculation it is due to less infiltration with a drier spring and winter. Due to the pending seepage testing, the lagoons weren't drawn down as far as last year so there was extra to irrigate this year (OBSD 2025).	
<h4>5.4 Soils</h4>	
<p>5.4.1 Is the facility reporting monitoring data as required in the permit?</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Soil monitoring was completed in 2021 and was not required during the reporting year.	
<p>5.4.2 Are correct analytical methods used?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable to this reporting year.	
<p>5.4.3 Has the facility provided analyses/interpretation of soils data? If yes, summarize interpretation and/or add DEQ comments below.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable to this reporting year	
<h4>5.5 Plant Tissue Monitoring</h4>	
<p>5.5.1 Is the facility reporting monitoring data as required in the permit?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	
<p>5.5.2 Are correct analytical methods used?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	
<p>5.5.3 Has the facility provided analyses/interpretation of plant tissue data? If yes, summarize interpretation and/or add DEQ comments below.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Yes No Not Known Not Reviewed Not Applicable
Comments: Not applicable. The permit does not require groundwater monitoring.	

5.6 Other Monitoring

5.6.1 Briefly Describe Other Monitoring Required:

Each timber harvest must document the harvest date and yield in board feet.

5.6.2 Is the facility reporting monitoring data as required in the permit?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: Yield data was not presented in the annual report but did indicate the company (Mike Pearson logging) performing the action, that they are following the current silviculture plan, and intend to submit the harvest information in the subsequent annual report following completion of the project.

5.6.3 Are correct analytical methods used?	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: Not known. No applicable information has been provided at this time of submission.

5.6.4 Has the facility provided analyses/interpretation of other monitoring data? If yes, summarize interpretation and/or add DEQ comments below.	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: "At the end of our irrigation season we started some logging and thinning of the irrigation area and the rest of our property. This is being done by Mike Pearson logging. They are following the recommendations of our current silviculture plan, and we will start working on getting a new updated one after the logging is complete. They are doing a great job. By doing this thinning it will give us a better unobstructed area for our irrigation, and have nice spacing for the younger healthy trees to grow better. I will have the Timber harvest report in next years report, after we complete the project." (OBSD 2025).

6 Other Permit Conditions, General Comments, and Recommendations

6.1 Were acts of noncompliance reported as required by the permit?	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: OBSD notes they did not have any noncompliance issues or other major mechanical issues (OBSD 2025).

6.2 Was a compliance activity status update included in the annual report?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: A review of compliance activities and their status was not summarized, but the annual report included seepage testing approvals with DEQ and starting the preapplication workshop process in the subsequent reporting year.

Compliance Activity	Description	Due Date	Status
CA-018-01	Updated Plan of Operation (PO)	November 1, 2017	Submitted: August 24, 2016
CA-018-02	Quality Assurance Project Plan (QAPP)	November 1, 2017	Submitted: August 24, 2016 Updated: November 15, 2017
CA-018-03	Seepage Testing (Cell 1 & 2)	October 31, 2024 October 31, 2024	Approved: September 16, 2024 (Cell 1) Approved: September 20, 2024 (Cell 2)
CA-018-04	Pre-Application Workshop	November 1, 2025	Held: December 4, 2025
CA-018-05	Renewal Permit Application	May 2, 2026	Pending

6.3 Were results of backflow testing, repairs, and replacements included?	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: Back flow testing and repair information was not presented in the annual report, but OBSD did state that flow meters will receive calibration verification next year in accordance with the quality assurance plan.

6.4 Was a discussion of major maintenance activities (major equipment replacement, lagoon liner maintenance, wastewater treatment plant and reuse facility maintenance) included?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: The annual report included seepage test result approvals for lagoons LG-01803 and LG-01804 occurring during the reporting year. The letters of approval were delivered by DEQ to OBSD on September 16th and September 20th.

6.5 If there are follow-up items from a previous annual report review describe these items and their current status in the Comment Section below.	
	Comments: DEQ staff did not present any recommendations following review of the 2023 annual report.

6.6 Is the annual report submitted substantially complete?	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Yes No Not Known Not Reviewed Not Applicable

Comments: The 2024 annual report appears to be substantially complete.

6.7 Recommendations:

- The annual report indicates irrigation began on June 25th. The June monthly irrigation report submitted with the annual report identifies two days (6/5, 6/13) with flow which do not present corresponding total chlorine residual data in the comments. The July 10th constituent sampling event was assessed as June sampling data with a second July sampling occurring on July 31st. OBSD must plan sampling events to ensure that permit required sampling occurs during the month specified.

6.8 References:

Outlet Bay Sewer District. 2024. 2023 Annual Report Reuse Permit M-018-05. (OBSD 2024).

Outlet Bay Sewer District. 2025. 2024 Annual Report Reuse Permit M-018-05. (OBSD 2025).

Idaho Department of Environmental Quality. 2016. Wastewater Reuse Permit for Outlet Bay Sewer District. Permit M-018-05. (DEQ 2016).

Outlet Bay Sewer District. 2017. Outlet Bay Water & Sewer District Operation & Maintenance Manual. (OBSD 2017).

James A. Sewell and Associates (2015). Outlet Bay Sewer District Wastewater Reuse Permit Application Technical Report. (JSA 2015).