LIBERTY LAKE
SEWER & WATER DISTRICT 1
"Serving People and the Environment."

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Feb 24, 2021

Water Quality Permit Coordinator
Eastern Regional Office
Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205-1265

RE: Application for Renewal NPDES Permit # WA0045144

Dear Diana,

Enclosed please find Form 2A NPDES and requested documents pertaining to such. We apologize in our delay in submission of this application as we were under the impression that the Jan. 31, 2021 had been extended. Lab reports for priority pollutant scans and WET will be forth coming when received. We will also provide a hard copy when it is appropriate and safe to send. Please let me know if you have any questions or comments. Thank you.

Sincerely,

Dan Grogg
Chief Operator
Liberty Lake Water Reclamation Facility
Liberty Lake, WA 99019

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
FRS# 110005310733	WA0045144	Liberty Lake Water Reclamation	

Form 2A NPDES | EPA

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater
NEW AND EXISTING PUBLICLY OWNED TREATMENT WORKS

SECTION 1. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS (40 CFR 122.21(j)(1) and (9))

Facility Information

1.1 Facility name
Liberty Lake Water Reclamation Facility

Mailing address (street or P.O. box)
22510 E. Mission Avenue

City or town	State	ZIP code
Liberty Lake	WA	99019

Contact name (first and last)	Title	Phone number	Email address
Dan Grogg	Chief Operator	(509) 370-1453	dangrogg@libertylake.org

Location address (street, route number, or other specific identifier) ☐ Same as mailing address
N. 2218 Harvard Road

City or town	State	ZIP code
Liberty Lake	WA	99019

1.2 Is this application for a facility that has yet to commence discharge?
☐ Yes ➔ See instructions on data submission requirements for new dischargers. ☑ No

Applicant Information

1.3 Is applicant different from entity listed under Item 1.1 above?
☑ Yes ☐ No ➔ SKIP to Item 1.4.

Applicant name
Liberty Lake Sewer and Water District #1

Applicant address (street or P.O. box)
22510 E. Mission Avenue

City or town	State	ZIP code
Liberty Lake	WA	99019

Contact name (first and last)	Title	Phone number	Email address
BiJay Adams	General Manager	(509) 922-5443	bijay@libertylake.org

1.4 Is the applicant the facility's owner, operator, or both? (Check only one response.)
☐ Owner ☐ Operator ☑ Both

1.5 To which entity should the NPDES permitting authority send correspondence? (Check only one response.)
☐ Facility ☐ Applicant ☑ Facility and applicant (they are one and the same)

Existing Environmental Permits

1.6 Indicate below any existing environmental permits. (Check all that apply and print or type the corresponding permit number for each.)

Existing Environmental Permits

☑ NPDES (discharges to surface water) WA-0045144	☐ RCRA (hazardous waste)	☐ UIC (underground injection control)
☑ PSD (air emissions) Registered with SRCAA	☐ Nonattainment program (CAA)	☐ NESHAPs (CAA)
☐ Ocean dumping (MPRSA)	☐ Dredge or fill (CWA Section 404)	☑ Other (specify) BA-0045144 Biosolids

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
FRS# 110005310733	WA0045144	Liberty Lake Water Reclamation	

Collection System and Population Served

1.7 Provide the collection system information requested below for the treatment works.

Municipality Served	Population Served	Collection System Type (indicate percentage)	Ownership Status
City of Liberty Lake	10500	100 % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☑ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
Spokane County	1100	100 % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☑ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		____ % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
		____ % separate sanitary sewer ____ % combined storm and sanitary sewer ☐ Unknown	☐ Own ☐ Maintain ☐ Own ☐ Maintain ☐ Own ☐ Maintain
Total Population Served	Roughly 11600		

Total percentage of each type of sewer line (in miles)	Separate Sanitary Sewer System	Combined Storm and Sanitary Sewer
	100 %	0 %

Indian Country

1.8 Is the treatment works located in Indian Country?

☐ Yes ☑ No

1.9 Does the facility discharge to a receiving water that flows through Indian Country?

☑ Yes ☐ No

Design and Actual Flow Rates

1.10 Provide design *and* actual flow rates in the designated spaces.

Design Flow Rate
2.0 mgd

Annual Average Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
.761 mgd	.790 mgd	.793 mgd

Maximum Daily Flow Rates (Actual)		
Two Years Ago	**Last Year**	**This Year**
.924 mgd	.924 mgd	.897 mgd

Discharge Points by Type

1.11 Provide the total number of effluent discharge points to waters of the United States by type.

Total Number of Effluent Discharge Points by Type				
Treated Effluent	**Untreated Effluent**	**Combined Sewer Overflows**	**Bypasses**	**Constructed Emergency Overflows**
1				

Outfalls and Other Discharge or Disposal Methods

Outfalls Other Than to Waters of the United States

1.12 Does the POTW discharge wastewater to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the United States?

☐ Yes ☑ No ➔ SKIP to Item 1.14.

1.13 Provide the location of each surface impoundment and associated discharge information in the table below.

Surface Impoundment Location and Discharge Data

Location	Average Daily Volume Discharged to Surface Impoundment	Continuous or Intermittent (check one)
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent
	gpd	☐ Continuous ☐ Intermittent

1.14 Is wastewater applied to land?

☑ Yes ☐ No ➔ SKIP to Item 1.16.

1.15 Provide the land application site and discharge data requested below.

Land Application Site and Discharge Data

Location	Size	Average Daily Volume Applied	Continuous or Intermittent (check one)
WRF Grounds Irrigation	<4.0 acres	50000 gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent
	acres	gpd	☐ Continuous ☐ Intermittent

1.16 Is effluent transported to another facility for treatment prior to discharge?

☐ Yes ☑ No ➔ SKIP to Item 1.21.

1.17 Describe the means by which the effluent is transported (e.g., tank truck, pipe).

1.18 Is the effluent transported by a party other than the applicant?

☐ Yes ☐ No ➔ SKIP to Item 1.20.

1.19 Provide information on the transporter below.

Transporter Data

Entity name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	

Outfalls and Other Discharge or Disposal Methods Continued

1.20 In the table below, indicate the name, address, contact information, NPDES number, and average daily flow rate of the receiving facility.

Receiving Facility Data

Facility name	Mailing address (street or P.O. box)	
City or town	State	ZIP code
Contact name (first and last)	Title	
Phone number	Email address	
NPDES number of receiving facility (if any) ☐ None	Average daily flow rate mgd	

1.21 Is the wastewater disposed of in a manner other than those already mentioned in Items 1.14 through 1.21 that do not have outlets to waters of the United States (e.g., underground percolation, underground injection)?

☐ Yes ☑ No ➔ SKIP to Item 1.23.

1.22 Provide information in the table below on these other disposal methods.

Information on Other Disposal Methods

Disposal Method Description	Location of Disposal Site	Size of Disposal Site	Annual Average Daily Discharge Volume	Continuous or Intermittent (check one)
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent
		acres	gpd	☐ Continuous ☐ Intermittent

Variance Requests

1.23 Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(n)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)

☐ Discharges into marine waters (CWA Section 301(h))

☑ Water quality related effluent limitation (CWA Section 302(b)(2))

☐ Not applicable

Contractor Information

1.24 Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?

☐ Yes ☑ No ➔ SKIP to Section 2.

1.25 Provide location and contact information for each contractor in addition to a description of the contractor's operational and maintenance responsibilities.

Contractor Information

	Contractor 1	Contractor 2	Contractor 3
Contractor name (company name)			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Contact name (first and last)			
Phone number			
Email address			
Operational and maintenance responsibilities of contractor			

SECTION 2. ADDITIONAL INFORMATION (40 CFR 122.21(j)(1) and (2))

Design Flow

Outfalls to Waters of the United States

2.1 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No ➔ SKIP to Section 3.

Inflow and Infiltration

2.2 Provide the treatment works' current average daily volume of inflow and infiltration.

Average Daily Volume of Inflow and Infiltration
1000 gpd

Indicate the steps the facility is taking to minimize inflow and infiltration.

Estimate, known source remaining; drying beds at WRF only during rain and runoff. Some areas where ground water infiltrates to the sanitary sewer but flow is minimal as confirmed with video inspection. Majority of the system is relatively new and the majority of I&I is from storm related inflows.

Topographic Map

2.3 Have you attached a topographic map to this application that contains all the required information? (See instructions for specific requirements.)

☑ Yes ☐ No

Flow Diagram

2.4 Have you attached a process flow diagram or schematic to this application that contains all the required information? (See instructions for specific requirements.)

☑ Yes ☐ No

Scheduled Improvements and Schedules of Implementation

2.5 Are improvements to the facility scheduled?

☐ Yes ☑ No ➔ SKIP to Section 3.

Briefly list and describe the scheduled improvements.

1.

2.

3.

4.

2.6 Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1.					
2.					
3.					
4.					

2.7 Have appropriate permits/clearances concerning other federal/state requirements been obtained? Briefly explain your response.

☐ Yes ☐ No ☐ None required or applicable

Explanation:

SECTION 3. INFORMATION ON EFFLUENT DISCHARGES (40 CFR 122.21(j)(3) to (5))

Description of Outfalls

3.1 Provide the following information for each outfall. (Attach additional sheets if you have more than three outfalls.)

	Outfall Number 1	Outfall Number _____	Outfall Number _____
State	Washington		
County	Spokane		
City or town	Liberty Lake		
Distance from shore	15 ft.	ft.	ft.
Depth below surface	1-4 ft.	ft.	ft.
Average daily flow rate	.793 mgd	mgd	mgd
Latitude	47° 40′ 41.0″ N	° ′ ″	° ′ ″
Longitude	117° 6′ 59.0″ E	° ′ ″	° ′ ″

Seasonal or Periodic Discharge Data

3.2 Do any of the outfalls described under Item 3.1 have seasonal or periodic discharges?

☐ Yes ☑ No ➔ SKIP to Item 3.4.

3.3 If so, provide the following information for each applicable outfall.

	Outfall Number _____	Outfall Number _____	Outfall Number _____
Number of times per year discharge occurs			
Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs			

Diffuser Type

3.4 Are any of the outfalls listed under Item 3.1 equipped with a diffuser?

☐ Yes ☑ No ➔ SKIP to Item 3.6.

3.5 Briefly describe the diffuser type at each applicable outfall.

	Outfall Number _____	Outfall Number _____	Outfall Number _____

Waters of the U.S.

3.6 Does the treatment works discharge or plan to discharge wastewater to waters of the United States from one or more discharge points?

☑ Yes ☐ No ➔ SKIP to Section 6.

Receiving Water Description

3.7 Provide the receiving water and related information (if known) for each outfall.

	Outfall Number _____	Outfall Number _____	Outfall Number _____
Receiving water name			
Name of watershed, river, or stream system			
U.S. Soil Conservation Service 14-digit watershed code			
Name of state management/river basin			
U.S. Geological Survey 8-digit hydrologic cataloging unit code			
Critical low flow (acute)	cfs	cfs	cfs
Critical low flow (chronic)	cfs	cfs	cfs
Total hardness at critical low flow	mg/L of $CaCO_3$	mg/L of $CaCO_3$	mg/L of $CaCO_3$

Treatment Description

3.8 Provide the following information describing the treatment provided for discharges from each outfall.

	Outfall Number 1	Outfall Number _____	Outfall Number _____
Highest Level of Treatment (check all that apply per outfall)	☐ Primary ☐ Equivalent to secondary ☑ Secondary ☑ Advanced ☑ Other (specify) Membrame Filtration	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5 or $CBOD_5$	99.5 %	%	%
TSS	99.9 %	%	%
Phosphorus	☐ Not applicable 99.5 %	☐ Not applicable %	☐ Not applicable %
Nitrogen	☐ Not applicable 98.5 %	☐ Not applicable %	☐ Not applicable %
Other (specify) Ammonia	☐ Not applicable 2.2 Lbs/day %	☐ Not applicable %	☐ Not applicable %

Treatment Description Continued

3.9 Describe the type of disinfection used for the effluent from each outfall in the table below. If disinfection varies by season, describe below.

Low pressure low intensity system consisting of 5 - 40 bulb modules. As facility flow is equalized, lamps are not operated in flow pace mode. Currently only 1 module is required for outstanding fecal coliform reduction (typically <1.0 cfu/100 ml.).

	Outfall Number 1	Outfall Number _____	Outfall Number _____
Disinfection type	Ultra Violet		
Seasons used	Continuous		
Dechlorination used?	☐ Not applicable ☐ Yes ☑ No	☐ Not applicable ☐ Yes ☐ No	☐ Not applicable ☐ Yes ☐ No

Effluent Testing Data

3.10 Have you completed monitoring for all Table A parameters and attached the results to the application package?

☑ Yes ☐ No

3.11 Have you conducted any WET tests during the 4.5 years prior to the date of the application on any of the facility's discharges or on any receiving water near the discharge points?

☐ Yes ☑ No ➔ SKIP to Item 3.13.

3.12 Indicate the number of acute and chronic WET tests conducted since the last permit reissuance of the facility's discharges by outfall number or of the receiving water near the discharge points.

	Outfall Number 1		Outfall Number _____		Outfall Number _____	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Number of tests of discharge water	6	6				
Number of tests of receiving water						

3.13 Does the treatment works have a design flow greater than or equal to 0.1 mgd?

☑ Yes ☐ No ➔ SKIP to Item 3.16.

3.14 Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent?

☐ Yes ➔ Complete Table B, including chlorine. ☑ No ➔ Complete Table B, omitting chlorine.

3.15 Have you completed monitoring for all applicable Table B pollutants and attached the results to this application package?

☐ Yes ☑ No

3.16 Does one or more of the following conditions apply?

- The facility has a design flow greater than or equal to 1 mgd.
- The POTW has an approved pretreatment program or is required to develop such a program.
- The NPDES permitting authority has informed the POTW that it must sample for the parameters in Table C, must sample other additional parameters (Table D), or submit the results of WET tests for acute or chronic toxicity for each of its discharge outfalls (Table E).

☑ Yes ➔ Complete Tables C, D, and E as applicable. ☐ No ➔ SKIP to Section 4.

3.17 Have you completed monitoring for all applicable Table C pollutants and attached the results to this application package?

☑ Yes ☐ No

3.18 Have you completed monitoring for all applicable Table D pollutants required by your NPDES permitting authority and attached the results to this application package?

☑ Yes ☐ No additional sampling required by NPDES permitting authority.

Effluent Testing Data Continued

3.19 Has the POTW conducted either (1) minimum of four quarterly WET tests for one year preceding this permit application or (2) at least four annual WET tests in the past 4.5 years?

☐ Yes ☑ No ➔ Complete tests and Table E and SKIP to Item 3.26.

3.20 Have you previously submitted the results of the above tests to your NPDES permitting authority?

☑ Yes ☐ No ➔ Provide results in Table E and SKIP to Item 3.26.

3.21 Indicate the dates the data were submitted to your NPDES permitting authority and provide a summary of the results.

Date(s) Submitted (MM/DD/YYYY)	Summary of Results
10/14/2014	Results were submitted with previous NPDES application. We will provide with latest updated testing results when available.

3.22 Regardless of how you provided your WET testing data to the NPDES permitting authority, did any of the tests result in toxicity?

☐ Yes ☑ No ➔ SKIP to Item 3.26.

3.23 Describe the cause(s) of the toxicity:

3.24 Has the treatment works conducted a toxicity reduction evaluation?

☐ Yes ☑ No ➔ SKIP to Item 3.26.

3.25 Provide details of any toxicity reduction evaluations conducted.

Past testing dates: 5/8/2012, 9/11/2012, 11/16/2012, 5/6/2014, 8/1/2014, 11/11/2014 No toxicity observed at permit limit. Currently arranging additional round of sampling as requested.

3.26 Have you completed Table E for all applicable outfalls and attached the results to the application package?

☐ Yes ☑ Not applicable because previously submitted information to the NPDES permitting authority.

SECTION 4. INDUSTRIAL DISCHARGES AND HAZARDOUS WASTES (40 CFR 122.21(j)(6) and (7))

Industrial Discharges and Hazardous Wastes

4.1 Does the POTW receive discharges from SIUs or NSCIUs?

☐ Yes ☑ No ➔ SKIP to Item 4.7.

4.2 Indicate the number of SIUs and NSCIUs that discharge to the POTW.

Number of SIUs	Number of NSCIUs
0	

4.3 Does the POTW have an approved pretreatment program?

☑ Yes ☐ No

4.4 Have you submitted either of the following to the NPDES permitting authority that contains information substantially identical to that required in Table F: (1) a pretreatment program annual report submitted within one year of the application or (2) a pretreatment program?

☐ Yes ☑ No ➔ SKIP to Item 4.6.

4.5 Identify the title and date of the annual report or pretreatment program referenced in Item 4.4. SKIP to Item 4.7.

4.6 Have you completed and attached Table F to this application package?

☐ Yes ☐ No

Industrial Discharges and Hazardous Wastes Continued

4.7 Does the POTW receive, or has it been notified that it will receive, by truck, rail, or dedicated pipe, any wastes that are regulated as RCRA hazardous wastes pursuant to 40 CFR 261?

☐ Yes ☑ No ➔ SKIP to Item 4.9.

4.8 If yes, provide the following information:

Hazardous Waste Number	Waste Transport Method (check all that apply)	Annual Amount of Waste Received	Units
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____ _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____ _____		
	☐ Truck ☐ Rail ☐ Dedicated pipe ☐ Other (specify) _____ _____		

4.9 Does the POTW receive, or has it been notified that it will receive, wastewaters that originate from remedial activities, including those undertaken pursuant to CERCLA and Sections 3004(7) or 3008(h) of RCRA?

☐ Yes ☑ No ➔ SKIP to Section 5.

4.10 Does the POTW receive (or expect to receive) less than 15 kilograms per month of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e)?

☐ Yes ➔ SKIP to Section 5. ☑ No

4.11 Have you reported the following information in an attachment to this application: identification and description of the site(s) or facility(ies) at which the wastewater originates; the identities of the wastewater's hazardous constituents; and the extent of treatment, if any, the wastewater receives or will receive before entering the POTW?

☐ Yes ☑ No

SECTION 5. COMBINED SEWER OVERFLOWS (40 CFR 122.21(j)(8))

CSO Map and Diagram

5.1 Does the treatment works have a combined sewer system?

☐ Yes ☑ No ➔ SKIP to Section 6.

5.2 Have you attached a CSO system map to this application? (See instructions for map requirements.)

☐ Yes ☐ No

5.3 Have you attached a CSO system diagram to this application? (See instructions for diagram requirements.)

☐ Yes ☐ No

CSO Outfall Description

5.4 For each CSO outfall, provide the following information. (Attach additional sheets as necessary.)

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
City or town			
State and ZIP code			
County			
Latitude	° ' "	° ' "	° ' "
Longitude	° ' "	° ' "	° ' "
Distance from shore	ft.	ft.	ft.
Depth below surface	ft.	ft.	ft.

CSO Monitoring

5.5 Did the POTW monitor any of the following items in the past year for its CSO outfalls?

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Rainfall	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO flow volume	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO pollutant concentrations	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Receiving water quality	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
CSO frequency	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Number of storm events	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

CSO Events in Past Year

5.6 Provide the following information for each of your CSO outfalls.

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Number of CSO events in the past year	events	events	events
Average duration per event	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated	hours ☐ Actual or ☐ Estimated
Average volume per event	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated	million gallons ☐ Actual or ☐ Estimated
Minimum rainfall causing a CSO event in last year	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated	inches of rainfall ☐ Actual or ☐ Estimated

CSO Receiving Waters

5.7 Provide the information in the table below for each of your CSO outfalls.

	CSO Outfall Number ____	CSO Outfall Number ____	CSO Outfall Number ____
Receiving water name			
Name of watershed/ stream system			
U.S. Soil Conservation Service 14-digit watershed code (if known)	☐ Unknown	☐ Unknown	☐ Unknown
Name of state management/river basin			
U.S. Geological Survey 8-Digit Hydrologic Unit Code (if known)	☐ Unknown	☐ Unknown	☐ Unknown
Description of known water quality impacts on receiving stream by CSO (see instructions for examples)			

SECTION 6. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

6.1 In Column 1 below, mark the sections of Form 2A that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

Column 1	Column 2	
☑ Section 1: Basic Application Information for All Applicants	☑ w/ variance request(s)	☑ w/ additional attachments
☑ Section 2: Additional Information	☑ w/ topographic map ☑ w/ additional attachments	☑ w/ process flow diagram
☑ Section 3: Information on Effluent Discharges	☑ w/ Table A ☑ w/ Table B ☐ w/ Table C	☐ w/ Table D ☑ w/ Table E ☐ w/ additional attachments
☑ Section 4: Industrial Discharges and Hazardous Wastes	☐ w/ SIU and NSCIU attachments ☑ w/ additional attachments	☐ w/ Table F
☐ Section 5: Combined Sewer Overflows	☐ w/ CSO map ☐ w/ CSO system diagram	☐ w/ additional attachments
☑ Section 6: Checklist and Certification Statement	☐ w/ attachments	

6.2 **Certification Statement**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
BiJay Adams	General Manger
Signature	**Date signed**
	2/24/21

EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
FRS# 110005310733	WA0045144	Liberty Lake Water Reclamation	1

Form Approved 03/05/19
OMB No. 2040-0004

TABLE A. EFFLUENT PARAMETERS FOR ALL POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Biochemical oxygen demand ☐ BOD_5 or ☐ $CBOD_5$ (report one)	4.7	mg/L	2.2	mg/L	1/7	SM 5210 B-2011	☐ ML ☐ MDL
Fecal coliform	1	CFU	<1	CFU	2/7	SM 92220D mfc	☐ ML ☐ MDL
Design flow rate	.897	MGD	.799	MGD	Cont.		
pH (minimum)	6.59	Standard Units					
pH (maximum)	9.31	Standard Units					
Temperature (winter)	17.7	degrees C	13.9		1/7		
Temperature (summer)	23.0	degrees C	18.4		1/7		
Total suspended solids (TSS)	0.7	mg/L	0.4	mg/L	1/7	SM 2540-D-2011	☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
FRS# 110005310733	WA0045144	Liberty Lake Water Reclamation	

Form Approved 03/05/19
OMB No. 2040-0004

TABLE B. EFFLUENT PARAMETERS FOR ALL POTWS WITH A FLOW EQUAL TO OR GREATER THAN 0.1 MGD

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)	.553	mg/L	.040	mg/L	2/7	EPA 350.1-2 1993	☐ ML ☐ MDL
Chlorine (total residual, TRC)[2]	not ran		not ran				☐ ML ☐ MDL
Dissolved oxygen	8.1	mg/L	6.1	mg/L	5/7	Hach 10360 Rev 1.2	☐ ML ☐ MDL
Nitrate/nitrite	Nitrate N 8.67	mg/L	Nitrate N 5.68	mg/L	1/14	Hach 10206	☐ ML ☐ MDL
Kjeldahl nitrogen	not ran						☐ ML ☐ MDL
Oil and grease	not ran						☐ ML ☐ MDL
Phosphorus	0.21	mg/L	.010	mg/L	1/7	EPA 365.1-2 1993	☐ ML ☐ MDL
Total dissolved solids	not ran						☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

[2] Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

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EPA Identification Number	NPDES Permit Number	Facility Name	Outfall Number
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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as $CaCO_3$)						SM 2340C	6.0 mg/L ☐ ML ☐ MDL
Antimony, total recoverable							☐ ML ☐ MDL
Arsenic, total recoverable						EPA 200.8	1.0 ug/L ☐ ML ☐ MDL
Beryllium, total recoverable							☐ ML ☐ MDL
Cadmium, total recoverable						EPA 200.8	1.0 ug/L ☐ ML ☐ MDL
Chromium, total recoverable							☐ ML ☐ MDL
Copper, total recoverable						EPA 200.8	1.0 ug/L ☐ ML ☐ MDL
Lead, total recoverable						EPA 200.8	1.0 ug/L ☐ ML ☐ MDL
Mercury, total recoverable						EPA 1631 E	.0005 ug/L ☐ ML ☐ MDL
Nickel, total recoverable							☐ ML ☐ MDL
Selenium, total recoverable							☐ ML ☐ MDL
Silver, total recoverable							☐ ML ☐ MDL
Thallium, total recoverable							☐ ML ☐ MDL
Zinc, total recoverable						EPA 200.8	1.0 ug/L ☐ ML ☐ MDL
Cyanide							☐ ML ☐ MDL
Total phenolic compounds							☐ ML ☐ MDL
Volatile Organic Compounds							
Acrolein							☐ ML ☐ MDL
Acrylonitrile							☐ ML ☐ MDL
Benzene							☐ ML ☐ MDL
Bromoform							☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride							☐ ML ☐ MDL
Chlorobenzene							☐ ML ☐ MDL
Chlorodibromomethane							☐ ML ☐ MDL
Chloroethane							☐ ML ☐ MDL
2-chloroethylvinyl ether							☐ ML ☐ MDL
Chloroform							☐ ML ☐ MDL
Dichlorobromomethane							☐ ML ☐ MDL
1,1-dichloroethane							☐ ML ☐ MDL
1,2-dichloroethane							☐ ML ☐ MDL
trans-1,2-dichloroethylene							☐ ML ☐ MDL
1,1-dichloroethylene							☐ ML ☐ MDL
1,2-dichloropropane							☐ ML ☐ MDL
1,3-dichloropropylene							☐ ML ☐ MDL
Ethylbenzene							☐ ML ☐ MDL
Methyl bromide							☐ ML ☐ MDL
Methyl chloride							☐ ML ☐ MDL
Methylene chloride							☐ ML ☐ MDL
1,1,2,2-tetrachloroethane							☐ ML ☐ MDL
Tetrachloroethylene							☐ ML ☐ MDL
Toluene							☐ ML ☐ MDL
1,1,1-trichloroethane							☐ ML ☐ MDL
1,1,2-trichloroethane							☐ ML ☐ MDL

TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene							☐ ML ☐ MDL
Vinyl chloride							☐ ML ☐ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol							☐ ML ☐ MDL
2-chlorophenol							☐ ML ☐ MDL
2,4-dichlorophenol							☐ ML ☐ MDL
2,4-dimethylphenol							☐ ML ☐ MDL
4,6-dinitro-o-cresol							☐ ML ☐ MDL
2,4-dinitrophenol							☐ ML ☐ MDL
2-nitrophenol							☐ ML ☐ MDL
4-nitrophenol							☐ ML ☐ MDL
Pentachlorophenol							☐ ML ☐ MDL
Phenol							☐ ML ☐ MDL
2,4,6-trichlorophenol							☐ ML ☐ MDL
Base-Neutral Compounds							
Acenaphthene							☐ ML ☐ MDL
Acenaphthylene							☐ ML ☐ MDL
Anthracene							☐ ML ☐ MDL
Benzidine							☐ ML ☐ MDL
Benzo(a)anthracene							☐ ML ☐ MDL
Benzo(a)pyrene							☐ ML ☐ MDL
3,4-benzofluoranthene							☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene							☐ ML ☐ MDL
Benzo(k)fluoranthene							☐ ML ☐ MDL
Bis (2-chloroethoxy) methane							☐ ML ☐ MDL
Bis (2-chloroethyl) ether							☐ ML ☐ MDL
Bis (2-chloroisopropyl) ether							☐ ML ☐ MDL
Bis (2-ethylhexyl) phthalate							☐ ML ☐ MDL
4-bromophenyl phenyl ether							☐ ML ☐ MDL
Butyl benzyl phthalate							☐ ML ☐ MDL
2-chloronaphthalene							☐ ML ☐ MDL
4-chlorophenyl phenyl ether							☐ ML ☐ MDL
Chrysene							☐ ML ☐ MDL
di-n-butyl phthalate							☐ ML ☐ MDL
di-n-octyl phthalate							☐ ML ☐ MDL
Dibenzo(a,h)anthracene							☐ ML ☐ MDL
1,2-dichlorobenzene							☐ ML ☐ MDL
1,3-dichlorobenzene							☐ ML ☐ MDL
1,4-dichlorobenzene							☐ ML ☐ MDL
3,3-dichlorobenzidine							☐ ML ☐ MDL
Diethyl phthalate							☐ ML ☐ MDL
Dimethyl phthalate							☐ ML ☐ MDL
2,4-dinitrotoluene							☐ ML ☐ MDL
2,6-dinitrotoluene							☐ ML ☐ MDL

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TABLE C. EFFLUENT PARAMETERS FOR SELECTED POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine							☐ ML ☐ MDL
Fluoranthene							☐ ML ☐ MDL
Fluorene							☐ ML ☐ MDL
Hexachlorobenzene							☐ ML ☐ MDL
Hexachlorobutadiene							☐ ML ☐ MDL
Hexachlorocyclo-pentadiene							☐ ML ☐ MDL
Hexachloroethane							☐ ML ☐ MDL
Indeno(1,2,3-cd)pyrene							☐ ML ☐ MDL
Isophorone							☐ ML ☐ MDL
Naphthalene							☐ ML ☐ MDL
Nitrobenzene							☐ ML ☐ MDL
N-nitrosodi-n-propylamine							☐ ML ☐ MDL
N-nitrosodimethylamine							☐ ML ☐ MDL
N-nitrosodiphenylamine							☐ ML ☐ MDL
Phenanthrene							☐ ML ☐ MDL
Pyrene							☐ ML ☐ MDL
1,2,4-trichlorobenzene							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. ADDITIONAL POLLUTANTS AS REQUIRED BY NPDES PERMITTING AUTHORITY

Pollutant (list)	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
☐ No additional sampling is required by NPDES permitting authority.							
Total Alkalinity						SM 2320 B	5.0 MG/l ☐ ML ☑ MDL
PCB						EPA 1668C	0.1 pg/L ☑ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL
							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

Test Information	**Test Number ____**	**Test Number ____**	**Test Number ____**
Test species			
Age at initiation of test			
Outfall number			
Date sample collected			
Date test started			
Duration			
Toxicity Test Methods			
Test method number			
Manual title			
Edition number and year of publication			
Page number(s)			
Sample Type			
Check one:	☐ Grab ☐ 24-hour composite	☐ Grab ☐ 24-hour composite	☐ Grab ☐ 24-hour composite
Sample Location			
Check one:	☐ Before Disinfection ☐ After Disinfection ☐ After Dechlorination	☐ Before Disinfection ☐ After Disinfection ☐ After Dechlorination	☐ Before disinfection ☐ After disinfection ☐ After dechlorination
Point in Treatment Process			
Describe the point in the treatment process at which the sample was collected for each test.			
Toxicity Type			
Indicate for each test whether the test was performed to asses acute or chronic toxicity, or both. (Check one response.)	☐ Acute ☐ Chronic ☐ Both	☐ Acute ☐ Chronic ☐ Both	☐ Acute ☐ Chronic ☐ Both

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number _____	Test Number _____	Test Number _____
Test Type			
Indicate the type of test performed. (Check one response.)	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through	☐ Static ☐ Static-renewal ☐ Flow-through
Source of Dilution Water			
Indicate the source of dilution water. (Check one response.)	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ Receiving water	☐ Laboratory water ☐ Receiving water
If laboratory water, specify type.			
If receiving water, specify source.			
Type of Dilution Water			
Indicate the type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.	☐ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)	☐ Fresh water ☐ Salt water (specify)
Percentage Effluent Used			
Specify the percentage effluent used for all concentrations in the test series.			
Parameters Tested			
Check the parameters tested.	☐ pH ☐ Salinity ☐ Temperature ☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature ☐ Ammonia ☐ Dissolved oxygen	☐ pH ☐ Salinity ☐ Temperature ☐ Ammonia ☐ Dissolved oxygen
Acute Test Results			
Percent survival in 100% effluent	%	%	%
LC_{50}			
95% confidence interval	%	%	%
Control percent survival	%	%	%

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TABLE E. EFFLUENT MONITORING FOR WHOLE EFFLUENT TOXICITY

The table provides response space for one whole effluent toxicity sample. Copy the table to report additional test results.

	Test Number ____		Test Number ____		Test Number ____	
Acute Test Results Continued						
Other (describe)						
Chronic Test Results						
NOEC	%		%		%	
IC_{25}	%		%		%	
Control percent survival	%		%		%	
Other (describe)						
Quality Control/Quality Assurance						
Is reference toxicant data available?	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
Was reference toxicant test within acceptable bounds?	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No
What date was reference toxicant test run (MM/DD/YYYY)?						
Other (describe)						

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EPA Identification Number	NPDES Permit Number	Facility Name
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TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU 0	SIU 0	SIU 0
Name of SIU			
Mailing address (street or P.O. box)			
City, state, and ZIP code			
Description of all industrial processes that affect or contribute to the discharge.			
List the principal products and raw materials that affect or contribute to the SIU's discharge.			
Indicate the average daily volume of wastewater discharged by the SIU.	gpd	gpd	gpd
How much of the average daily volume is attributable to process flow?	gpd	gpd	gpd
How much of the average daily volume is attributable to non-process flow?	gpd	gpd	gpd
Is the SIU subject to local limits?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the SIU subject to categorical standards?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

EPA Identification Number	NPDES Permit Number	Facility Name
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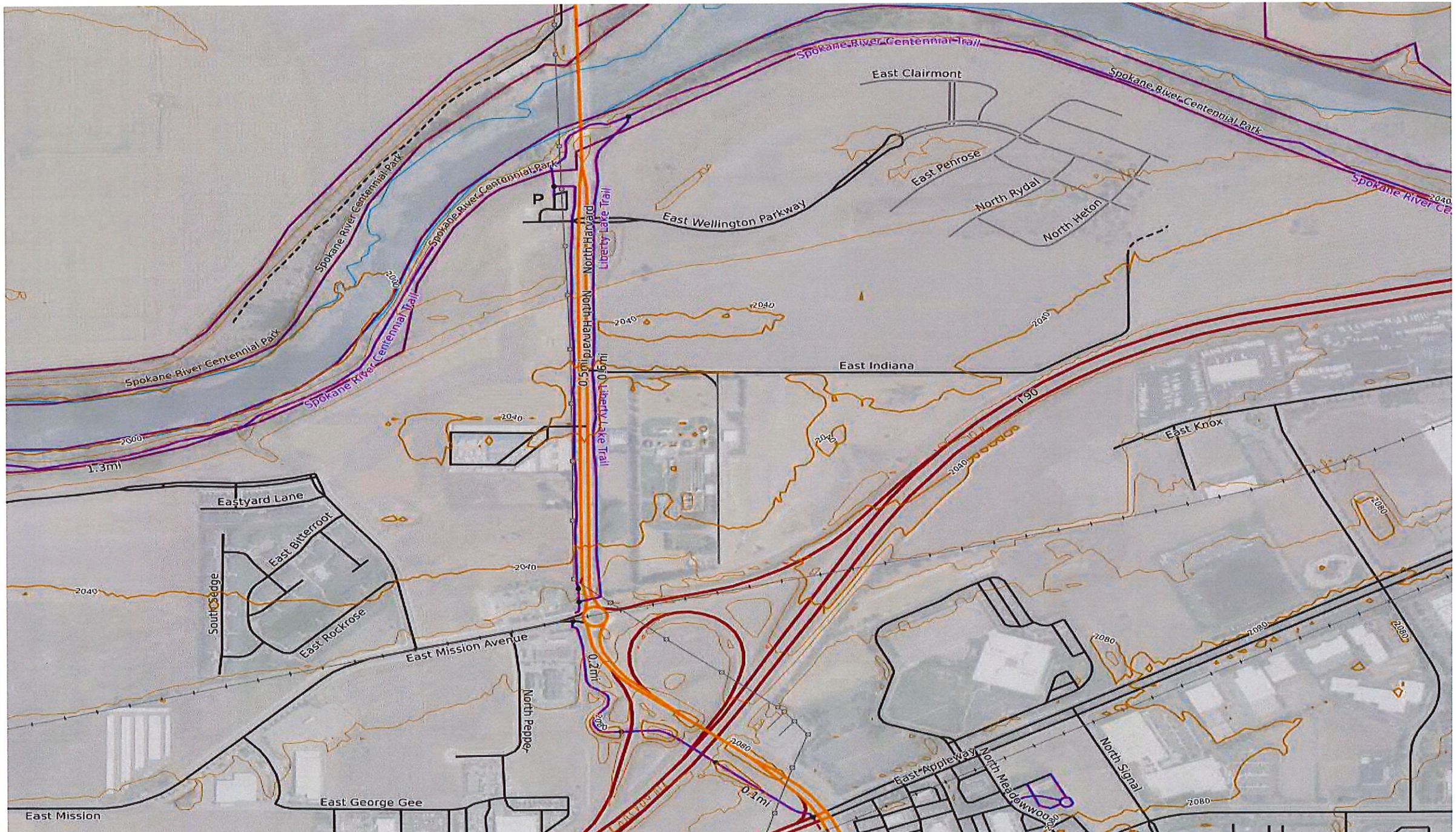
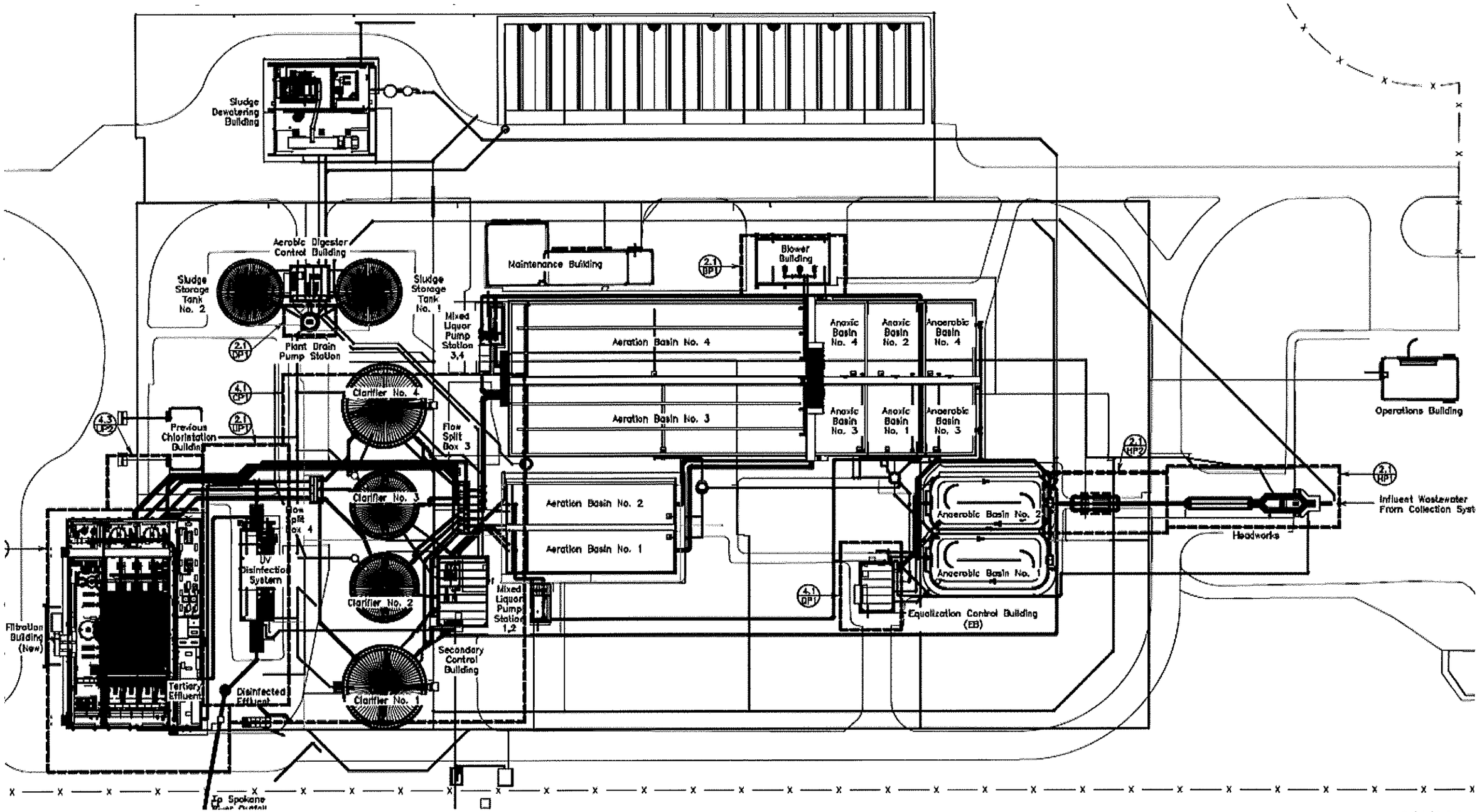
TABLE F. INDUSTRIAL DISCHARGE INFORMATION

Response space is provided for three SIUs. Copy the table to report information for additional SIUs.

	SIU ____	SIU ____	SIU ____
Under what categories and subcategories is the SIU subject?			
Has the POTW experienced problems (e.g., upsets, pass-through interferences) in the past 4.5 years that are attributable to the SIU?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If yes, describe.			


Spokane River Centennial Trail
East Clairmont
Spokane River Centennial Park
East Penrose
North Rydal
North Heton
P
East Wellington Parkway
North Harvard
Liberty Lake Trail
0.5mi
0.6mi
East Indiana
2040
2080
I90
East Knox
1.3mi
Eastyard Lane
East Bitterroot
South Sedge
East Rockrose
East Mission Avenue
0.2mi
North Pepper
East George Gee
East Mission
0.1mi
East Appleway
North Meadowwood
North Signal


Sludge Dewatering Building
Aerobic Digester Control Building
Sludge Storage Tank No. 2
Sludge Storage Tank No. 1
Plant Drain Pump Station
Maintenance Building
Blower Building
Mixed Liquor Pump Station 3,4
Aeration Basin No. 4
Aeration Basin No. 3
Aeration Basin No. 2
Aeration Basin No. 1
Anoxic Basin No. 4
Anoxic Basin No. 2
Anaerobic Basin No. 4
Anoxic Basin No. 3
Anoxic Basin No. 1
Anaerobic Basin No. 3
Clarifier No. 4
Clarifier No. 3
Clarifier No. 2
Clarifier No. 1
Previous Chlorination Building
Flow Split Box 3
Flow Split Box 4
UV Disinfection System
Mixed Liquor Pump Station 1,2
Secondary Control Building
Tertiary Effluent
Disinfected Effluent
Filtration Building (New)
Anaerobic Basin No. 2
Anaerobic Basin No. 1
Equalization Control Building (EB)
Headworks
Operations Building
Influent Wastewater From Collection Syst
To Spokane

2/4/2021

Liberty Lake Water Reclamation Facility

Water Balance

1 Headworks area - Influent Composite sampler, fine screens (2) grit channels (2) and influent flow measurement (ultrasonic). Flow ranges .700 - .900 MGD

2 Equalization Basins - Influent flow and all drains (press bldg., drying beds, main drainage well). Flow ranges (400 – 700 gpm)

3 Selector Basins and Aeration Basins - Flow from EQ basin plus RAS. Flow ranges (EQ 0 – 1.0 MGD) (RAS 200 – 1600 gpm). Influent anoxic selectors Mixed Liquor Recycle added (0 – 4000 gpm)

4 Secondary Clarifiers - Receive all flows from aerations basins. Removed (RAS 200- 1600) (WAS 0 - .5 MGD)

5 Sludge Storage Tanks – WAS from secondary clarifiers. (0 - .5MGD)

6 Belt Filter Press Building – Sludge from SST's (0 – 250 gpm)

6 Membrane Filtration Building – All flows from secondary clarifiers (.600 – 2.0 MGD). Recovery rate, currently at 92% of MFB influent

7 Ultra Violet Disinfection – Permeate from MFB less WRF utility water (0 - .25MGD)

*Flows indicated are indicative of current operating ranges, not total designed flow ranges.

Liberty Lake Water Reclamation Facility

Process Description/Narrative

1. Headworks - 21" interceptor enters facility where flow is split into 2 separate channels, each equipped with a mechanical fine screen with 6 mm screen openings. Screened influent then flows to two gravity separation grit removal channels.

2. Equalization Basins – Receive flow from headworks. Redesigned in 2006 to anaerobic selectors that have repurposed for flow equalization each with a volume of .23 MG. Pumped flow from the EQ is combined with RAS from the secondary clarifiers and enters the anaerobic selector.

3. AA/AO Basins – Anaerobic selector for triggering phosphorus release of blended EQ/RAS mixture. Each basin has a volume of .21 MG. Aerobic selectors (2) per train at .25 MG for denitrification. Mixed Liquor return enters first aerobic selector then to second.

4. Aeration Basins – Waste stream form selectors pass through 1 of 4 aeration basins. Basins volumes, 2 at .36 MG and 2 at 1.15MG. Fine bubble diffusers provide air supplied from 150 HP blowers for aeration and mixing. After aeration, portion of the mixed liquor is returned to the selectors for denitrification with remaining flow to secondary Clarifiers.

5. Secondary Clarifiers – 4 usable clarifiers, 2 40 ft. diameter and 2 50 ft. All center feed with hydrostatic sludge withdrawal. Effluent to either membrane filtration of U/V basin and RAS to blend with EQ effluent and WAS to sludge storage tank for conditioning prior to dewatering.

6. Membrane Filtration – consisting of 3 automatic strainers, 3 flash mixers, 3 flocculation basins, common channel with 3 membrane trains with vacuum submerged filtrations with support equipment for membrane maintenance and cleaning.

7 U/V Basins – Disinfection with low pressure low intensity ultra violet system. Treated water metered prior to discharge to Spokane River.

2018	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MAX	MIN	AVE
AVERAGE Q	0.786	0.772	0.773	0.791	0.767	0.756	0.737	0.717	0.735	0.754	0.772	0.776	0.791	0.717	0.761
PEAK Q	0.882	0.844	0.849	0.924	0.914	0.848	0.841	0.827	0.855	0.814	0.849	0.847	0.924	0.814	0.858
SUS INF	301	372	332	307	256	291	282	257	288	324	318	433	433	256	313
SUS EFF	0.4	0.5	0.4	0.4	0.8	0.6	0.8	0.6	0.5	0.4	0.3	0.2	0.8	0.2	0.5
BOD INF	256.0	313.0	283.0	266.0	290.0	207.0	210.0	173.0	163.0	166.0	149.0	167.0	313	149	220
BOD EFF	2.5	2.5	2.1	2.2	2.1	2.5	2.5	2.5	2.5	<2.0	2.4	<2.0	2.5	2	2.4
FECAL	1	1	2	1	2	2	2	2	1	2	2	1	2	1	3
EFF pH MAX	7.44	7.39	7.38	7.70	7.55	7.50	7.90	8.45	7.49	7.59	7.42	7.58	8.45	7.38	
EFF pH MIN	6.94	6.88	6.85	6.85	6.86	6.82	6.87	7.01	6.89	6.87	6.85	7.00	7.01	6.82	
PHOS INF	6.80	6.79	6.78	6.65	6.54	6.43	7.24	6.29	6.03	6.19	6.00	6.13	7.24	6.00	6.49
PHOS EFF	0.22	0.22	0.23	0.23	0.51	0.39	0.76	0.16	0.16	0.10	0.08	0.07	0.76	0.07	0.65*
ORTHO PHOS EFF	0.11	0.12	0.10	0.12	0.39	0.32	0.69	0.14	0.07	0.04	0.02	0.02	0.69	0.02	0.56*
NH3 EFF	0.024	0.022	0.049	0.015	0.034	0.095	0.082	0.113	0.087	0.048	0.061	0.140	0.14	0.015	0.064
ALKALINITY	85.6	133.0	83.4	108.0	85.3	109.0	89.7	115.0	92.0	99.0	83.0	120.0	133	83	100.3
HARDNESS	96.6			121.0			114.0			119.0			121	97	112.7

Entries are monthly averages as reported on Discharge Monitoring Reports

Hardness and Alkalinity testing by Anatek Labs

2019	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MAX	MIN	AVE
AVERAGE Q	0.791	0.790	0.806	0.788	0.773	0.786	0.766	0.757	0.794	0.822	0.803	0.816	0.822	0.757	0.790
PEAK Q	0.844	0.790	0.924	0.903	0.895	0.876	0.836	0.870	0.866	0.906	0.901	0.870	0.924	0.790	0.873
SUS INF	417.52	480.53	300.53	322.19	278.50	302.50	302.27	270.9	290.9	305.4	307.2	322.4	480.5	270.9	325.1
SUS EFF	0.5	0.3	0.3	0.3	0.3	0.3	0.6	1.1	0.6	0.2	0.2	0.2	1	0	0
BOD INF	167.2	153.3	118.8	147.1	155.8	180.3	208.00	195.800	224.3	234.6	243.4	195.4	278.5	119	195.5
BOD EFF	<2.0	<2.0	<2.0	<2.0	<2.0	3	<2.0	<2.0	5	2	2	3	4.7	<2.0	2
FECAL	1.00	1.00	1.00	<1	1.00	1.00	2.00	2.00	2.00	<1	<1	1.00	2.00	<1	1.0
EFF pH MAX	7.48	7.59	7.42	7.83	7.62	7.51	7.39	8.58	8.58	7.53	8.36	8.33	8.58	7.36	
EFF pH MIN	6.90	6.83	6.89	6.85	6.81	6.83	6.86	6.94	6.94	6.92	6.83	6.93	6.94	6.81	
PHOS INF	6.10	5.93	5.45	5.92	5.72	6.21	6.50	6.03	6.03	5.95	6.26	6.30	6.50	5.45	6.07
PHOS EFF	0.081	0.050	0.060	0.055	0.063	0.072	0.152	0.042	0.042	0.010	0.012	0.010	0.081	0.000	0.169
ORTHO PHOS EFF	0.024	0.010	0.010	0.010	0.010	0.010	0.081	0.020	0.020	0.010	0.010	0.010	0.081	0.010	0.02
NH3 EFF	0.060	0.031	0.036	0.062	0.030	0.034	0.510	0.104	0.104	0.064	0.710	0.553	0.553	0.040	0.180
ALKALINITY	92.0	86.0	124.0	96.0	92.0	94.7	104.0	104.0	79.5	116.0	127.0	120.0	127	80	101.6
HARDNESS	111.0			133.0			126.0			142.0			142	111	128.0

Entries are monthly averages as reported on Discharge Monitoring Reports

Hardness and Alkalinity testing by Anatek Labs

2020	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MAX	MIN	AVE
AVERAGE Q	0.826	0.813	0.825	0.778	0.781	0.781	0.769	0.739	0.794	0.799	0.828	0.838	0.838	0.739	0.798
PEAK Q	0.875	0.888	0.897	0.875	0.867	0.867	0.895	0.839	0.866	0.882	0.880	0.897	0.897	0.839	0.877
SUS INF	298.0	329.0	405.0	328.0	276.0	276.0	287.0	261.0	291	236	251	309	405	236	296
SUS EFF	0.20	0.20	0.60	0.20	0.30	0.30	0.60	0.7	0.6	0.6	0.3	0.3	0.7	0.2	0.4
BOD INF	229.0	246.0	260.0	210.0	190.0	190.0	167.0	216.0	224.3	127.0	136.0	159.0	260	127	196
BOD EFF	<2.0	<2.0	<2.0	<2.0	<2.0	99.0	2.10	<2.0	4.7	<2.0	<2.0	<2.0	99.0	2	35.2
FECAL	1	1	<1	1	1	1	1	1	1	1	<1	<1	1	1	1
EFF pH MAX	7.83	9.31	8.12	7.81	7.89	7.89	8.16	7.89	7.36	7.57	8.36	7.92	9.31	7.36	
EFF pH MIN	6.86	6.59	6.89	6.97	6.82	6.82	6.88	7.01	7.02	7.09	6.83	6.85	7.09	6.59	
PHOS INF	6.26	6.58	5.45	6.30	6.24	6.24	6.44	5.89	6.49	5.81	6.26	6.95	6.95	5.45	6.24
PHOS EFF	0.020	0.010	0.068	0.013	0.010	0.010	0.210	0.049	0.018	0.040	0.010	0.020	0.21	0.010	0.040
ORTHO PHOS EFF	0.010	0.011	0.022	0.010	0.010	0.010	0.210	0.028	0.012	0.026	0.010	0.010	0.21	0.010	0.03
NH3 EFF	0.394	0.477	0.011	8.290	2.340	2.340	0.110	0.125	0.049	0.049	0.531	2.500	8.290	0.011	103.333
ALKALINITY	83.0	75.0	124.0	93.5	131.0	131.0	111.0	97.5	88.5	124.0	118.0	63.5	131	64	103.3
HARDNESS	104.0			109.0			119.0			132.0			132	104	116.0

Entries are monthly averages as reported on Discharge Monitoring Reports

Hardness and Alkalinity testing by Anatek Labs

Anatek Labs, Inc.

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number 160122018-001
Client Sample ID #2 EFFLUENT COMP
Matrix Water
Comments

Sampling Date 1/22/2016
Sampling Time 6:30 AM
Sample Location

Date/Time Received 1/22/2016 2:10 PM
Extraction Date

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Antimony	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Arsenic	0.00122	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Beryllium	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Cadmium	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Chromium	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Copper	0.00339	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Cyanide	<0.01	mg/L	0.01	2/1/2016 2:55:00 PM	RAW	SM4500CNE	
Lead	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Mercury-CVAFS	ND	ug/L	0.01	2/1/2016	ETL	EPA 245.7	
Nickel	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Phenolics	ND	mg/L	0.05	2/8/2016	MER	EPA 420.1	
Selenium	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Silver	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Thallium	ND	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	
Zinc	0.0600	mg/L	0.001	2/2/2016 5:57:00 PM	KEB	EPA 200.8	

Authorized Signature

Kathy Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number 160122018-001 **Sampling Date** 1/22/2016 **Date/Time Received** 1/22/2016 2:10 PM
Client Sample ID #2 EFFLUENT COMP **Sampling Time** 6:30 AM **Extraction Date**
Matrix Water **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1,1-Trichloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1,2-Trichloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1-Dichloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1-Dichloroethene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,1-dichloropropene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2,3-Trichloropropane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2-Dichlorobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2-Dichloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,2-Dichloropropane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,3-Dichlorobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,3-Dichloropropane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1,4-Dichlorobenzene	0.99	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
1-Methylnaphthalene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
2,2-Dichloropropane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
2-Chlorotoluene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
2-hexanone	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
2-Methylnaphthalene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
4-Chlorotoluene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Acetone	11800	ug/L	250	1/28/2016 5:11:00 PM	WOZ	EPA 624	W
Acetonitrile	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Acrolein	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Acrylonitrile	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Benzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Bromobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Bromochloromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016 2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromodichloromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Bromoform	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Bromomethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Carbon disulfide	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Carbon Tetrachloride	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Chlorobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Chloroethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Chloroform	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Chloromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
cis-1,2-dichloroethene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
cis-1,3-Dichloropropene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Dibromochloromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Dibromomethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Dichlorodifluoromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Diethyl ether	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Ethylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Hexachlorobutadiene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Iodomethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Isopropylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
m+p-Xylene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Methylene chloride	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
methyl-t-butyl ether (MTBE)	ND	ug/L	2.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Naphthalene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
n-Butylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Nitrobenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
n-Propylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
o-Xylene	0.65	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
p-isopropyltoluene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
sec-Butylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Styrene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
tert-Butylbenzene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Tetrachloroethene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Toluene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	

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Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016 2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Total Xylene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
trans-1,2-Dichloroethene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
trans-1,3-Dichloropropene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Trichloroethene	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Trichlorofluoromethane	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Vinyl acetate	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	
Vinyl Chloride	ND	ug/L	0.5	1/28/2016 5:11:00 PM	WOZ	EPA 624	

Surrogate Data

Sample Number 160122018-001

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 624	101.4	70-130
4-Bromofluorobenzene	EPA 624	112.0	70-130
Toluene-d8	EPA 624	110.2	70-130

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LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-002	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments	Both trip blanks submitted to the lab were analyzed to confirm the presence of acetone.					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1,1-Trichloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1,2-Trichloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1-Dichloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1-Dichloroethene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,1-dichloropropene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2,3-Trichlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2,3-Trichloropropane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2,4-Trichlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2,4-Trimethylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2-Dichlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2-Dichloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,2-Dichloropropane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,3,5-Trimethylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,3-Dichlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,3-Dichloropropane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1,4-Dichlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
1-Methylnaphthalene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
2,2-Dichloropropane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
2-Chlorotoluene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
2-hexanone	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
2-Methylnaphthalene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
4-Chlorotoluene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Acetone	16.8	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Acetonitrile	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Acrolein	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Acrylonitrile	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Benzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Bromobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Bromochloromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Bromodichloromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-002	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**		
Matrix	Water	**Sample Location**				
Comments	Both trip blanks submitted to the lab were analyzed to confirm the presence of acetone.					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromoform	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Bromomethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Carbon disulfide	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Carbon Tetrachloride	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Chlorobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Chloroethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Chloroform	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Chloromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
cis-1,2-dichloroethene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
cis-1,3-Dichloropropene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Dibromochloromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Dibromomethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Dichlorodifluoromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Diethyl ether	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Ethylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Hexachlorobutadiene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Iodomethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Isopropylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
m+p-Xylene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Methylene chloride	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
methyl-t-butyl ether (MTBE)	ND	ug/L	2.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Naphthalene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
n-Butylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Nitrobenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
n-Propylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
o-Xylene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
p-isopropyltoluene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
sec-Butylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Styrene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
tert-Butylbenzene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Tetrachloroethene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Toluene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Total Xylene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-002	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016 2:10 PM
Client Sample ID	TRIP BLANK	**Sampling Time**		**Extraction Date**	
Matrix	Water	**Sample Location**			

Comments Both trip blanks submitted to the lab were analyzed to confirm the presence of acetone.

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
trans-1,2-Dichloroethene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
trans-1,3-Dichloropropene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Trichloroethene	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Trichlorofluoromethane	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Vinyl acetate	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	
Vinyl Chloride	ND	ug/L	0.5	2/1/2016 6:03:00 PM	WOZ	EPA 624	

Surrogate Data

Sample Number 160122018-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 624	102.6	70-130
4-Bromofluorobenzene	EPA 624	108.2	70-130
Toluene-d8	EPA 624	113.8	70-130

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Client:	LIBERTY LAKE SEWER & WATER DIST.	**Batch #:**	160122018
Address:	PO BOX 184 LIBERTY LAKE, WA 99109	**Project Name:**	PRIORITY POLLUTANT SCAN 2016
Attn:	DAN GROGG		

Analytical Results Report

Authorized Signature

Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit
W	Analyte was detected in both the sample and the associated trip blank

The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	1/28/2016	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,2,4-Trichlorobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
1,2-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
1,2-Diphenyl hydrazine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
1,3-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
1,4-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
1-Methylnaphthalene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,3,4,6-Tetrachlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,3,5,6-Tetrachlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4,5-Trichlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4,6-Trichlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4-Dichlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4-Dimethylphenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4-Dinitrophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,4-Dinitrotoluene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2,6-Dinitrotoluene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Chloronaphthalene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Chlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Methylnaphthalene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Methylphenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Nitroaniline	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
2-Nitrophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
3,3'-Dichlorobenzidine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
3+4-Methylphenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
3-Nitroaniline	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4,6-Dinitro-2-methylphenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Bromophenyl-phenylether	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Chloro-3-methylphenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Chloroaniline	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Chlorophenyl-phenylether	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Nitroaniline	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
4-Nitrophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Acenaphthene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Acenaphthylene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Aniline	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	1/28/2016	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Anthracene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzidine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzo(ghi)perylene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzo[a]anthracene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzo[a]pyrene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzo[b]fluoranthene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzo[k]fluoranthene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Benzyl alcohol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
bis(2-Chloroethoxy)methane	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
bis(2-Chloroethyl)ether	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
bis(2-chloroisopropyl)ether	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
bis(2-Ethylhexyl)phthalate	337	ug/L	10	2/1/2016	HSW	EPA 625	
Butylbenzylphthalate	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Carbazole	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Chrysene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Dibenz[a,h]anthracene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Dibenzofuran	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Diethylphthalate	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Dimethylphthalate	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Di-n-butylphthalate	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Di-n-octylphthalate	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Fluoranthene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Fluorene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Hexachlorobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Hexachlorobutadiene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Hexachlorocyclopentadiene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Hexachloroethane	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Isophorone	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Naphthalene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Nitrobenzene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Nitrosodimethylamine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
n-Nitroso-di-n-propylamine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
n-Nitrosodiphenylamine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Pentachlorophenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	1/28/2016	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Phenanthrene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Phenol	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Pyrene	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	
Pyridine	ND	ug/L	0.5	2/1/2016	HSW	EPA 625	

Surrogate Data

Sample Number 160122018-001

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4,6-Tribromophenol	EPA 625	87.6	53-122
2-Fluorobiphenyl	EPA 625	84.4	12-116
2-Fluorophenol	EPA 625	78.8	10-139
Nitrobenzene-d5	EPA 625	83.6	54-118
Phenol-d5	EPA 625	79.6	28-154
Terphenyl-d14	EPA 625	38.2	20-137

Authorized Signature

Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
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Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016	2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	1/29/2016	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Aroclor 1016 (PCB-1016)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	
PCB (total)	ND	ug/L	0.2	1/29/2016	MAH	EPA 8082	

Surrogate Data

Sample Number 160122018-001

Surrogate Standard	Method	Percent Recovery	Control Limits
DCB	EPA 8082	82.8	30-130

Authorized Signature

Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client:	LIBERTY LAKE SEWER & WATER DIST.	**Batch #:**	160122018
Address:	PO BOX 184 LIBERTY LAKE, WA 99109	**Project Name:**	PRIORITY POLLUTANT SCAN 2016
Attn:	DAN GROGG		

Analytical Results Report

Sample Number	160122018-001	**Sampling Date**	1/22/2016	**Date/Time Received**	1/22/2016 2:10 PM
Client Sample ID	#2 EFFLUENT COMP	**Sampling Time**	6:30 AM	**Extraction Date**	
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,3,7,8-TCDD	ND	pg/L	5	2/11/2016 9:46:00 AM	SUB	EPA 1613B	

Authorized Signature

Kathleen A. Sattler

Kathy Sattler, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Chlorobenzene	4.98	ug/L	5	99.6	86-115	1/28/2016	1/28/2016
1,2,4-Trichlorobenzene	3.87	ug/L	5	77.4	33-109	1/27/2016	2/2/2016
Dieldrin	0.526	ug/L	0.5	105.2	71-114	1/29/2016	1/29/2016
delta-BHC	0.547	ug/L	0.5	109.4	48-123	1/29/2016	1/29/2016
beta-BHC	0.482	ug/L	0.5	96.4	68-115	1/29/2016	1/29/2016
alpha-BHC	0.482	ug/L	0.5	96.4	68-115	1/29/2016	1/29/2016
Aldrin	0.486	ug/L	0.5	97.2	27-121	1/29/2016	1/29/2016
4,4-DDT	0.501	ug/L	0.5	100.2	60-124	1/29/2016	1/29/2016
4,4-DDE	0.538	ug/L	0.5	107.6	69-116	1/29/2016	1/29/2016
4,4-DDD	0.539	ug/L	0.5	107.8	63-125	1/29/2016	1/29/2016
PCB (total)	10.9	ug/L	10	109.0	30-130	1/29/2016	1/29/2016
Trichloroethene	5.09	ug/L	5	101.8	72-125	1/28/2016	1/28/2016
Toluene	5.33	ug/L	5	106.6	76-123	1/28/2016	1/28/2016
Endosulfan II	0.522	ug/L	0.5	104.4	70-117	1/29/2016	1/29/2016
Ethylbenzene	5.31	ug/L	5	106.2	84-115	1/28/2016	1/28/2016
Endosulfan sulfate	0.497	ug/L	0.5	99.4	60-124	1/29/2016	1/29/2016
Benzene	5.18	ug/L	5	103.6	75-125	1/28/2016	1/28/2016
1,1-Dichloroethene	4.58	ug/L	5	91.6	68-127	1/28/2016	1/28/2016
Pyrene	4.66	ug/L	5	93.2	45-139	1/27/2016	2/2/2016
Phenol	5.17	ug/L	5	103.4	45-134	1/27/2016	2/2/2016
Pentachlorophenol	3.66	ug/L	5	73.2	22-138	1/27/2016	2/2/2016
n-Nitroso-di-n-propylamine	4.68	ug/L	5	93.6	46-135	1/27/2016	2/2/2016
bis(2-Ethylhexyl)phthalate	5.25	ug/L	5	105.0	43-148	1/27/2016	2/2/2016
Acenaphthene	5.00	ug/L	5	100.0	36-131	1/27/2016	2/2/2016
4-Nitrophenol	4.51	ug/L	5	90.2	19-137	1/27/2016	2/2/2016
4-Chloro-3-methylphenol	4.72	ug/L	5	94.4	42-139	1/27/2016	2/2/2016
2-Chlorophenol	4.58	ug/L	5	91.6	50-131	1/27/2016	2/2/2016
2,4-Dinitrotoluene	4.65	ug/L	5	93.0	49-145	1/27/2016	2/2/2016
1,4-Dichlorobenzene	3.64	ug/L	5	72.8	28-108	1/27/2016	2/2/2016
Tetrachloroethene	5.59	ug/L	5	111.8	78-119	1/28/2016	1/28/2016
Tetrachloroethene	5.50	ug/L	5	110.0	78-119	2/1/2016	2/1/2016
Zinc	0.0506	mg/L	0.05	101.2	85-115	1/26/2016	2/2/2016
Thallium	0.0541	mg/L	0.05	108.2	85-115	1/26/2016	2/2/2016
Silver	0.0506	mg/L	0.05	101.2	85-115	1/26/2016	2/2/2016
Selenium	0.0504	mg/L	0.05	100.8	85-115	1/26/2016	2/2/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

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Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Nickel	0.0503	mg/L	0.05	100.6	85-115	1/26/2016	2/2/2016
Lead	0.0523	mg/L	0.05	104.6	85-115	1/26/2016	2/2/2016
Copper	0.0467	mg/L	0.05	93.4	85-115	1/26/2016	2/2/2016
Chromium	0.0534	mg/L	0.05	106.8	85-115	1/26/2016	2/2/2016
Cadmium	0.0495	mg/L	0.05	99.0	85-115	1/26/2016	2/2/2016
Beryllium	0.0519	mg/L	0.05	103.8	85-115	1/26/2016	2/2/2016
Arsenic	0.0552	mg/L	0.05	110.4	85-115	1/26/2016	2/2/2016
Antimony	0.0502	mg/L	0.05	100.4	85-115	1/26/2016	2/2/2016
Endosulfan I	0.518	ug/L	0.5	103.6	67-117	1/29/2016	1/29/2016
Toluene	5.99	ug/L	5	119.8	76-123	2/1/2016	2/1/2016
Phenolics	0.371	mg/L	0.4	92.8	70-130	2/8/2016	2/8/2016
Ethylbenzene	5.00	ug/L	5	100.0	84-115	2/1/2016	2/1/2016
Chlorobenzene	4.49	ug/L	5	89.8	86-115	2/1/2016	2/1/2016
Benzene	5.80	ug/L	5	116.0	75-125	2/1/2016	2/1/2016
1,1-Dichloroethene	5.60	ug/L	5	112.0	68-127	2/1/2016	2/1/2016
Mercury-CVAFS	0.00492	ug/L	0.005	98.4	76-113	2/1/2016	2/1/2016
Cyanide	0.0977	mg/L	0.1	97.7	80-120	2/1/2016	2/1/2016
Methoxychlor	0.543	ug/L	0.5	108.6	56-124	1/29/2016	1/29/2016
Heptachlor epoxide	0.537	ug/L	0.5	107.4	72-115	1/29/2016	1/29/2016
Heptachlor	0.484	ug/L	0.5	96.8	37-129	1/29/2016	1/29/2016
gamma-BHC (Lindane)	0.517	ug/L	0.5	103.4	75-115	1/29/2016	1/29/2016
Endrin ketone	0.499	ug/L	0.5	99.8	58-124	1/29/2016	1/29/2016
Endrin aldehyde	0.478	ug/L	0.5	95.6	60-121	1/29/2016	1/29/2016
Endrin	0.548	ug/L	0.5	109.6	73-121	1/29/2016	1/29/2016
Trichloroethene	5.67	ug/L	5	113.4	72-125	2/1/2016	2/1/2016

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
PCB (total)	10.6	ug/L	10	106.0	2.8	0-50	1/29/2016	1/29/2016
Pyrene	4.75	ug/L	5	95.0	1.9	0-36	1/27/2016	2/2/2016
Phenol	4.96	ug/L	5	99.2	4.1	0-35	1/27/2016	2/2/2016
Pentachlorophenol	4.03	ug/L	5	80.6	9.6	0-47	1/27/2016	2/2/2016
n-Nitroso-di-n-propylamine	4.38	ug/L	5	87.6	6.6	0-38	1/27/2016	2/2/2016
bis(2-Ethylhexyl)phthalate	5.13	ug/L	5	102.6	2.3	0-50	1/27/2016	2/2/2016
Acenaphthene	4.83	ug/L	5	96.6	3.5	0-23	1/27/2016	2/2/2016
4-Nitrophenol	4.89	ug/L	5	97.8	8.1	0-50	1/27/2016	2/2/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

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Analytical Results Report

Quality Control Data

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
4-Chloro-3-methylphenol	4.98	ug/L	5	99.6	5.4	0-33	1/27/2016	2/2/2016
2-Chlorophenol	4.30	ug/L	5	86.0	6.3	0-50	1/27/2016	2/2/2016
2,4-Dinitrotoluene	4.77	ug/L	5	95.4	2.5	0-47	1/27/2016	2/2/2016
1,4-Dichlorobenzene	3.32	ug/L	5	66.4	9.2	0-27	1/27/2016	2/2/2016
1,2,4-Trichlorobenzene	3.61	ug/L	5	72.2	7.0	0-27	1/27/2016	2/2/2016

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
160122018-001	4,4-DDD	ND	0.517	ug/L	0.5	103.4	66-118	1/29/2016	1/29/2016
160122018-001	Endosulfan sulfate	ND	0.505	ug/L	0.5	101.0	62-119	1/29/2016	1/29/2016
160122018-001	Endosulfan II	ND	0.509	ug/L	0.5	101.8	68-116	1/29/2016	1/29/2016
160122018-001	Endosulfan I	ND	0.532	ug/L	0.5	106.4	71-115	1/29/2016	1/29/2016
160122018-001	Dieldrin	ND	0.512	ug/L	0.5	102.4	70-115	1/29/2016	1/29/2016
160122018-001	delta-BHC	ND	0.474	ug/L	0.5	94.8	51-124	1/29/2016	1/29/2016
160122018-001	beta-BHC	ND	0.479	ug/L	0.5	95.8	53-136	1/29/2016	1/29/2016
160122018-001	alpha-BHC	ND	0.496	ug/L	0.5	99.2	56-135	1/29/2016	1/29/2016
160122018-001	Aldrin	ND	0.462	ug/L	0.5	92.4	50-115	1/29/2016	1/29/2016
160119038-003A	Antimony	ND	0.0528	mg/L	0.05	105.6	70-130	1/26/2016	2/2/2016
160122018-001	4,4-DDE	ND	0.498	ug/L	0.5	99.6	62-115	1/29/2016	1/29/2016
160122018-001	Endrin ketone	ND	0.461	ug/L	0.5	92.2	60-119	1/29/2016	1/29/2016
160119038-003A	Nickel	0.00106	0.0444	mg/L	0.05	86.7	70-130	1/26/2016	2/2/2016
160122011-001A	Mercury-CVAFS	ND	0.0487	ug/L	0.05	97.4	63-111	2/1/2016	2/1/2016
160119038-003A	Lead	ND	0.0486	mg/L	0.05	97.2	70-130	1/26/2016	2/2/2016
160122018-001	Cyanide	<0.01	0.103	mg/L	0.1	103.0	70-130	2/1/2016	2/1/2016
160119038-003A	Copper	0.00392	0.0430	mg/L	0.05	78.2	70-130	1/26/2016	2/2/2016
160119038-003A	Chromium	ND	0.0496	mg/L	0.05	99.2	70-130	1/26/2016	2/2/2016
160119038-003A	Cadmium	ND	0.0488	mg/L	0.05	97.6	70-130	1/26/2016	2/2/2016
160119038-003A	Beryllium	ND	0.0490	mg/L	0.05	98.0	70-130	1/26/2016	2/2/2016
160119038-003A	Arsenic	ND	0.0518	mg/L	0.05	103.6	70-130	1/26/2016	2/2/2016
160122018-001	4,4-DDT	ND	0.464	ug/L	0.5	92.8	58-121	1/29/2016	1/29/2016
160127034-001A	2,4-Dinitrotoluene	ND	4.71	ug/L	5	94.2	49-145	1/27/2016	2/2/2016
160119038-003A	Thallium	ND	0.0504	mg/L	0.05	100.8	70-130	1/26/2016	2/2/2016
160119038-003A	Silver	ND	0.0461	mg/L	0.05	92.2	70-130	1/26/2016	2/2/2016
160127034-001A	Pyrene	ND	4.53	ug/L	5	90.6	45-139	1/27/2016	2/2/2016
160127034-001A	Phenol	ND	5.32	ug/L	5	106.4	45-134	1/27/2016	2/2/2016
160127034-001A	Pentachlorophenol	ND	4.26	ug/L	5	85.2	22-138	1/27/2016	2/2/2016

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Analytical Results Report

Quality Control Data

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
160127034-001A	n-Nitroso-di-n-propylamine	ND	4.57	ug/L	5	91.4	46-135	1/27/2016	2/2/2016
160127034-001A	bis(2-Ethylhexyl)phthalate	ND	6.43	ug/L	5	128.6	43-142	1/27/2016	2/2/2016
160127034-001A	Acenaphthene	ND	4.91	ug/L	5	98.2	36-131	1/27/2016	2/2/2016
160127034-001A	4-Nitrophenol	ND	5.32	ug/L	5	106.4	19-137	1/27/2016	2/2/2016
160122018-001	Endrin	ND	0.578	ug/L	0.5	115.6	70-128	1/29/2016	1/29/2016
160127034-001A	2-Chlorophenol	ND	4.38	ug/L	5	87.6	50-131	1/27/2016	2/2/2016
160122018-001	Endrin aldehyde	ND	0.570	ug/L	0.5	114.0	60-118	1/29/2016	1/29/2016
160127034-001A	1,4-Dichlorobenzene	ND	3.40	ug/L	5	68.0	28-108	1/27/2016	2/2/2016
160127034-001A	1,2,4-Trichlorobenzene	ND	3.86	ug/L	5	77.2	33-109	1/27/2016	2/2/2016
160119038-003A	Selenium	ND	0.0454	mg/L	0.05	90.8	70-130	1/26/2016	2/2/2016
160122018-001	Phenolics	ND	0.402	mg/L	0.4	100.5	70-130	2/8/2016	2/8/2016
160122018-001	Methoxychlor	ND	0.550	ug/L	0.5	110.0	48-136	1/29/2016	1/29/2016
160122018-001	Heptachlor epoxide	ND	0.536	ug/L	0.5	107.2	71-115	1/29/2016	1/29/2016
160122018-001	Heptachlor	ND	0.475	ug/L	0.5	95.0	61-123	1/29/2016	1/29/2016
160122018-001	gamma-BHC (Lindane)	ND	0.530	ug/L	0.5	106.0	74-115	1/29/2016	1/29/2016
160119038-003A	Zinc	0.0317	0.0739	mg/L	0.05	84.4	70-130	1/26/2016	2/2/2016
160127034-001A	4-Chloro-3-methylphenol	ND	4.80	ug/L	5	96.0	42-139	1/27/2016	2/2/2016

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Lead	0.0490	mg/L	0.05	98.0	0.8	0-20	1/26/2016	2/2/2016
alpha-BHC	0.494	ug/L	0.5	98.8	0.4	0-30	1/29/2016	1/29/2016
Aldrin	0.458	ug/L	0.5	91.6	0.9	0-30	1/29/2016	1/29/2016
4,4-DDT	0.464	ug/L	0.5	92.8	0.0	0-30	1/29/2016	1/29/2016
4,4-DDE	0.498	ug/L	0.5	99.6	0.0	0-30	1/29/2016	1/29/2016
4,4-DDD	0.513	ug/L	0.5	102.6	0.8	0-30	1/29/2016	1/29/2016
Antimony	0.0525	mg/L	0.05	105.0	0.6	0-20	1/26/2016	2/2/2016
Mercury-CVAFS	0.0492	ug/L	0.05	98.4	1.0	0-18	2/1/2016	2/1/2016
Dieldrin	0.504	ug/L	0.5	100.8	1.6	0-30	1/29/2016	1/29/2016
Cyanide	0.102	mg/L	0.1	102.0	1.0	0-25	2/1/2016	2/1/2016
Copper	0.0437	mg/L	0.05	79.6	1.6	0-20	1/26/2016	2/2/2016
Chromium	0.0494	mg/L	0.05	98.8	0.4	0-20	1/26/2016	2/2/2016
Cadmium	0.0488	mg/L	0.05	97.6	0.0	0-20	1/26/2016	2/2/2016
Beryllium	0.0478	mg/L	0.05	95.6	2.5	0-20	1/26/2016	2/2/2016
Arsenic	0.0510	mg/L	0.05	102.0	1.6	0-20	1/26/2016	2/2/2016
Nickel	0.0448	mg/L	0.05	87.5	0.9	0-20	1/26/2016	2/2/2016

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Matrix Spike Duplicate

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Endrin ketone	0.463	ug/L	0.5	92.6	0.4	0-30	1/29/2016	1/29/2016
Thallium	0.0512	mg/L	0.05	102.4	1.6	0-20	1/26/2016	2/2/2016
Silver	0.0420	mg/L	0.05	84.0	9.3	0-20	1/26/2016	2/2/2016
Selenium	0.0457	mg/L	0.05	91.4	0.7	0-20	1/26/2016	2/2/2016
Phenolics	0.300	mg/L	0.4	75.0	29.1	0-25	2/8/2016	2/8/2016
Methoxychlor	0.649	ug/L	0.5	129.8	16.5	0-30	1/29/2016	1/29/2016
Heptachlor epoxide	0.526	ug/L	0.5	105.2	1.9	0-30	1/29/2016	1/29/2016
beta-BHC	0.469	ug/L	0.5	93.8	2.1	0-30	1/29/2016	1/29/2016
gamma-BHC (Lindane)	0.528	ug/L	0.5	105.6	0.4	0-30	1/29/2016	1/29/2016
delta-BHC	0.477	ug/L	0.5	95.4	0.6	0-30	1/29/2016	1/29/2016
Endrin aldehyde	0.556	ug/L	0.5	111.2	2.5	0-30	1/29/2016	1/29/2016
Endrin	0.578	ug/L	0.5	115.6	0.0	0-30	1/29/2016	1/29/2016
Endosulfan sulfate	0.465	ug/L	0.5	93.0	8.2	0-30	1/29/2016	1/29/2016
Endosulfan II	0.499	ug/L	0.5	99.8	2.0	0-30	1/29/2016	1/29/2016
Endosulfan I	0.522	ug/L	0.5	104.4	1.9	0-30	1/29/2016	1/29/2016
Zinc	0.0738	mg/L	0.05	84.2	0.1	0-20	1/26/2016	2/2/2016
Heptachlor	0.468	ug/L	0.5	93.6	1.5	0-30	1/29/2016	1/29/2016

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Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1,1-Trichloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1,1-Trichloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1,2-Trichloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1,2-Trichloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1-Dichloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1-Dichloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1-Dichloroethene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1-Dichloroethene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,1-dichloropropene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,1-dichloropropene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2,3-Trichlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2,3-Trichlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Quality Control Data

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Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,2,3-Trichloropropane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2,3-Trichloropropane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2,4-Trichlorobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
1,2,4-Trichlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2,4-Trichlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2,4-Trimethylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2,4-Trimethylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2-Dibromoethane (EDB)	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dichlorobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
1,2-Dichlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dichloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2-Dichloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dichloropropane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,2-Dichloropropane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,2-Diphenyl hydrazine	ND	ug/L	0.5	1/27/2016	2/2/2016
1,3,5-Trimethylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,3,5-Trimethylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,3-Dichlorobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
1,3-Dichlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1,3-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,3-Dichloropropane	ND	ug/L	0.5	2/1/2016	2/1/2016
1,3-Dichloropropane	ND	ug/L	0.5	1/28/2016	1/28/2016
1,4-Dichlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
1,4-Dichlorobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
1,4-Dichlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
1-Methylnaphthalene	ND	ug/L	0.5	1/27/2016	2/2/2016
1-Methylnaphthalene	ND	ug/L	0.5	1/28/2016	1/28/2016
1-Methylnaphthalene	ND	ug/L	0.5	2/1/2016	2/1/2016
2,2-Dichloropropane	ND	ug/L	0.5	1/28/2016	1/28/2016
2,2-Dichloropropane	ND	ug/L	0.5	2/1/2016	2/1/2016
2,3,4,6-Tetrachlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,3,5,6-Tetrachlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,4,5-Trichlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

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Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

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Parameter	Result	Units	PQL	Prep Date	Analysis Date
2,4,6-Trichlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,4-Dichlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,4-Dimethylphenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,4-Dinitrophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2,4-Dinitrotoluene	ND	ug/L	0.5	1/27/2016	2/2/2016
2,6-Dinitrotoluene	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Chloroethyl vinyl ether	ND	ug/L	0.5	1/28/2016	1/28/2016
2-Chloroethyl vinyl ether	ND	ug/L	0.5	2/1/2016	2/1/2016
2-Chloronaphthalene	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Chlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Chlorotoluene	ND	ug/L	0.5	1/28/2016	1/28/2016
2-Chlorotoluene	ND	ug/L	0.5	2/1/2016	2/1/2016
2-hexanone	ND	ug/L	2.5	1/28/2016	1/28/2016
2-hexanone	ND	ug/L	2.5	2/1/2016	2/1/2016
2-Methylnaphthalene	ND	ug/L	0.5	2/1/2016	2/1/2016
2-Methylnaphthalene	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Methylnaphthalene	ND	ug/L	0.5	1/28/2016	1/28/2016
2-Methylphenol	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Nitroaniline	ND	ug/L	0.5	1/27/2016	2/2/2016
2-Nitrophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
3,3'-Dichlorobenzidine	ND	ug/L	0.5	1/27/2016	2/2/2016
3+4-Methylphenol	ND	ug/L	0.5	1/27/2016	2/2/2016
3-Nitroaniline	ND	ug/L	0.5	1/27/2016	2/2/2016
4,4-DDD	ND	ug/L	0.01	1/29/2016	1/29/2016
4,4-DDE	ND	ug/L	0.01	1/29/2016	1/29/2016
4,4-DDT	ND	ug/L	0.01	1/29/2016	1/29/2016
4,6-Dinitro-2-methylphenol	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Bromophenyl-phenylether	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Chloro-3-methylphenol	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Chloroaniline	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Chlorophenyl-phenylether	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Chlorotoluene	ND	ug/L	0.5	2/1/2016	2/1/2016
4-Chlorotoluene	ND	ug/L	0.5	1/28/2016	1/28/2016
4-Nitroaniline	ND	ug/L	0.5	1/27/2016	2/2/2016
4-Nitrophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
Acenaphthene	ND	ug/L	0.5	1/27/2016	2/2/2016
Acenaphthylene	ND	ug/L	0.5	1/27/2016	2/2/2016

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Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

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Parameter	Result	Units	PQL	Prep Date	Analysis Date
Acetone	ND	ug/L	2.5	2/1/2016	2/1/2016
Acetone	ND	ug/L	2.5	1/28/2016	1/28/2016
Acetonitrile	ND	ug/L	2.5	1/28/2016	1/28/2016
Acetonitrile	ND	ug/L	2.5	2/1/2016	2/1/2016
Acrolein	ND	ug/L	2.5	1/28/2016	1/28/2016
Acrolein	ND	ug/L	2.5	2/1/2016	2/1/2016
Acrylonitrile	ND	ug/L	2.5	1/28/2016	1/28/2016
Acrylonitrile	ND	ug/L	2.5	2/1/2016	2/1/2016
Aldrin	ND	ug/L	0.01	1/29/2016	1/29/2016
alpha-BHC	ND	ug/L	0.01	1/29/2016	1/29/2016
Aniline	ND	ug/L	0.5	1/27/2016	2/2/2016
Anthracene	ND	ug/L	0.5	1/27/2016	2/2/2016
Antimony	ND	mg/L	0.001	1/26/2016	2/2/2016
Aroclor 1016 (PCB-1016)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1221 (PCB-1221)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1232 (PCB-1232)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1242 (PCB-1242)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1248 (PCB-1248)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1254 (PCB-1254)	ND	ug/L	0.2	1/29/2016	1/29/2016
Aroclor 1260 (PCB-1260)	ND	ug/L	0.2	1/29/2016	1/29/2016
Arsenic	ND	mg/L	0.001	1/26/2016	2/2/2016
Benzene	ND	ug/L	0.5	1/28/2016	1/28/2016
Benzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Benzidine	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzo(ghi)perylene	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzo[a]anthracene	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzo[a]pyrene	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzo[b]fluoranthene	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzo[k]fluoranthene	ND	ug/L	0.5	1/27/2016	2/2/2016
Benzyl alcohol	ND	ug/L	0.5	1/27/2016	2/2/2016
Beryllium	ND	mg/L	0.001	1/26/2016	2/2/2016
beta-BHC	ND	ug/L	0.01	1/29/2016	1/29/2016
bis(2-Chloroethoxy)methane	ND	ug/L	0.5	1/27/2016	2/2/2016
bis(2-Chloroethyl)ether	ND	ug/L	0.5	1/27/2016	2/2/2016
bis(2-chloroisopropyl)ether	ND	ug/L	0.5	1/27/2016	2/2/2016
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Bromobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

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Parameter	Result	Units	PQL	Prep Date	Analysis Date
Bromobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Bromochloromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Bromochloromethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Bromodichloromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Bromodichloromethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Bromoform	ND	ug/L	0.5	1/28/2016	1/28/2016
Bromoform	ND	ug/L	0.5	2/1/2016	2/1/2016
Bromomethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Bromomethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Butylbenzylphthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Cadmium	ND	mg/L	0.001	1/26/2016	2/2/2016
Carbazole	ND	ug/L	0.5	1/27/2016	2/2/2016
Carbon disulfide	ND	ug/L	2.5	1/28/2016	1/28/2016
Carbon disulfide	ND	ug/L	2.5	2/1/2016	2/1/2016
Carbon Tetrachloride	ND	ug/L	0.5	2/1/2016	2/1/2016
Carbon Tetrachloride	ND	ug/L	0.5	1/28/2016	1/28/2016
Chlordane	ND	ug/L	0.05	1/29/2016	1/29/2016
Chlorobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Chlorobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
Chloroethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Chloroethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Chloroform	ND	ug/L	0.5	1/28/2016	1/28/2016
Chloroform	ND	ug/L	0.5	2/1/2016	2/1/2016
Chloromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Chloromethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Chromium	ND	mg/L	0.001	1/26/2016	2/2/2016
Chrysene	ND	ug/L	0.5	1/27/2016	2/2/2016
cis-1,2-dichloroethene	ND	ug/L	0.5	1/28/2016	1/28/2016
cis-1,2-dichloroethene	ND	ug/L	0.5	2/1/2016	2/1/2016
cis-1,3-Dichloropropene	ND	ug/L	0.5	1/28/2016	1/28/2016
cis-1,3-Dichloropropene	ND	ug/L	0.5	2/1/2016	2/1/2016
Copper	ND	mg/L	0.001	1/26/2016	2/2/2016
Cyanide	<0.01	mg/L	0.01	2/1/2016	2/1/2016
delta-BHC	ND	ug/L	0.01	1/29/2016	1/29/2016
Dibenz[a,h]anthracene	ND	ug/L	0.5	1/27/2016	2/2/2016
Dibenzofuran	ND	ug/L	0.5	1/27/2016	2/2/2016
Dibromochloromethane	ND	ug/L	0.5	2/1/2016	2/1/2016

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Dibromochloromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Dibromomethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Dibromomethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Dichlorodifluoromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Dichlorodifluoromethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Dieldrin	ND	ug/L	0.01	1/29/2016	1/29/2016
Diethyl ether	ND	ug/L	0.5	1/28/2016	1/28/2016
Diethyl ether	ND	ug/L	0.5	2/1/2016	2/1/2016
Diethylphthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Dimethylphthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Di-n-butylphthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Di-n-octylphthalate	ND	ug/L	0.5	1/27/2016	2/2/2016
Endosulfan I	ND	ug/L	0.01	1/29/2016	1/29/2016
Endosulfan II	ND	ug/L	0.01	1/29/2016	1/29/2016
Endosulfan sulfate	ND	ug/L	0.01	1/29/2016	1/29/2016
Endrin	ND	ug/L	0.01	1/29/2016	1/29/2016
Endrin aldehyde	ND	ug/L	0.01	1/29/2016	1/29/2016
Endrin ketone	ND	ug/L	0.01	1/29/2016	1/29/2016
Ethylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Ethylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
Fluoranthene	ND	ug/L	0.5	1/27/2016	2/2/2016
Fluorene	ND	ug/L	0.5	1/27/2016	2/2/2016
gamma-BHC (Lindane)	ND	ug/L	0.01	1/29/2016	1/29/2016
Heptachlor	ND	ug/L	0.01	1/29/2016	1/29/2016
Heptachlor epoxide	ND	ug/L	0.01	1/29/2016	1/29/2016
Hexachlorobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
Hexachlorobutadiene	ND	ug/L	0.5	2/1/2016	2/1/2016
Hexachlorobutadiene	ND	ug/L	0.5	1/27/2016	2/2/2016
Hexachlorobutadiene	ND	ug/L	0.5	1/28/2016	1/28/2016
Hexachlorocyclopentadiene	ND	ug/L	0.5	1/27/2016	2/2/2016
Hexachloroethane	ND	ug/L	0.5	1/27/2016	2/2/2016
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	1/27/2016	2/2/2016
Iodomethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Iodomethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Isophorone	ND	ug/L	0.5	1/27/2016	2/2/2016
Isopropylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
Isopropylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Lead	ND	mg/L	0.001	1/26/2016	2/2/2016
m+p-Xylene	ND	ug/L	0.5	2/1/2016	2/1/2016
m+p-Xylene	ND	ug/L	0.5	1/28/2016	1/28/2016
Mercury-CVAFS	ND	ug/L	0.001	2/1/2016	2/1/2016
Methoxychlor	ND	ug/L	0.01	1/29/2016	1/29/2016
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	1/28/2016	1/28/2016
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	2/1/2016	2/1/2016
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	1/28/2016	1/28/2016
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	2/1/2016	2/1/2016
Methylene chloride	ND	ug/L	0.5	2/1/2016	2/1/2016
Methylene chloride	ND	ug/L	0.5	1/28/2016	1/28/2016
methyl-t-butyl ether (MTBE)	ND	ug/L	2.5	1/28/2016	1/28/2016
methyl-t-butyl ether (MTBE)	ND	ug/L	2.5	2/1/2016	2/1/2016
Naphthalene	ND	ug/L	0.5	2/1/2016	2/1/2016
Naphthalene	ND	ug/L	0.5	1/28/2016	1/28/2016
Naphthalene	ND	ug/L	0.5	1/27/2016	2/2/2016
n-Butylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
n-Butylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Nickel	ND	mg/L	0.001	1/26/2016	2/2/2016
Nitrobenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Nitrobenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
Nitrobenzene	ND	ug/L	0.5	1/27/2016	2/2/2016
Nitrosodimethylamine	ND	ug/L	0.5	1/27/2016	2/2/2016
n-Nitroso-di-n-propylamine	ND	ug/L	0.5	1/27/2016	2/2/2016
n-Nitrosodiphenylamine	ND	ug/L	0.5	1/27/2016	2/2/2016
n-Propylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
n-Propylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
o-Xylene	ND	ug/L	0.5	1/28/2016	1/28/2016
o-Xylene	ND	ug/L	0.5	2/1/2016	2/1/2016
PCB (total)	ND	ug/L	0.2	1/29/2016	1/29/2016
Pentachlorophenol	ND	ug/L	0.5	1/27/2016	2/2/2016
Phenanthrene	ND	ug/L	0.5	1/27/2016	2/2/2016
Phenol	ND	ug/L	0.5	1/27/2016	2/2/2016
Phenolics	ND	mg/L	0.05	2/8/2016	2/8/2016
p-isopropyltoluene	ND	ug/L	0.5	1/28/2016	1/28/2016
p-isopropyltoluene	ND	ug/L	0.5	2/1/2016	2/1/2016
Pyrene	ND	ug/L	0.5	1/27/2016	2/2/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: LIBERTY LAKE SEWER & WATER DIST.
Address: PO BOX 184
LIBERTY LAKE, WA 99109
Attn: DAN GROGG

Batch #: 160122018
Project Name: PRIORITY POLLUTANT SCAN 2016

Analytical Results Report

Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Pyridine	ND	ug/L	0.5	1/27/2016	2/2/2016
sec-Butylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
sec-Butylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Selenium	ND	mg/L	0.001	1/26/2016	2/2/2016
Silver	ND	mg/L	0.001	1/26/2016	2/2/2016
Styrene	ND	ug/L	0.5	1/28/2016	1/28/2016
Styrene	ND	ug/L	0.5	2/1/2016	2/1/2016
tert-Butylbenzene	ND	ug/L	0.5	1/28/2016	1/28/2016
tert-Butylbenzene	ND	ug/L	0.5	2/1/2016	2/1/2016
Tetrachloroethene	ND	ug/L	0.5	1/28/2016	1/28/2016
Tetrachloroethene	ND	ug/L	0.5	2/1/2016	2/1/2016
Thallium	ND	mg/L	0.001	1/26/2016	2/2/2016
Toluene	ND	ug/L	0.5	2/1/2016	2/1/2016
Toluene	ND	ug/L	0.5	1/28/2016	1/28/2016
Total Xylene	ND	ug/L	0.5	2/1/2016	2/1/2016
Total Xylene	ND	ug/L	0.5	1/28/2016	1/28/2016
Toxaphene	ND	ug/L	0.05	1/29/2016	1/29/2016
trans-1,2-Dichloroethene	ND	ug/L	0.5	1/28/2016	1/28/2016
trans-1,2-Dichloroethene	ND	ug/L	0.5	2/1/2016	2/1/2016
trans-1,3-Dichloropropene	ND	ug/L	0.5	1/28/2016	1/28/2016
trans-1,3-Dichloropropene	ND	ug/L	0.5	2/1/2016	2/1/2016
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	2/1/2016	2/1/2016
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	1/28/2016	1/28/2016
Trichloroethene	ND	ug/L	0.5	1/28/2016	1/28/2016
Trichloroethene	ND	ug/L	0.5	2/1/2016	2/1/2016
Trichlorofluoromethane	ND	ug/L	0.5	1/28/2016	1/28/2016
Trichlorofluoromethane	ND	ug/L	0.5	2/1/2016	2/1/2016
Vinyl acetate	ND	ug/L	0.5	1/28/2016	1/28/2016
Vinyl acetate	ND	ug/L	0.5	2/1/2016	2/1/2016
Vinyl Chloride	ND	ug/L	0.5	1/28/2016	1/28/2016
Vinyl Chloride	ND	ug/L	0.5	2/1/2016	2/1/2016
Zinc	ND	mg/L	0.001	1/26/2016	2/2/2016

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
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Client:	LIBERTY LAKE SEWER & WATER DIST.	**Batch #:**	160122018
Address:	PO BOX 184 LIBERTY LAKE, WA 99109	**Project Name:**	PRIORITY POLLUTANT SCAN 2016
Attn:	DAN GROGG		

Analytical Results Report

Quality Control Data

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments: COMPOSITE SAMPLES FROM EFF SAMPLERS

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
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Login Report

Customer Name: LIBERTY LAKE SEWER & WATER DIST.
PO BOX 184
LIBERTY LAKE WA 99109

Order ID: 160122018
Order Date: 1/22/2016

Contact Name: DAN GROGG

Project Name: PRIORITY POLLUTANT SCAN 2016

Comment: COMPOSITE SAMPLES FROM EFF SAMPLERS

Sample #: 160122018-001 **Customer Sample #:** #2 EFFLUENT COMP

Recv'd: ☑ **Matrix:** Water **Collector:** DAN GROGG **Date Collected:** 1/22/2016
Quantity: 11 **Date Received:** 1/22/2016 2:10:11 PM **Time Collected:** 6:30 AM
Comment:

Test	Lab	Method	Due Date	Priority
624 VOLATILES IN WW	S	EPA 624	2/1/2016	***Normal (~10 Days)***
CYANIDE TOTAL SM	S	SM4500CNE	2/1/2016	***Normal (~10 Days)***
DIOXIN	S	EPA 1613B	1/22/2016	***Normal (~10 Days)***
OC PEST 8081A	M	EPA 8081A	1/29/2016	***Normal (~10 Days)***
PCB 8082	M	EPA 8082	1/29/2016	***Normal (~10 Days)***
PHENOLICS TOTAL	M	EPA 420.1	2/1/2016	***Normal (~10 Days)***
SEMIVOLATILES 625	M	EPA 625	1/29/2016	***Normal (~10 Days)***
Antimony	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Arsenic	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
BERYLLIUM	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Cadmium	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Chromium	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Copper	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Lead	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
MERCURY-CVAFS	M	EPA 245.7	2/1/2016	***Normal (~10 Days)***
Nickel	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Priority Pollutant Metals	S	N/A	1/22/2016	***Normal (~10 Days)***
Selenium	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Silver	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Thallium	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***
Zinc	S	EPA 200.8	2/1/2016	***Normal (~10 Days)***

Customer Name: LIBERTY LAKE SEWER & WATER DIST.
PO BOX 184
LIBERTY LAKE WA 99109

Order ID: 160122018
Order Date: 1/22/2016

Contact Name: DAN GROGG

Project Name: PRIORITY POLLUTANT SCAN 2016

Comment: COMPOSITE SAMPLES FROM EFF SAMPLERS

Sample #: 160122018-002 **Customer Sample #:** TRIP BLANK

Recv'd: ☑ **Matrix:** Water **Collector:** DAN GROGG **Date Collected:** 1/22/2016

Quantity: 1 **Date Received:** 1/22/2016 2:10:11 PM **Time Collected:**

Comment:

Test	Lab	Method	Due Date	Priority
624 VOLATILES IN WW	S	EPA 624	2/1/2016	***Normal (~10 Days)***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	8.6
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	Yes
Is there a trip blank to accompany VOC samples?	Yes
Labels and chain agree?	Yes

60122 018 LLWS Last Due 2/1/2016
st SAMP 1/22/2016 1st RCVD 1/22/2016
RIORITY POLLUTANT SCAN 2016

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Company Name: LIBERTY LAKE SEWER + WATER DIST
Address: 22510 E. MISSION AVE.
City: LIBERTY LAKE State: WA Zip: 99019
Phone: (509) 370-1453
Fax: (509) 926-7691

Project Manager: DAN GROGG
Project Name & #: PRIORITY POLLUTANT SCAN 2016
Email Address: dangrogg@libertylake.org
Purchase Order #: 8368
Sampler Name & phone: DAN GROGG 370-1453

Turn Around Time & Reporting

Please refer to our normal turn around times at:
http://www.anateklabs.com/services/guidelines/reporting.asp

_Normal _Next Day* _2nd Day* _Other*_____
*All rush order requests must be prior approved.
_Phone _Mail _Fax _Email

Provide Sample Description / **List Analyses Requested** / **Note Special Instructions/Comments**

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative
	#2 EFFLUENT	1-22-16	WASTE	11		
	COMP	6:30AM	WATER			
		TRIP BLANK		1		

Note Special Instructions/Comments: PRIORITY POLLUTANT SCAN
EFFLUENT COMPOSITE

	Printed Name	Signature	Company	Date	Time
Relinquished by	DAN GROGG		LLSWD	1-22-16	2:00
Received by	K Scott		Anatek	1/22/16	1400
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact? (Y) N
Labels & Chains Agree? (Y) N
Containers Sealed? Y N
VOC Head Space? Y (N)
Cooler / Ice / Trip
Temperature (°C) 8.6° IRH1
Preservative: HCl 53077
Ice NaOH
Date & Time: 1-22-16
Inspected By: KS
13pc

2018 INF

DATE	Total Hardness as CaCO3 mg/l	Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
1/3/18		108	ND (<0.5)	1.47	1.27	23.8	ND (<0.2)
2/6/18		110	ND (<0.5)	1.79			
3/6/18		109	ND (<0.5)	1.87			
4/3/18		94.2	ND (<0.5)	1.61	2.2	24.8	ND (<0.2)
5/1/18		103	ND (<0.5)	2.8			
6/5/18		85.7	ND (<0.5)	1.60			
7/3/18		106	ND (<0.5)	1.61	1.97	37.9	ND (<0.2)
8/21/18		118	ND (<0.5)	1.71			
9/11/18		103	ND (<0.5)	1.54			
10/9/18		100	ND (<0.5)	1.8	3	29.7	ND (<0.2)
11/6/18		96.9	ND (<0.5)	1.68			
12/4/18		101	ND (<0.5)	1.83			
MAX		118	0	2.8			
MIN		85.7	0	1.54			
AVER		102.9	0.0	1.9			

Testing by Accurate Testing Labs

*PQL for Hg 0.2 ug/L

2018 EFF

DATE	Total Hardness as CaCO3 mg/l	Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
1/3/18	96.6	57.3	ND (<0.5)	0.877	1.11	2.33	ND (<0.2)
2/6/18		64.1	ND (<0.5)	1.43			
3/6/18		68.8	ND (<0.5)	1.23			
4/3/18	121	66.5	ND (<0.5)	1.56	1.4	3.09	ND (<0.2)
5/1/18		70.6	ND (<0.5)	1.51			
6/5/18		65.1	ND (<0.5)	1.060			
7/3/18	114	58.4	ND (<0.5)	0.789	ND (<1.0)	3.21	ND (<0.2)
8/21/18		50.4	ND (<0.5)	1.14			
9/11/18		47.7	ND (<0.5)	1.02			
10/9/18	119	48.7	ND (<0.5)	1.01	1.37	1.41	ND (<0.2)
11/6/18		52.4	ND (<0.5)	1.39			
12/4/18		49.6	ND (<0.5)	0.638			
MAX	121	70.6	0	1.56			
MIN	96.6	47.7	0	0.638			
AVER	113	58.3	<0.5	1.14			
	permit limit	**80.8**	**76**	**3.7**			

Testing by Accurate Testing Labs

*PQL for Hg 0.2 ug/L

*PQL for Cd .003 ug/L

2019 INF

DATE	Total Hardness as CaCO3 mg/l	Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
1/3/19		91.6	<0.5	1.38	1.5	28.7	<0.2
2/5/19		97.3	<0.5	1.37			
3/5/19		53.8	<0.5	1.25			
4/2/19		118	<0.5	1.37	2.47	45.3	<0.2
5/7/19		135	<0.5	2.14			
6/4/19		109.0	<0.5	3.10			
7/2/19		160	<1.0	<1.0	1.37	19.6	<10.0
8/6/19		209	0.164	2.04			
9/3/19		66.9	0.043	0.434			
10/1/19		119	0.097	0.828	1.9	22.6	0.0174
11/12/19		98.3	0.143	0.823			
12/4/19		91.7	0.165	0.668			
MAX		209	0.165	3.1			
MIN		53.8	0.043	0.434			
AVER		112.5	0.1	1.5			

Testing by Accurate Testing Labs

*PQL for Hg 0.2 ug/L
*PQL for Cd 0.5 ug/L

2019 EFF

DATE	Total Hardness as CaCO3 mg/l	Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
1/3/189	111	37.1	<0.5	0.769	1.12	16.8	<0.2
2/5/19		53.6	<0.5	0.735			
3/5/19		51.8	<0.5	1.06			
4/2/19	133	62.4	<0.5	0.64	<1.0	2.18	<0.2
5/7/19		56.1	<0.5	0.6			
6/4/19		54.5	<0.5	1.200			
7/2/19	126	70.6	<0.5	<0.5	1.01	4.38	<10.0
8/6/19		12.1	0.005	0.035			
9/3/19		55.7	0.025	0.295			
10/1/19	142	47.7	0.016	0.196	0.611	2.63	<.0005
11/12/19		51.4	0.068	0.185			
12/3/19		56.1	0.098	0.161			
MAX		70.6	0.098	1.2			
MIN		12.1	0.005	0.035			
AVER		50.8	0.042	0.53			

Testing by Accurate Testing Labs

*PQL for Hg 0.2 ug/L
*PQL for Cd 0.5 ug/L

2020 INF

DATE	Total Hardness as CaCO3 mg/l	Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
1/7/20		101	ND	ND	1.19	21.5	0.0139
2/3/20		119	ND*	ND			
3/2/20		101	ND*	ND			
4/2/20		116	ND*	ND	1.87	21.8	0.0142
5/5/20		151	ND*	ND*			
6/2/20		112.0	0.239	0.929			
7/14/20		140	<1.0	<1.0	2.11	1.69	0.018
8/4/20		127	<1.0	<1.0			
9/1/20		115	<1.0	<1.0			
10/6/21		70.1	<1.0	<1.0	2.38	22.1	0.0208
11/3/21		159	<1.0	1.15			
12/1/20		134	<1.0	<1.0			
MAX		159	0.239	1.15			
MIN		70.1	0.239	0.929			
AVER		120.4	0.2	1.0			

Testing by Accurate Testing Labs

*PQL for Hg 0.2 ug/L
*PQL for Cd 0.5 ug/L

* 2/3/20 new limits
pql for Cd 0.995 µg/l
pql for PB 1.00 µg/l

2020 EFF

Total Recoverable Zinc ug/L	Total Recoverable Cadmium ug/L	Total Recoverable Lead ug/L	Total Recoverable Arsenic ug/L	Total Recoverable Copper ug/L	Total Recoverable Mercury ug/L
58.8	ND	ND	ND	2.48	0.000212
67.9	ND	ND			
67.6	ND	ND			
62.9	ND	ND	0.658	3.24	0.0028
62.6	ND	ND			
13.1	<0.05	<0.12			
57.7	<1.0	<1.0	0.64	1.69	0.00126
53.8	<1.0	<1.0			
50.7	<1.0	<1.0			
49.9	<1.0	<1.0	1.2	2.02	0.000763
56.4	<1.0	<1.0			
67.5	<1.0	<1.0			
67.9	0	0			
13.1	0	0			
55.7					
80.8	**76**	**3.7**			

ND	ND

atek Labs, Inc

*PQL for Hg 0.0005 ug/L
*PQL for Cd,Pb,As .001 mg/L

* 2/3/20 new limits
pql for Cd 0.995 µg/l
pql for PB 1.00 µg/l

Cd <1.0
Pb <1.0

DATE	LOCATION	Total PCB's pg/L	PRL BLANKS	LOCATION
2/23/2018	Influent	3110	11.9	Influent
4/10/2018	Influent	4940	33.5	Influent
6/14/2018	Influent	2910	0.1	Influent
8/24/2018	Influent	3580	0.1	Influent
10/11/2018	Influent	2670	0.5	Influent
12/20/2018	Influent	4610	1.9	Influent
2/26/2019	Influent	2680	26.4	Influent
4/16/2019	Influent	3730	0.9	Influent
6/27/2019	Influent	4440	0.4	Influent
8/22/2019	Influent	1570	22.8	Influent
10/23/2019	Influent	2520	0.5	Influent
12/13/2019	Influent	65.9	0.1	Influent
2/13/2020	Influent	760	26.3	Influent
4/15/2020	Influent	2660	23	Influent
6/19/2020	Influent	2090	0.1	Influent
8/20/2020	Influent	2630	14	Influent
10/20/2020	Influent	2490	46.4	Influent
12/10/2020	Influent	2100	0.89	Influent

DATE	LOCATION	Total PCB's pg/L	PRL BLANKS	LOCATION
1/18/2018	Effluent	242	1.86	Effluent
4/12/2018	Effluent	95.8	33.5	Effluent
7/19/2018	Effluent	107	0.1	Effluent
10/18/2018	Effluent	0.6	0.5	Effluent
11/18/2018	Effluent	30	0.6	Effluent
1/16/2019	Effluent	173	51.5	Effluent
4/18/2019	Effluent	95	0.9	Effluent
7/10/2019	Effluent	137	0.4	Effluent
10/25/2019	Effluent	67.7	0.4	Effluent
1/9/2020	Effluent	33	0.4	Effluent
4/17/2020	Effluent	221	23	Effluent
7/24/2020	Effluent	70.4	2.42	Effluent
10/21/2020	Effluent	46.4	0.1	Effluent

NORTHWESTERN AQUATIC SCIENCES
A Division of NAS Associates, Inc.
P.O. Box 1437, Newport, Oregon 97365 • (541) 265-7225 • Fax: (541) 265-2799 • contact@nwaquatic.com

November 11, 2014

Mr. Dan Grogg
Chief Operator
Liberty Lake Water Reclamation Facility
22510 E. Mission Avenue
Liberty Lake, WA 99019

Dear Dan:

Enclosed please find 2 copies of reports No. 831-21 to 831-24 describing the results of chronic and acute testing on composite effluent samples from the Liberty Lake Water Reclamation Facility. There was no toxicity observed at your permit limits in any of these tests.

If you have any questions, please feel free to call me at 541.265.7225 or send E-mail to gbuhler@nwaquatic.com.

Sincerely,

Gary Buhler
Project Manager

Encl.

LIBERTY LAKE SEWER AND WATER DISTRICT

Resolution 11-12
WASTEWATER PRETREATMENT

Sections:

A. Definitions.

As used in this Resolution, the following words and phrases will have the following meanings unless the context clearly indicates a different meaning:

(1) “BOD” means the biochemical oxygen demand, expressed in milligrams per liter, utilized in the biochemical oxidation of organic matter under standard laboratory conditions for five days at a temperature of 20 degrees Centigrade. The laboratory tests shall be made in accordance with “standard methods” as defined in this section.

(2) “Commercial waste” means waste from a commercial use as defined in this resolution and not specifically hereafter defined as “industrial waste.”

(3) “District” means the Liberty Lake Sewer and Water District.

(4) “Domestic sewage” means water and water carried wastes normally discharged into the sanitary sewers from dwellings, including single-family homes, multiple-family homes and hotels, from office buildings, factories and institutions, but not including stormwater drainage or surface water drainage and not including industrial wastes as defined in this section.

(5) “Garbage” means solid wastes and residue from preparation, cooking and dispensing of food and from the handling, storage, processing and sale of food products and produce.

(6) “Industrial user” means any nongovernmental user of the district’s sewage system, including agriculture, forestry, fishing, mining, manufacturing, transportation, communication, electric, gas and sanitary services and any other industrial services discharging industrial wastes into the district’s sanitary sewer system, or discharging into the district’s sanitary sewer system, any wastes other than domestic sewage as defined in this section.

(7) “Industrial wastes” means all water, water-carried solids, liquid and gas wastes resulting from any industrial, manufacturing or food processing operation or process or from the development of any natural resource, or any mixture of these fluids and domestic sewage, or any mixture of these fluids with any other water or with any other liquid.

(8) “Milligrams per liter” shall be abbreviated “mg/l” and means a weight to volume ratio. The figure appearing before the symbol “mg/l” shall be the number of milligrams to be found in one liter of the substance being tested. This figure can be transposed to pounds per million gallons of water by multiplying the figure appearing before the symbol “mg/l” by 8.34.

(9) “Normal domestic sewage” means sewage in which the average concentration of suspended materials does not exceed 250 mg/l and in which the five day BOD does not exceed 250 mg/l.

(10) “Owner” means the owner, tenant, occupant or person in charge of any building or premises, or any person acting in the owner’s behalf.

(11) “Person” means any person, firm, corporation, association or governmental entities.

(12) “pH” means the logarithm (base 10) of the reciprocal of the hydrogen ion concentration expressed in moles per liter. pH shall be determined by standard methods as defined in this section.

(13) “Premises” means any building or lot under individual ownership or individual use where water service is metered independently.

(14) “Properly shredded garbage” means wastes from preparation and cooking and disposing of food, exclusive of eggshells and bones, which waste has been shredded so that the particles are no greater than one-half inch in any dimension, and the particles can be carried freely through the normal conditions in public sanitary sewers.

(15) “Public sanitary sewer” means any sanitary sewer constructed by the district or dedicated to the dedicated, regardless of the source of funding, and any sanitary sewer belonging to any public trust or municipal corporation or body politic of any kind.

(16) “Sanitary sewer” means a sewer that conveys sewage and wastewater, in which groundwater and unpolluted industrial wastes are not included.

(17) “Sewer system” means all of the mains, pumping facilities, treating and disposing facilities included in the wastewater treatment facilities of the district.

(18) “Slug” means any discharge continuing longer than 15 minutes in which either the concentration of any material or the amount of flow is more than five times the 24-hour average from the same source.

(19) “Standard methods” means methods approved by the engineering profession of examination of waste and wastewater. Evidence of standard methods may be submitted by showing standard methods approved by the American Waterworks Association, the American Public Health Association and the Water Pollution Control Federation.

(20) “Stormwater runoff” means the amount of rainfall that flows directly or indirectly into the sewer system of the district.

(21) “Manager” means the district manager or designee.

(22) “Suspended solids” means solids that either float in sewage or are in suspension in sewage, which are removable by a laboratory filtration device.

(23) “Wastewater” means sewage.

(24) “Wastewater plant” means any facility owned by the district used for receiving and treating sewage.

B. Requirements for permits.
Permits shall be issued after application to the Manager, when the applicant meets the following conditions:

(1) New Establishments. Permits for new establishments constructed or connected after the effective date of this resolution will be issued only after the following conditions have been met:

(a) A formal written application is filed on a form provided by the Manager;

(b) Where necessary to comply with the terms of this resolution, holding facilities, pretreatment facilities, flow-regulating devices, cooling or heating devices or inspection chambers have been installed, and inspected and approved by the Manager;

(c) The estimated amounts of wastewater and concentrations of industrial wastes have been determined by the Manager and agreed to by the applicant. When any user discharges 1,000 gallons or more daily, there will be actual samples taken after operations start to determine the actual concentrations;

(d) The applicant must sign an agreement to pay any surcharges required by the terms of this chapter, and agreeing to operate and maintain at the applicant's costs any pretreatment facilities, holding and flow regulating facilities required to comply with the terms of this resolution.

(2) Existing Establishments. Permits for connections existing on the effective date of this resolution will be issued when the following conditions have been met:

(a) A formal application must be submitted on a form furnished by the Manager, and filed within 120 days after the effective date of this resolution;

(b) Where necessary to comply with the terms of this resolution, pretreatment facilities, flow-regulating devices, cooling or heating devices or inspection chambers have been installed and inspected and approved by the Manager;

(c) The estimated amounts and concentrations of industrial wastes have been determined by the Manager and agreed to by the applicant. When any user discharges 1,000 gallons or more daily, there will be actual samples taken after operations start to determine the actual concentrations;

(d) The applicant must sign an agreement to pay any surcharges required by the terms of this resolution, and agreeing to operate and maintain at the applicant's cost any pretreatment facilities required to comply with the terms of this resolution. The agreement will specify that all pretreatment facilities will be in place within 120 days after the effective date of this resolution.

(3) Procedure for Renewal of Permits. Each application for a renewal of an annual permit under this chapter shall be accompanied by a laboratory report issued either by an independent testing laboratory or by the discharger's laboratory, if the discharger's laboratory is approved by the Manager, either indicating that there have been no changes in flow rates, BOD and suspended solid concentrations, or if there have been any changes, furnishing detailed information as to the changes and the current status.

C. Regular sampling procedure.

Industrial users at anytime during the year shall report all such changes in flow rate, BOD or suspended solids or any other characteristics of industrial waste to the District within 24 hours of the change. It is the user's responsibility to make such tests from time to time as are necessary to comply with the terms of this section. A reasonable schedule of testing may be required by the Manager.

D. Methods of determining volume and concentrations.

The volume of wastes may be determined by utilizing the method used to calculate the sewer service charge or actual water meter flows. For users discharging less than 20,000 gallons per

day, the BOD determination and suspended solid concentrations may be determined by the Manager in accordance with standards applicable to the various industries involved. Any user who is not satisfied with the results obtained by the Manager under that method may install at his expense a control chamber or inspection chamber, subject to inspection and approval by the Manager, to make determinations by means of actual samples. Any user discharging more than 20,000 gallons per day shall, within one year of the effective date of this resolution, provide and maintain an accessible inspection chamber near the outlet of the building sewer. Each such inspection chamber shall be of such design and construction as to prevent infiltration by ground and surface waters or introduction of any liquids or solids. The inspection chamber shall contain the necessary access for obtaining samples and necessary flow measuring devices required to measure compliance with this resolution.

E. Power of Manager and employees.

All of the powers granted under this resolution to the Manager may be exercised by any employee duly authorized by the Manager to exercise those powers, provided that any hearing provided for herein shall be held by the Manager and not by an employee of the Manager. The Manager and his employees shall carry credentials at all times that they are in the field enforcing the terms of this resolution. The methods of enforcement shall be as follows:

(1) Powers. The Manager shall be permitted access to any part of any property where access is necessary for the purpose of inspecting, observing, measuring, sampling or testing to determine compliance with the provision of this resolution. If any person should refuse to permit access to the Manager, the Manger may, with the assistance of the district's attorney, obtain the necessary court orders to obtain access. If the Manager finds any violation of this resolution at the premises of any user, the Manger shall notify the owner or occupant or user in writing stating the nature of the violation and providing a reasonable time for corrections to be made. In the absence of unusual circumstances, 15 days shall be considered a reasonable time. The person receiving the notice shall report to the Manager within 15 days, in writing, stating what action has been taken and is being taken to correct the conditions constituting the violation. If the user, occupant or owner of the premises does not correct the violation within the time limit, or within any extension of time granted by the Manager, the Manager shall do one or all of the following:

(a) Disconnect water service and sewer service to the premises;

(b) Bring appropriate court action to enforce compliance;

(2) Request for Hearing. Any person aggrieved by any notice by the Manager under this resolution may obtain a hearing upon a written request being filed with the Manager. The written request must be filed within the time for correcting the violation, or within any extension of time granted by the Manager. Any such written request will postpone the date that the work is required

to be completed until after the hearing; provided, however, that the Manager will set the date for hearing on the request for hearing as early as possible. At the hearing, the petitioner may present any facts or arguments he desires to present, may be represented by counsel and may present such expert testimony or technical evidence as is necessary to establish the contentions of the owner or occupant. After the hearing, the Manager may continue the original order in effect, modify the order or withdraw the order, depending on the facts shown at the hearing.

(3) Appeals to the District's Board of Commissioners. Any person aggrieved by any decision of the Manager under the provisions of this section may appeal to the District's Board of Commissioners. The appeal shall be by a notice in writing stating the nature of the decision of the Manager, and stating briefly the reasons for the appeal, that is, the reason why the owner or user believes that the decision of the Manager should be overturned or modified. The appeal must be filed within 15 days after the user is notified by the Manager of his decision. The appeal will delay the effective date of the Managers order until after the hearing.

F. Pretreatment requirements.

For any industrial wastes which, without pretreatment, will be harmful to the structure, process or operation of the sewage treatment works, or detrimental to the quality of the effluent, the user shall provide preliminary treatment or processing facilities, at the user's expense, to render the wastes acceptable for admission to the public sanitary sewers, by providing facilities at the user's expense, subject to inspection by the Manager. Industrial wastes which have excessive BOD or excessive suspended solids in excess of normal domestic sewage shall be pretreated to meet the requirements of normal domestic sewage; provided, that such wastes may be accepted without pretreatment if the user can show that the waste will not cause damage to the sanitary sewer collection system, the waste will not impair the operation of the wastewater treatment process, the waste will not damage any of the wastewater facilities, and the precise limits to be accepted are covered by an agreement in writing between the District and the user.

G. Grease, oil and sand interceptors.

Grease, oil and sand traps or interceptors shall be provided for any liquid wastes containing grease or flammable wastes, sand and other harmful ingredients. Such interceptors shall not be required for private living quarters or dwellings. All such interceptors shall be subject to inspection by the Manager, and shall be located so as to be readily accessible for easy cleaning and inspection. Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight and equipped with easily removable covers which when bolted in place shall be gastight and watertight. Where installed, all grease, oil and sand interceptors shall be maintained by the user, at his expense, in continuously efficient operation at all times. Materials removed from these facilities shall be either recycled by the user or disposed of in accordance with all applicable laws and ordinances.

H. Plans and specifications for pretreatment facilities and interceptors.

No pretreatment facility shall be accepted and no interceptor shall be accepted under the terms of this chapter until written plans, specifications and information required to show compliance with the terms of this resolution have been submitted to the Manager and approved by the Manager.

I. Prohibited discharges.

No person shall discharge any of the following substances or conditions into any public sanitary sewer in the District, into any sewer flowing into any wastewater plant owned or operated by the District:

(1) No person shall discharge any storm water or groundwater, roof run-off, subsurface drainage or any water from downspouts, yard drains, fountains and ponds, swimming pools, sump pumps, septic tanks or lawn sprays into any sanitary sewer. Dilution of any waste discharged into the sanitary sewer system is prohibited whether accomplished by combining two or more water streams or accomplished by adding other liquids solely for the purpose of diluting the discharge. Dilution may be an acceptable means of complying with the pH prohibition.

(2) No person shall discharge any of the following substances into any public sanitary sewer:

(a) Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit or 65 degrees Centigrade;

(b) Any water or waste which contains wax, grease, oil, plastic or other substances that will solidify or become discernibly viscous at temperatures between 32 degrees Fahrenheit and 150 degrees Fahrenheit or zero degrees Centigrade and 65 degrees Centigrade;

(c) Flammable or explosive liquids, solids or gases;

(d) Solid or viscous substances in quantity capable of causing obstruction to the flow of sanitary sewers or of interfering with the operation of the wastewater treatment works. Such substances include but are not limited to acids, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, whole blood, animal wastes, animal body parts, lime slurry, lime residue, paint residues, fiberglass or bulk solids;

(e) Any garbage except properly shredded garbage;

(f) Any noxious or malodorous substance which, singly or by interaction with other wastes in the sewage system, is capable of causing objectionable odors or hazards to health, life or property or which can by itself or in combination with other substances in the sewage system result in concentrations exceeding the limits established in this chapter or any substance which creates any other condition harmful to the structure or treatment processes of the wastewater treatment system.

(3) No person shall discharge any substances exceeding the following concentrations into the public sanitary sewers of the District:

(a) Free or emulsified oil and grease exceeding an average of 100 mg/l or 830 pounds per million gallons of either oil or grease or any combination of oil and grease if it appears that the amounts of oil and grease can do any of the following: deposit grease or oil on the sanitary sewer lines in such a manner as to clog or interfere with the flow of sewage, overload the grease handling equipment of the wastewater system, exceed wastewater treatment process capacity of the District, or have any harmful effect on the treatment process or the treatment equipment due to the nature and quantity of the substances;

(b) Acids or alkalis having a pH value lower than 6.0 or higher than 9.0;

(c) Salts of heavy metals in solution or suspension in concentrations toxic to biological wastewater treatment processes or in concentrations sufficient to adversely affect sludge digestion or any other biochemical, biological or other wastewater treatment process or harmful to the biology of the receiving water to which the flow of the wastewater treatment facility discharges, or exceeding any of the following limits:

Toxic Substance	**mg/l**
Arsenic	3
Cadmium	1
Chromium	3
Copper	3
Lead	0.10
Mercury	0.002
Nickel	3
Silver	3
Zinc	3

(d) Any other elements which will damage collection facilities or be detrimental to the treatment processes or to the receiving water to which the effluent of the wastewater treatment facility discharges. In enforcing this resolution the volume of a particular industrial user shall be considered not only by itself but also in connection with other industrial discharges within the same area of contributing to the same wastewater treatment plant. All state and federal laws and regulations relating to discharge of effluent into receiving waters shall be followed;

(e) Cyanide or cyanogen compounds capable of liberating hydrocyanic gas or acidification in excess of two mg/l as Cx;

(f) Radioactive materials defined as hazardous materials under federal laws and applicable regulations, including any substance required by the United States Department of

Transportation to have Type A packaging or Type B packaging under regulations found in 49 CFR 173.426;

(g) Any wastewaters containing phenols or other taste-producing substances in such concentrations as to produce a detectable odor or taste in the stream or other watercourse receiving the effluent from the treatment facilities;

(h) Materials such as fuller's earth which cause unusual concentrations of inert solids or other solids such as sodium chloride, calcium chloride or sodium sulfate. Materials which cause excessive discoloration of the sewage. Materials which cause unusual biochemical oxygen demand or an immediate oxygen demand. Materials with a high hydrogen sulfide content. Materials with unusual flow and concentration characteristics;

(i) Any toxic substances which are not amenable to treatment or reduction by the wastewater treatment processes of the District.

(4) Procedure for Violations. Upon any violation of any provision of this section, the Manager may take any or all of the following actions:

(a) Discontinue sewer service and water service to the offending premises;

(b) Apply for appropriate court action, with the assistance of the district's attorney;

(c) Require pretreatment facilities or other action to end the violation forthwith;

(d) Require the user to pay a surcharge equal to the cost to the District of dealing with the offending matter;

(e) Apply to court for further action for violation of this resolution.

J. Penalty.

(1) Injunction. Violation of any of the provisions of this chapter is deemed to be a nuisance and threatening to the health and safety of the citizens of the District. The district may utilize any civil remedy available to it under the laws of the state of Washington to enforce these provisions, including injunctive relief.

(3) Civil Damages. Any person violating any of the provisions of this chapter shall become liable to the district for any direct or indirect expense, loss or damage occasioned by the district by reason of such violation. .

RESOLUTION 12-12

RULES, REGULATIONS AND BYLAWS

GOVERNING SEWER SYSTEM

FOR LIBERTY LAKE SEWER & WATER DISTRICT

MAY 2012

TABLE OF CONTENTS

SECTION I - GENERAL INFORMATION

1.1 AUTHORIZATION OF REGULATIONS

The Commissioners of the Liberty Lake Sewer & Water District have the power to make such reasonable regulations as they deem necessary to carry out the provisions of this law and any other law relating to the Commission, pursuant to the State of Washington Sewer & Water District Laws, Title 57, Revised 1996.

1.2 DEFINITIONS

A. COMMISSIONERS--the Board of Sewer Commissioners of the Liberty Lake Sewer & Water District.

B. DISTRICT--the Liberty Lake Sewer & Water District No. 1 in Spokane County, Washington.

C. ENGINEER--the consulting engineers and/or any of his authorized assistants or inspectors employed by the District.

D. PERSON--any individual, firm, company, association, society, corporation, or group.

E. MANAGER--the person employed by the District who is in charge of the Business Office of the District.

F. SEWER or SANITARY SEWER--any lateral, trunk, or other sewer owned or constructed by and/or part of the public sewerage facilities of the District.

G. SEWAGE--ground garbage, human and animal excretions, and all the types of domestic waste normally disposed of by a domicile, or commercial establishment through the sanitary drainage system.

H. SIDE-SEWER--any intercepting line from any domestic and/or commercial service to the sewers of the District.

I. SIDE-SEWER CONTRACTOR--a contractor licensed by the County of Spokane, hired by as property owner or resident of a building for the purpose of constructing side-sewer facilities. See section 3.7.

J. CHIEF OPERATOR--the person employed by the District who is in charge of the operation, maintenance and inspection of the sewer system and/or Water Reclamation Plant.

K. DEVELOPER - Any individual or corporation that plats property for development of residential, multifamily, commercial & business purposes.

L. WATER RECLAMATION PLANT- The wastewater treatment plant of the District.

1.3 RIGHT OF ACCESS

The authorized agents of the District shall have the right of access to the customer's premises, at reasonable hours, for the purpose of inspecting the customer's sewerage connections and for any other purpose which is proper and necessary in connection with the District's business.

1.4 REQUIRED CONNECTIONS

The owner of each lot or parcel of real property within the area to be served by the sewerage system of the District, upon which lot or parcel of real property there shall be situated any improvement designed to be utilized for human occupancy, employment, recreation, or other purpose or use abutting on any street, alley or right-of-way in which there is now located, or may in the future be located, a public sanitary sewer of the District, is hereby required, at his expense, to install suitable toilet facilities therein (or, in the instance of a trailer or mobile home to insure that there are suitable toilet facilities therein) and to connect such facilities directly with a proper sewer, provided that said public sewer is within three hundred (300) feet of the property line. All connections to said sewerage system shall be made in a manner complying with theºDistrict regulations, and each toilet, sink, stationary washstand, or other piece of equipment having sanitary waste or other such matter as determined by the District to require connection, shall be connected with said sewerage system.

Whenever any land, buildings or premises are required to be connected with the public sewer, the District's Manager shall serve upon the owner, tenant, or occupant of said lands, buildings or premises a notice in writing specifying the time within which connections must be made, which time shall be not more than sixty (60) days from the date of delivery of the notice.

Any improvement hereinafter constructed or made available for human occupancy and use for any purpose shall, before completion of construction or before any occupancy or use thereof, or within sixty (60) days after written notification from the District in the event that a sewer line capable of serving said building or structure had not been completed by the District prior to its construction occupancy, or use, be connected to the sewerage system of the District.

1.5 PROHIBITED DISCHARGE STANDARDS

General Prohibitions: No User shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes Pass Through or Interference. These general prohibitions apply to all Users of the POTW whether or not they are subject to categorical pretreatment standards or any other National, State, or local pretreatment standards or requirements. (40 CFR 403.5(a) and WAC 173-216-060(2)(b)(i))

Specific Prohibitions: Except as hereinafter provided no person shall discharge or cause to be discharged any of the following waters or wastes to the district sewer system.

A. Pollutants which either alone or by interaction may create a fire or explosive hazard in the POTW, a public nuisance or hazard to life, or prevent entry into the sewers for their maintenance and repair or are in any way injurious to the operation of the system or operating personnel. This includes waste streams with a closed-cup flashpoint of less than 140º F (60º C) using the test methods specified in 40 CFR Part 261.21. Such substances further include, but are not limited to:

alcohol	aldehyde	benzene	bromate	carbide	chlorate
ether	gasoline	hydride	kerosene	ketone	naphtha
perchlorate	peroxide	sulfide	toluene	xylene	

or any other substance which the District, the Department of Ecology, or the EPA has notified the user is a fire hazard or hazard to the POTW.

B. Any water or waste which may contain more than one hundred (100) parts per million by weight of animal or vegetable fat, oil, or grease (FOG).

C. Pollutants, including oxygen-demanding pollutants (Biochemical Oxygen Demand, etc), released in a discharge at a flow rate and/or pollutant concentration, which, either singly or by interaction with other pollutants, will cause interference with the POTW.

D. Solid or viscous substances in amounts that may cause obstruction to the flow in the sewer or other interference with the operation of the system

E. Wastewater having a temperature that will interfere with the biological activity in the system, has detrimental effects of the collection system, or prevents entry into the sewer. In no case shall wastewater be discharged, which causes the wastewater temperature at the Reclamation Facility to exceed 40ºC.

F. Any waters or wastes having a pH lower than 5.5 or higher than 9.0 or having any other corrosive property capable of causing damage or hazard to sewer structures, equipment, personnel of the sewage works, or to be adversely active on sewage treatment processes.

G. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with the sewage treatment processes, constitutes a hazard to humans or animals, or creates any hazard in the receiving waters of the Water Reclamation Facility.

H. Any waters or waste containing suspended solids or such character and quantity that unusual attention or expense is required to handle such materials at the sewage plant.

I. Any noxious or malodorous gas or substance capable of creating a public nuisance or hazard. to life, or to prevent entry into the sewers for maintenance or repair.

J. Wastewater, which imparts color that cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the Reclamation Facility's effluent.

K. Any detergents, surface-active agents, or other substances in amounts which may cause excessive foaming in the POTW.

L. Any of the following discharges unless approved by the District under extraordinary circumstances such as the lack of direct discharge alternatives due to combined sewer service or need to augment sewage flows due to septic conditions (WAC 173-216-060(2)(b)(vii)):

(a) Noncontact cooling water in significant volumes;

(b) Stormwater, and other direct inflow sources; or

(c) Wastewaters significantly affecting system hydraulic loading, which do not require treatment or would not be afforded a significant degree of treatment by the POTW

M. Any substance which will cause the POTW to violate its NPDES, State Waste Discharge or other disposal system permits or causing, alone or in conjunction with other sources, the treatment plant's effluent to fail a toxicity test.

N. Any trucked or hauled pollutants, except at discharge points designated by the District.

O. Wastewaters prohibited to be discharged to the POTW by the Dangerous Waste Regulation (WAC 173-303), unless authorized under the Domestic Sewage Exclusion (WAC 173-303-071).

1.6 Federal Categorical Pretreatment Standards

National Categorical Pretreatment Standards as adopted and hereafter amended by the EPA pursuant to the Act shall be met by all Users in the regulated industrial categories. These standard, found in 40 CFR Chapter I, Subchapter N, Parts 405-471, are hereby incorporated by reference.

1.7 State Requirements

A. State requirements and limitations on discharges to the POTW as incorporated into

Washington State Law by Chapter 90.48 RCW and implemented in Chapter 173-201A WAC, Chapter 173-216 WAC, and Chapter 173-240 WAC, shall be met by all Users which are subject to such standards in any instance in which they are more stringent than Federal requirements and limitations, or those in this or other applicable Ordinances. This includes the requirement to meet AKART as defined herein whenever applicable.

B. Any User determined by the District to qualify as a Significant Industrial User shall file an application for a State Waste Discharge Permit with the Department in accordance with the requirements of WAC 173-216-070. Proof of acceptance of the application and payment of permit fees shall be kept at the User's facilities, and produced upon request by the District. Failure to submit the application or rejection of the application by the Department may be considered sufficient grounds to terminate or refuse to provide sewer service.

1.8 Local Limits

A. The following pollutant limits are established to protect against pass through and interference. No person shall discharge wastewater containing in excess of the following daily maximum allowable discharge limits.

Analyte	Daily Maximum Concentration Limit mg/L
Arsenic	0.5
Cadmium	0.11
Chromium	2.5
Copper	1.0
Cyanide	0.49
Lead	0.32
Mercury	0.1
Nickle	2.5
Silver	0.3l
Zinc	5.0
Fats, oil or grease (FOG)	100
Reduction in effluent ultra violet transmissivity (per cm at 254 nm wavelength)	10% reduction

1.9 PENALTIES FOR VIOLATIONS

Any violation of this Resolution and the rules and regulations of the District may impose a penalty not to exceed One Thousand Dollars ($1,000.00) for each violation or the actual cost to the District, whichever is greater.

1.10 PUBLIC REPORTS

The Commissioners of the Liberty Lake Sewer & Water District shall hold at least one meeting per year for the purpose of making a report to the sewer users of the District.

1.11 PUBLIC MEETING NOTICE

Public notice of any meeting of the Liberty Lake Sewer & Water District Board of Commissioners will be at least 24 hours in advance of the meeting. Notice will be available at the District Office and mailed to local news media. Notice may be waived in the event of any emergency.

1.12 COMMISSIONER MEETINGS

The Commissioners of Liberty Lake Sewer & Water District shall meet once per month to conduct business of the District. Meeting notices must comply with section 1.8 of these bylaws. Meetings canceled for any reason will be posted at the District Office and at the scheduled meeting room prior to the meeting time.

SECTION II - REGULATIONS FOR SERVICE

2.1 RIGHT OF CLASSIFICATION

The District reserves the right to determine the type of customer receiving sanitary sewer service and to classify the type of customer within the foregoing categories in the event there arises a dispute relative to the type of customer receiving sewer service and thus applicable sewer service rate, the District's determination as to the type of customer shall be binding upon the customer receiving sanitary sewer service in the absence of manifest error, however, a customer disputing the classification shall have the right to appeal the determination of the District to the Board of Commissioners, and, after a hearing on the matter before the Board, the determination of the Board shall be likewise binding on the customer in the absence of manifest error.

2.2 CLASSIFICATIONS OF SERVICE

DEFINITIONS: Dwelling--a building or portion thereof designed exclusively for residential purposes, including one (1) family, two (2) family and multiple dwelling units, but shall not include hotel, boarding and lodging houses (Spokane County Code, Section 4.03 020 (20)).

DWELLING UNIT: One (1) or more rooms in a dwelling, commercial building, apartment house or any type of multiple family dwelling building designed for living or sleeping purposes, and having one (1) kitchen.

GENERAL: A sewer user charge shall be levied by the District on all users of the sewage collection and treatment facilities to cover the actual or estimated cost of operation, maintenance, replacement, and financing of these facilities. The user charge shall distribute these costs to each user in approximate proportion to such user's contribution to the total wastewater loading of said facilities. The sewer user rates for each user shall be based on the user's estimated or actual contribution to the total wastewater loading of the treatment facilities in comparison to a standard equivalent user as defined below. Each user shall be assigned a number of equivalent users to be multiplied by a constant monthly cost factor to determine the basic monthly sewer user charge rate. User connection fees and monthly rates will be based on the latest edition the Equivalent Users Schedule adopted by the Board of Commissioners. (Resolution 37-97 and Resolution 10-97)

EQUIVALENT USER UNIT (ERU): One equivalent user shall be defined as contributing 300 gallons per day of wastewater containing not more than .54 pounds of 5-day BOD and .54 pounds of suspended solids. The equivalent user flow is based on an average single dwelling unit of 3.2 people contributing 94 gallons per day per person. The wastewater strength is based on .17 pounds of 5-day BOD and .17 pounds of suspended solids respectively per person per day. The basic equivalent user shall be subject to revision if population, water usage, sewage volume, and/or other information indicates flow and/or strength significantly different than defined herein.

EQUIVALENT USER SCHEDULE: The number of equivalent users to be assigned to each user shall be in accordance with the latest adopted edition of the Liberty Lake Sewer & Water District Equivalent User Schedule. (Resolution 37-97 and Resolution 10-97) Assignment of equivalent users shall apply for one year. A single user having more than one classification of use shall be the sum of all uses.

REVIEW AND REVISION OF RATES: The sewer rates and connections fees shall be reviewed annually and update to reflect actual costs of operation, maintenance, replacement and financing of the sewage collection and treatment facilities. The District may require installation of flow-measuring devices and/or collect wastewater samples at any time in reviewing or revising a users equivalent user charges.

USER REQUEST FOR RATE CHANGE: Any sewer user may appeal to the Board of Commissioners regarding the assignment of equivalent user units. Each appeal must be in writing and indicate actual or estimated average flow and strength of wastewater in comparison to values assigned by the District. Additional studies and review may be required by the Board.

NEW CONSTRUCTION AND VACANCIES: For new construction, the sewer user charge shall begin when the service connection has been inspected and approved. All sewer users shall pay a user charge for their premises even though vacant or unoccupied, unless said premises have been destroyed by fire, demolished or other wise made unfit for human habitation, then the user charge shall be terminated until the premises become habitable. The sewer ERU's will be classified as dedicated capacity.

MONTHLY RATES: Monthly rates for all sewer users in the District shall be established by resolution at a public meeting. The Monthly Rates shall be reviewed annually by the Board of Commissioners.

DEDICATED CAPACITY- Sewer ERU's that are not assigned to a residence or building and may be subject to special monthly fees as reserve units.

2.3 BILLING FOR SERVICE

A. The District shall bill all sewer service customers in accordance with the adopted Schedule of Rates and Charges, The current schedule shall be made available to the public at the District's business office. Sewer service billings shall include a base rate charged according to the service connection.

B. Property owners whose property is rented to others shall be responsible for all sewer charges. All sewer bills and notices will be sent to the property owner, unless requested otherwise in writing by the property owner.

C. The District shall have the right to charge a reasonable fee for processing checks returned to them by the bank for any reason, when such checks are received in payment of charges.

D. All sewer service charges are due at the District's business office by the last day of the billing cycle. A 10% late charge will be charged on all amounts not paid when due.

E. An additional notice of amount due shall be sent to any customer whose bill is not paid when due. If said bill is not paid on or before the 15th day following such written notice, the service will be turned off by the District and shall remain off until all charges, including penalties are remitted.

F. Developers will be required to sign District form, Intent to Pay Engineer Plan Review & Inspection Fees.

G. Billing for regular service begins at date service is available to site regardless of use or building construction completion.

2.4 AUTHORIZATION FOR RECEIPT OF PAYMENTS

The Manager or any such person who shall from time to time under the authority of the Board of Commissioners act as Manager of the District, shall collect all the rates and charges herein designated, and all such sums when collected shall be transfered by the District at least once each month to the County Treasurer of Spokane County.

2.5 NEW CONNECTIONS

New Connections: Billing for new connections will commence on the day of final inspection and approval of the sewer connection to the property.

2.6 DELINQUENT ACCOUNTS

All sewer charges against property owners receiving or capable of receiving such services are deemed charges against the property served and when such charges are not paid by the end of the billing cycle, such charges are considered delinquent. Upon such charges becoming delinquent, there shall be added to said charges a late charge of ten percent (10%) per month of the amount of such charges due.

Delinquent charges and penalties added thereto shall be a lien against the property upon which such service was received or capable of being received, subject only to the lien for general taxes, and shall be certified to the Treasurer of Spokane County whenever such charges have been delinquent for a period of three (3) months. The District may, thereafter bring suit and foreclose such lien by civil action in the Superior Court of the State of Washington for Spokane County pursuant to RCW 57.

2.7 CESSATION OF BILLING

All changes of ownership of property occurring during any calendar month will be billed to the date of change.

In the event that buildings or structures being billed for sewer service are destroyed by fire, demolished or otherwise made unfit for human occupation, the District will, upon capping off of the side-sewer and having such cap-off inspected by the District, terminate its billing. Dedicated capacity charges may be applicable. At such time as buildings are rebuilt or otherwise made suitable for human occupation, the District will resume its billing for sewer service in accordance with the appropriate rate into which the user classification falls.

2.8 RESPONSIBILITY FOR SIDE-SEWER MAINTENANCE

All expenses of operation and upkeep of the sewer system of the District, including the mains and side-sewers located in the street, alley, roads, and land for which an easement has been granted the District, shall be paid by the District except those expenses (1) cause by the negligence of the property owner of lessee; (2) resulting from the special or extraordinary service needs of a property owner or lessee; and (3) resulting from new or modified connections to the system made at the request of the property owner or lessee, which shall be paid by the owner or lessee of the property served. Except as provided above, the District shall be responsible for maintenance and repair and replacement of side-sewers up to the property line. The property owner shall be responsible for maintenance and repair and replacement of side-sewer on private property.

When any side-sewer or private sewer or portion thereof located on private property becomes obstructed, broken or out of order, the District shall, if the owner, agent, or tenant of such premises fails to repair the same after ten (10) days notice to do so, cause such drainpipe to be removed, reconstructed, repaired, altered, or cleansed as may be required, and all expenses incurred for such repair, replacement and cleaning shall be the responsibility of the property owner, agent or occupant of the premises.

2.9 PUMP POLICY

I. Installation:

A. The Liberty Lake Sewer & Water District No. 1 (the "District") will purchase grinder pumps (including their container and the necessary electrical equipment and controls) for existing homes, that, due

to topographical difficulties, are unable to be connected to the District's sewer system by conventional gravity lines. The District will retain ownership of said pumps.

B. Homes constructed after the District's sanitary sewer construction period (approximately January, 1979) that, due to topography, are unable to utilize conventional gravity lines, will have pumps installed by the homeowner, at the sole expense of the individual homeowner. The type of pump must be both acceptable to the District and conform to its By-laws. The District will assume ownership of the pump upon acceptance by the District.

C. The placement and location of the pumps referred to in Section 1.1 and 1.2 must be mutually acceptable to both the homeowners and the District. If the parties can't agree, the District's determination is final.

D. The homeowner is in all respects responsible, including expenses relating thereto, for providing adequate electrical service so the grinder pump be safely connected in conformity with appropriate building codes.

E. The homeowner shall bear the cost of all electricity required to operate the grinder pump.

F. The homeowner is responsible for and shall bear the expense of the construction and installation of the service line from the home to the grinder pump and from such pump to the side sewer, if one has been installed or to the District's main sewer if no side sewer exists.

II. Maintenance:

The District, at its expense, will provide maintenance and repair to the grinder pumps.

III. Hold Harmless:

The homeowner, by accepting the installation of a grinder pump, agrees to hold the District harmless from any and all losses, claims, expenses, damages, obligations and liabilities relating to the installation, operation, maintenance and repair of the grinder pump except for expenses and damages arising out of the District's gross negligence.

SECTION III - REQUIREMENTS FOR CONNECTIONS

3.2 CONNECTION CHARGES

Connection Charges: Connection charges and hookup fees shall be in accordance to the latest edition of the Board adopted Rate Schedule and thereafter amended.

3.3 ILLEGAL CONNECTIONS

No gutter drain, downspout, storm water collection system, street drainage, swimming pool or any such waters shall be connected with the public sanitary sewer or side-sewer. Also, no cesspool, septic tank, privy vault or cistern shall be connected with the sanitary sewer or side-sewer.

3.4 OPENING PUBLIC SEWER: PERMIT REQUIRED

It shall be unlawful for any person to make any opening in any sewer or connect any private sewer drain therewith, without complying with all of the provisions of this Resolution in relation thereto and having a permit to do so from the District.

Application for permit shall be made at the Business Office of the District, or at such other place as may be designated in Spokane County, Washington.

3.5 PERMIT TO OPEN SEWER HOW OBTAINED

In order to obtain the permit provided in section 3.4, any licensed side-sewer contractor employed to do the work or the owner or occupant of any property shall file an application in writing with the Manager

stating the name of the owner or occupant of the premises to be connected, giving service address, lot, block, plat, and addition, or other legal description, the number of buildings on premises, and the purpose for which they are to be used, together with plans and specifications showing the whole course of the drain from the sewer or other outlet to its connection with the building or premises and all branches, traps, and fixtures to be connected therewith, which plans and specifications shall be submitted with two (2) copies to the Manager and he may change or modify the same and designate the manner in which such connections shall be made with the building, the place where such connections of the public sewer shall be made, specify the size and grade of such connecting sewer, and endorse his approval on such plans and specifications as originally prepared or as modified and changed.

Upon approval of such plans and specifications as heretofore provided, the Manager shall issue as permit as provided in this Resolution and it shall be unlawful for any person to alter the approved plans and specifications or to do any other work than is provided for in the permit, or to repair, extend, or connect to any private sewer or drain without first obtaining a permit as provided in this ordinance. The Manager shall prepare and keep on file in the District's Business Office all cards and records of buildings connected to sewers showing the size of the lot, location of the building or buildings, and the whole course of the side-sewer drain to the public sewer.

3.6 THE OWNER DESIRING TO CONSTRUCT, EXTEND, OR REPAIR SEWER INSIDE PROPERTY

It shall be unlawful for any person to construct, extend, re-lay, repair, or make connections to a private or side-sewer within the property lines without obtaining a permit therefore as herein provided and submitting a scale drawing showing the location thereof as provided in section 3.5 of this Resolution. The Manager may issue such permit to the owner or occupant of any property to construct, extend, re-lay, repair, or make connections to a side-sewer, or private sewer, lying inside of the property line, provided that such owner or occupant shall comply with the applicable provisions of this ordinance except he need not employ a licensed side-sewer contractor to do such work.

3.7 REGULATIONS FOR SIDE-SEWER CONTRACTORS

All contractors working on sewer mains and/or side sewers within the District shall be a licensed and bonded contractor to do work in the State of Washington. Contractors shall obtain and keep in force during the term of contract or work, Commercial General Liability insurance policies with insurance companies approved by the Insurance Commissioner of the State of Washington. The Contractor shall file with the District a certified copy of all policies or a certificate of insurance evidencing such policies are in force. The certificate shall be accompanied by such policy endorsements as are necessary to comply with these requirements. The Contractor shall not commence work until all required insurance's are in place and approved by the District. Insurance policies shall name the District, its elected or appointed officials, employees and volunteers as insured with regards to damages and defense of claims. The District shall be given 45 days written notice of cancellation. The coverage provided by the Contractor insurance policy shall be primary to any insurance maintained by the district. The Contractors insurance policies shall not contain deductibles or any self insured retention in excess of $10,000. The types and limits of insurance shall be that required by the Districts Insurance provider and/or insurance pool in effect at the time of Contractors work. The Contractor will maintain all insurance requirements of the Washington State Department of Labor and Industries and any other agency or organization requiring insurance coverage for contractors providing work in the State of Washington. The contractual coverage of the Contractors policy shall be sufficiently broad enough to insure the provisions of the Hold Harmless and Indemnification Agreement required by the District. Nothing contained in these requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations in the District.

3.8 ADDITIONAL WORK--NEW PERMIT REQUIRED

When a permit has been issued for a private sewer drain as herein provided, no additional work shall be put in without the approval of the Manager and a new permit must be taken out covering all additional work.

3.9 LIFE OF PERMIT--EXTENSION OF TIME

In the event work shall not be completed within one year (365) days after being issued permit, the permit becomes void and a new permit will be required. No permit issued under the provisions of this Resolution shall be valid for a longer period than that specified in such permit.

3.11 CONSTRUCTION REQUIREMENTS FOR SIDE-SEWERS

All materials and standards of construction shall be subject to the latest approved edition of the Liberty Lake Sewer & Water District Standard Construction Specifications.

3.12 WORK IN PUBLIC STREETS--BONDED CONTRACTOR

No person shall install side-sewers in any public thoroughfare or right-of-way and make connection to the District sewer unless he is bonded to do such work to the Liberty Lake Sewer & Water District and to Spokane County and has adequate liability insurance. Bond and insurance forms along with opening permit issued by Spokane County must be in the possession of person working in right-of-way. The Manager has the authority to waive this requirements in the event of emergency.

3.13 RESTORATION OF ROADWAYS

All work within the limits of any street or public place must proceed to completion with due diligence and if any excavation is left open beyond a reasonable time, in the opinion of the District, the Manager or Engineer may cause the same to be rebuilt and the street to be restored forthwith and any costs incurred in such work shall be charged to the contractor in charge of such work, or to the owner of the property and the actual costs may be added to the bill for sewer services and shall be a lien upon the property served by such side-sewer.

3.14 EXCAVATION TO BE GUARDED

All excavations for purpose of sewer installations made by any person within the limits of any street, alley, avenue or other public place or easement shall be protected and guarded by fencing or covering by such person, both by night and by day, by the display of proper signals and lights. If the Manager deems any such guards, fencing, or covering inadequate, the person making such excavation shall place necessary or additional guards, fencing or covering as the Manager or Engineer may direct.

Persons conducting any part, or all of the operations connected with the work as set forth above, will be held responsible for any failure to respect, adhere to and comply with, all ordinances, resolutions and laws governing, controlling, or limiting in any way, the action of those engaged upon the work.

3.15 CALL FOR INSPECTION--NOTICE OF DEFECTS

Any person performing work subject to the provisions of this Resolution shall notify the District when the work will be ready for inspection, and shall specify in such notice the location of the premises. If the inspector finds the work or material used is not in accordance with the provisions of this Resolution, he shall notify the person doing the work and also the owner of the premises by posting written notice upon the premises, and such posted notice shall be all the notice that is required to be given of the defects in the work or material found in such inspection and a copy of such notice shall be kept on file in the District Office. If such defects are not corrected within thirty (30) days for such posted notice, the Manager or Engineer, if in

their opinion such defective work is detrimental to the public sewerage system, may order or cause the said defects to be corrected and the actual cost of such correction shall be chargeable to the owner as a service charge and shall be a lien upon the property served by such side-sewer.

3.16 INSPECTION BEFORE TRENCHES ARE FILLED

No trench shall be filled nor any connecting sewer covered until the work from the place where the same connects with the public sewer, or other outlet, to the point where it connects with the iron pipe, or other plumbing of the building or premises to be connected, shall have been inspected and approved by or under the direction of the Chief Operator and until the same shall have been made in all respects to conform to the provisions of this Resolution.

3.18 INSPECTOR'S RIGHT OF ENTRY

The Manager, Engineer, or other designated inspectors, or authorized representatives shall have free access to all buildings or premises for the purpose of examining any or all private sewers or drains and of ascertaining whether the provisions of this Resolution are being complied with, and for such purpose shall, at all reasonable times, have the right to enter and inspect such buildings, and it shall be unlawful for any person to prevent, or attempt to prevent, any entrance or inspection or to obstruct or interfere with any such officer while engaged therein.

3.19 MODIFICATION OF REGULATIONS

The Commissioners of the Liberty Lake Sewer & Water District shall have the authority to repeal, modify, or add to these regulations, bylaws, and rules at any meeting, either regular meeting or special meeting.

If any section, sentence, clause, or part of this Resolution is for any reason held invalid, such decision shall not affect the remaining portion of this Resolution. The Board of Commissioners hereby declares that it would have passed this Resolution and each section, sentence, clause and part thereof, despite the fact that one or more sections, sentences, clauses and parts thereof be declared invalid.

ADOPTED by the Board of Commissioners of the Liberty Lake Sewer & Water District, Spokane County, Washington at a regular meeting thereof this _____day of _____2012

_____
Steve Skipworth, President

_____
Frank L. Boyle, Secretary

_____
Tom Agnew, Commissioner

ATTEST

_____
F. Lee Mellish, Manager

Liberty Lake Sewer and Water District
Water Quality Variance Request

Name of facility:

Liberty Lake Sewer and Water District - Water Reclamation Facility

Facility contact (name and title):

BiJay Adams, General Manager

Phone (area code and number):

(509) 922-5443

Email address:

bijay@libertylake.org

Facility mailing address:

22510 E. Mission Ave., Liberty Lake, WA 99019

Facility location (street address and latitude/longitude):

1926 N. Harvard Rd., Liberty Lake, WA 99019
Lat.: 47° 40' 36"N., Long.: 117° 06' 33" W.

Existing NPDES permit number for facility:

WA0045144

Receiving Water Body:

Spokane, River, WA-57-1010

Location of Discharge:

River Mile 92.3
Lat.: 47° 40' 42"N., Long.: 117° 07' 00" W.

Sources of Influent:

Municipal Wastewater

List the other NPDES, state waste discharge, or clean-up permits/orders applicable to the facility location, to areas that discharge to the facility or to the waterbody on which the facility discharge is located.

None

Attach a topographic map of the facility location that shows the locations of all permitted NPDES and state waste discharges and clean-up sites, and the service areas (in the case of municipal wastewater and stormwater permits) for the permitted facilities listed above. Show the outline of the facility, location of intake and discharge structures. Include all springs, rivers, and other surface water bodies in the map area.

Attached

Pollutant and criterion for which a variance is being requested (e.g., total PCBs criterion of 7 pg/L):

Pollutant: PCB's
Criterion: 7 pg/L

Designated use for which a variance is being requested (e.g., harvest of fish and shellfish):

Harvest of fish

Is this a request for a discharger variance (individual or multi-discharger) or a waterbody variance? (see WAC 173-201A-420(2) and 40 CFR 131.14(b)(1)(ii), or, contact Ecology for more information):

Individual discharger

Signature of Responsible Official (person who signs permit applications):

Signature: _____
BiJay Adams, General Manager

Date: April 30, 2019

When submitting a variance request to Ecology the following information must be included to fulfill the requirements of WAC 173-201A-420(3). Ecology recommends that any entity requesting a variance contact Ecology first to determine whether a variance is needed and the level/types of information needed to fulfill the requirements of WAC 173-201A-420(3).

1. **The pollutant-specific criteria and designated use(s) proposed to be modified by the variance, and the proposed duration of the variance.**
   A. Pollutant-specific criteria:
   PCBs. The water quality criterion for which the District request a variance is the 7 pg/L Human Health water quality criteria for Total PCB's.
   B. Designated uses:
   The designated use for the human health criteria is fish harvest and consumption, domestic water, and recreation. This variance is a request for establishment of criteria based on a Highest Attainable Condition (HAC) based on 40 CFR 131.14 (g) (3); Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.
   C. Proposed duration of variance:
   The District request a variance of the Total PCB criteria for a period of 20 years. The two recent upgrades to the District's treatment facility were completed at significant cost ($37.3 Million) to the District's customers. The most recent upgrade included addition of chemical coagulation and membrane filtration. Chemical coagulation and membrane filtration is recognized as the most technical, economical, and feasible technology available to meet effluent limits based on the underlying water quality criteria. As discussed in section 3 below there is currently no treatment technology available that has been proven to treat municipal wastewater to 7 pg/L on a consistent basis. The District is currently optimizing the operation of the facility to achieve effluent criteria in the current NPDES permit and to identify what measures if any can be taken to further reduce PCB concentrations in the discharge. In addition, the District has begun to evaluate reuse options to reduce or eliminate the effluent discharge to the Spokane River. If found to be feasible some of these alternatives will take 20 years to evaluate, plan, acquire funding, and implement.

2. **A demonstration that attaining the water quality standard for a specific pollutant is not feasible for the requested duration of the variance based on 40 C.F.R. 131.14(b)(2)(i).**

   Meeting the Water Quality of 7 pg/L is not feasible within the 20-year variance duration requested for the following reasons:

   A. Limitations for reducing PCB concentrations in the District's discharge to 7 pg/L;
      i. *There is no treatment technology available to meet the water quality standard;* As discussed in section 3 below there is currently no treatment technology available that has been proven to treat municipal wastewater to 7 pg/L on a consistent basis.
      ii. *TSCA and FDA limits for PCB's does not adequately protect the influent PCB levels into the District's plant;* The Code of Federal Regulations (CFR, Title 40, Chapter 1, Sub chapter R, 761.20) limits the distribution of commercial items

to PCB levels of 50 ppm. This TSCA limit allows products with levels 7,142,857,000 times the concentration of the WQS to enter the District's collection system. Furthermore, FDA mandates tolerances of 0.2 to 3.0 ppm PCBs for all foods [FDA 1996c]. Also, the enforceable MCL for PCBs in public water systems is 0.0005 ppm [EPA 2001]. The limits described above result in PCB concentrations in the plant's influent where PCB removal rates cannot be currently achieved to meet a water quality standard of 7 pg/L.

iii. *Current testing procedures do not provide consistent/accurate PCB test results to determine District compliance with effluent criteria of 7 pg/L*. Laboratory test results on "blank" samples often exceed the 7 pg/L water quality standard. There is currently no approved laboratory testing procedure with detection limits that will provide the District with reliable test data to confirm compliance with an effluent limit at the water quality standard.

iv. *Sources of PCBs in the District's wastewater are outside the control of the District*; PCBs are persistent and widespread in our environment with half-lives estimated at 10-15 years. They are found in food products, clothing, paper products, and personal care products. The District has no regulatory control over the use of those products nor do they have control to reduce or eliminate PCB concentrations in those products (See TSCA discussion above).

v. *Additional treatment added to the Water Reclamation Facility would cause more environmental damage than if they are not done;* Additional treatment technologies discussed in the evaluation of treatment options section of this request may minimally reduce PCB concentrations in the District's Water Reclamation Facility. These technologies would require more chemical addition and significantly higher energy consumption resulting in an increase in the carbon footprint of the treatment facility. This would result in more environmental damage from the increase in carbon emissions than the minimal environmental benefit that they are estimated to achieve.

B. Limitations for reducing PCB concentrations in the Spokane River to 7pg/L;

i. *PCB levels in the Spokane River come from many sources that are difficult if not impossible to control;* Sources of PCBs include groundwater contamination sites, non-point sources, and aquifer concentrations above the water quality standard contributing flow to the river through the gaining reaches. In addition, groundwater is withdrawn from the aquifer for domestic, commercial and irrigation use in the District. This water enters into the District's wastewater system through normal daily uses of drinking water such as laundry, showering/bathing, dish and clothes washing, cooking, flushing and excretions from drinking and eating liquids and foods consumed by customers.

ii. *Idaho water quality standard is higher than the standard required in Washington;* On April 4, 2019 EPA Region 10 approved Idaho's Human Health Water Quality Standards (HHWQS) with a PCB criteria of 0.00019 µ/L for water. The water quality standards for PCBs in the Spokane River in Idaho prior to entering Washington are significantly higher than those in Washington.

3. **An evaluation of treatment or alternative actions that were considered to meet effluent limits based on the underlying water quality criteria, and a description of why these options are not technically, economically, or otherwise feasible.**

The District has implemented a state-of-the art biological, chemical, and ultrafiltration (nominal pore size of 0.04 µm) membrane treatment system for nutrient removal and is currently producing highly treated effluent with PCBs less than 1,000 pg/L. The District's treatment system would have been adequate for compliance with state water quality standards for toxics prior to implementation of the new 7 pg/L human health criteria for PCBs in surface waters in 2016, and the publishing of EPA Method 1668C in 2010 for detecting PCBs down to 7 - 77 pg/L in clean water (depending on the PCB congener) (U.S. EPA 2010).

However, because the changes to the surface water quality standards and analytical test methods have occurred relatively recently, the available technologies that have been demonstrated at full-scale for treatment of PCBs to the new standard of 7 pg/L using EPA Method 1668C are limited, if non-existent. Table 1 is a summary of feasible "add-on" PCB treatment technology alternatives for the District's existing state-of-the art treatment plant, and Table 3 is a summary of alternatives for optimizing the existing treatment system. The technologies included in the tables are technologies that could theoretically, based on the current science available, reduce the trace PCBs in the District's treatment system effluent, and are capable of being implemented on a high-flow domestic waste stream. Other technologies for PCB destruction exist and are discussed in detail in various publications (U.S. EPA 1976) (Rahuman 2000) (Gomes 2013) (Urbaniak 2013) (Ayanda 2014) (Jing 2018). These other technologies are applicable to the remediation of sediments, soils, solvents, or concentrated low volume industrial wastes. They typically involve high temperature, pressure, and/or radiation, solvents, metallic catalysts, and other processes that are not considered to be technologically feasible for trace PCB removal from high-flow domestic wastewater streams.

Table 1. Evaluation of Additional Treatment and Treatment Optimization Alternatives

Add-On Treatment Alternatives	Feasibility and Implementation Considerations	Economic and Environmental Considerations
Granular Activated Carbon (GAC) Biological Activated Carbon (BAC) Powder Activated Carbon (PAC)	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -GAC has been considered the best available technology for plant scale treatment of PCBs in wastewaters since the 1970s (U.S. EPA 1976). -Benchtop studies have shown removal of PCBs to non-detect levels (Ghosh 1999) (Des Ligneris 2018). One benchtop study demonstrated removal of PCBs down to less than 100 pg/L for trichlorobiphenyl-18 and to 0.1 pg/L for hexachlorobiphenyl-158 using coal-based activated carbon (Ghosh U. 2012). -In the presence of influent particulates, PCB removal was better for BAC (99%) than for GAC (62%) (Ghosh 1999). Biofilm covered GAC has a higher removal efficiency due to simultaneous adsorption and biodegradation (Kjellerup 2013). -PAC and alum removed 78-98% of PCBs in a benchtop study (Roninska 2015). PAC could be added in low doses ahead of the existing alum coagulation process to enhance organic matter and PCB removal. Permission	-Lower capital cost than other add-on treatment processes due to the relative simplicity and widespread use of activated carbon treatment systems. -High operation and maintenance costs due to energy for pumping and spent media replacement and disposal. -Lower carbon footprint and land space requirements than other add-on treatment processes.

Add-On Treatment Alternatives	Feasibility and Implementation Considerations	Economic and Environmental Considerations
	from the existing membrane system manufacturer would be required.	
Advanced Oxidation Processes (AOP) with ultraviolet (UV) light and Hydrogen Peroxide, or Ozone, or Electrochemical Peroxidation (ECP)	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -One benchtop study using UV-hydrogen peroxide showed over 99% removal of six PCB congeners down to less than 1 ng/L after 160 minutes (Kastanek 2004). A second benchtop study showed 98% removal of PCB-153 using UV-hydrogen peroxide (Yu D. N. 2011). -Another study using pulsed corona discharge to generate UV and hydrogen peroxide degraded nearly 70% of PCB-47 within 60 minutes (Sahni 2005).	-High capital cost than other add-on processes due to complexity and being a less-developed technology. -Higher operation and maintenance costs due to high energy costs and/or chemical costs, but no residual or media disposal costs. -Higher carbon footprint due to high energy and/or chemical consumption. -Lower land space requirements than other add-on treatment processes.
Reverse Osmosis (RO) Nanofiltration (NF)	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -Molecular weight of PCBs range from ~190 g/mole to ~500 g/mole, so theoretically PCBs could be excluded by RO and partially by NF for PCBs larger than ~300 g/mole (J. S. Taylor 1989). NF membrane pore sizes are in the range of 0.001 to 0.005 µm, and they will reject multivalent ions. RO membrane pore sizes are typically less than 0.001 µm, and they will reject monovalent ions. -Removal of 12 PCB congeners in the range of 0.15 to 50 pg/L through microfiltration and RO was demonstrated in a limited duration pilot study (Rodriguez, Dioxins, furans, and PCBs in recycled water for indirect potable reuse 2008).	-High capital cost due to complexity and management of high dissolved salts in membrane reject streams which require storage and evaporation. -High operation and maintenance costs due to energy costs for pumping and evaporation, chemical costs for membrane maintenance, and membrane replacement costs. -High carbon footprint due to high energy, and chemical/membrane consumption. -Large land space requirements for storage and evaporation of reject streams.
Moving Bed Biofilm Reactor	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -Pseudomonas bacterium, polyphosphate accumulating organisms (PAOs), found in biofilms and wastewater treatment systems, are capable of oxidizing PCBs into chloric benzoic acids (Novakova H., PCB metabolism by Pseudomonas sp. P2 2002) (Chavez F. P., Growth of polychlorinated-biphenyl-degrading bacteria in the presence of biphenyl and chlorobiphenyls generates oxidative stress and massive accumulation of inorganic polyphosphate 2004) (Chavez, Adaptive responses and cellular behaviour of biphenyl-degrading bacteria toward polychlorinated biphenyls 2006). -Combined Moving-Bed Biofilm Reactor (MBBR) and membrane filtration system showed removal efficiencies for PCB77 of 73% under anaerobic conditions and 84% under aerobic conditions (Dong 2015). -Inland Empire Paper pilot testing demonstrated an average ~50% removal of total PCBs from 1,920 pg/L to ~1,000 pg/L (Inland Empire Paper Company 2018). -The rate of aerobic biodegradation of PCB compounds increases with the reduction of chlorination (Furukawa K. 1978). -PCB monitoring data for the District's existing treatment system indicates that the existing system is completely removing PCB homologs with 7 or greater chlorine atoms, and most of the time is removing those homologs with 5 or more (Century West Engineering Corporation 2019), which may increase the potential for further biodegradation with a biofilm treatment system.	-High capital cost if implemented as an add-on process due the additional membrane solids separation process and complexity. May be implemented as a polishing process prior to the treatment plant's existing membrane filtration system to reduce costs. -High operation and maintenance costs due to energy costs for pumping and aeration, added chemical costs for membrane cleaning, and additional biosolids disposal costs. -High carbon footprint due to high energy use, and additional chemical consumption. -Larger land space requirements than for other add-on treatment processes.

Phytoremediation	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -Phytoplankton (algae and cyanobacteria) play a critical role in controlling the fate of PCBs in water columns because they are high in lipids (Lynn 2007). -Blue-green algae (Cyanobacteria) are capable of degrading 40 to 68% dioxin-like PCBs after sufficient exposure times, up to 25 days (Zhang 2015). -Five species of microalgae have been identified for bioaccumulation of PCBs (Baghour 2017).	-High capital cost if implemented as an add-on treatment process due additional solids separation process and complexity. -May be implemented as a polishing process prior to the treatment plant's existing membrane filtration system to reduce costs. -High capital cost if implemented as a natural system due to land and ecosystem requirements. -High operation and maintenance costs due to energy for pumping and UV radiation, added chemical costs for membrane cleaning, and additional biosolids disposal costs, if implemented as an add-on mechanical treatment process. -Lower carbon footprint than other add-on treatment process due to carbon fixation of phyto-organisms, although system may still consume energy and additional chemicals. -Larger land space requirements than other add-on treatment processes.
Oil/Solvent Sorption and Filtration	-Data demonstrating removal of PCBs to 7 pg/L using EPA Method 1668C is inconclusive. -PCBs are freely soluble in non-polar organic solvents, oils, and biological lipids, and the degree of water to lipid solubility is linked to the degree of chlorination, with the higher chlorinated PCBs less soluble in water and more soluble in non-polar oils and solvents (Shui W. Y. 1986). -Pilot testing from 2015 through 2018 at Kaiser Aluminum's Trentwood facility showed that for an average inlet PCB concentration of 350 ng/L, the walnut shell filtration system removed an average of ~70% of PCBs using 15 mg/L of castor oil (Leber 2019).	-High capital cost due to solvent management systems, complexity, and being a less developed technology. -High operation and maintenance costs due to energy for pumping, and spent media and solvent replacement and disposal costs. -Lower carbon footprint and land space requirements than other add-on treatment processes.

Table 2. Evaluation of Additional Treatment and Treatment Optimization Alternatives

Treatment Optimization and Pollutant Minimization	Feasibility and Implementation Considerations	Economic and Environmental Considerations
Coagulant and Alkalinity Dosing	-Various coagulants have been shown to remove PCBs from drinking water with aluminum sulfate being one of the most effective in bench scale studies (up to 65% total PCB removal) (A. Rosinska 2017). The removal efficiency increases with the PCB hydrophobicity and degree of chlorination, and the degree to which natural organic matter (NOM) is removed. Sorption of organic micropollutants onto NOM, and neutralization and coagulation of the NOM play an important role in the removal of organic micropollutants (Li X. 2009). -Testing of PCBs, total and dissolved organic carbon, and specific ultraviolet absorbance (SUVA) before and after the coagulation and filtration process could help correlate NOM and PCB removal and coagulant and alkalinity doses, and determine if adjustments can be made to improve removal efficiency. -Testing of all bulk chemicals used in the coagulation process for PCBs is recommended prior to optimization of the coagulation process. Alternate suppliers of PCB-free bulk chemicals may be required.	-Environmental and economic impacts of testing and optimization of the coagulation process would be less significant than implementing new add-on treatment processes, but would likely increase operational costs.

Treatment Optimization and Pollutant Minimization	Feasibility and Implementation Considerations	Economic and Environmental Considerations
Biosolids Storage and Dewatering Processes	-Biological and chemical solids removed from the secondary clarifiers are stored and then dewatered by the belt filter press. PCBs adsorbed to solids that are not captured by the dewatering process or PCBs that remain in solution may be recycled back to the head of the treatment system during biosolids dewatering. -Increasing the solids capture efficiency of the dewatering system, through operational adjustments of the belt filter press, may reduce the PCB loading recycled back to the treatment system. -Optimizing the mixing and the selection of polymers in the dewatering process to capture PCBs may also reduce PCB recycling back to the treatment system. -Treatment technologies could also be used on the dewatering reject stream to reduce recycled PCB loadings, but it is not clear if these PCBs are already removed by the tertiary membrane filtration system, and if so, would not improve overall PCB removal by the treatment system. -Biosolids stored for longer than a few days tend to decompose and release organics and nutrients back into soluble forms which are recycled back to the treatment system instead of being dewatered. There is a potential for PCBs to be released and recycled through the same process. Limiting the duration of biosolids storage may reduce this recycling of PCBs.	-Testing of PCBs in the solids dewatering reject stream could help determine the extent to which PCBs are recycled back to the head of the treatment system. Testing for PCBs and optimization of the solids dewatering and storage processes may increase operational costs, although the overall environmental and economic impacts would be minor. -Since the dewatering system operates intermittently and produces a smaller volume waste stream, it may be more cost effective to treat the dewatering reject stream than implement new full-scale treatment processes.
Membrane Cleaning	The existing membrane filtration system uses various chemicals for membrane cleaning, including sodium hypochlorite. The dilute cleaning solutions are recycled back to the treatment system after membrane cleaning on a periodic basis. Testing of PCBs in the bulk cleaning chemical solutions and in the membrane cleaning reject stream may help determine if PCBs are generated in the membrane cleaning process. Modifications to the cleaning process could be evaluated with the membrane system manufacturer if required.	-Testing for PCBs in the reject stream and bulk cleaning chemicals would increase operational costs, although the overall environmental and economic impacts would be minor. -The economic and environmental impacts of modifying the membrane cleaning process or chemicals are unknown, but are assumed to be less than implementing new treatment processes.
Evaluate Enhancing Conditions for Microorganisms that are Capable of PCB Biodegradation	-Various species of bacteria have been show to dechlorinate PCBs under anaerobic conditions (Furukawa K. 1978) (L. V. Master E. R. 2002) (Fava F. 1994). -Sequential exposure of PCBs to anaerobic and aerobic degradation has shown to increase overall biodegradation of PCBs to chlorobenzoic acids by reducing the chlorine molecules on the PCBs and thereby increasing the rate of aerobic biodegradation (Furukawa K. 1978), (L. V. Master E. R. 2002). -PCB monitoring data for the District's wastewater treatment system indicates that the existing system is completely removing PCB homologs with 7 or greater chlorine atoms, and most of the time is removing those homologs with 5 or more (Century West Engineering Corporation 2019). -Removal of higher chlorinated homologs is likely due to adsorption to non-polar solids, but may also be due in part to reductive dechlorination in the treatment system (Rodenburg L. A. 2010).	-Testing of PCBs after the anaerobic basins (prior to aeration basins) and after the aeration basins prior to coagulation and UF membranes could help determine if the existing anaerobic and aerobic treatment conditions support PCB biodegradation and if these conditions can be optimized for PCB removal without negatively effecting treatment removal of other constituents. -Testing for PCBs in the activated sludge system would increase operational costs, although the environmental and economic impacts would be would be minor. -The economic and environmental impacts of modifying the existing biological treatment process are unknown, but are assumed to be less than implementing new treatment processes.

4. **Sufficient water quality data & analysis to characterize receiving water & discharge concentrations.**

Washington Administrative Code (WAC) 173-201A-420(3)(d) requires that "sufficient water quality data and analyses to characterize receiving and discharge water pollutant concentrations" be submitted with a variance request. This section addresses this requirement by summarizing the Spokane River total PCB water quality in the vicinity of the District's treatment plant discharge and the effluent water quality from the plant.

Spokane River Receiving Water PCB Water Quality Data

The Spokane River Regional Toxics Task Force (SRRTTF) has collected samples from various locations in the Spokane River between years 2014 and 2018. The samples were analyzed using EPA Method 1668C and the results incorporated into a database that is available to the members of the SRRTTF, which includes the Washington State Department of Ecology and the United States Environmental Protection Agency. Since the data is readily available, this receiving water quality summary only includes the PCB data collected from sampling locations immediately upstream and downstream of the District's treatment plant discharge.

The District's treatment plant discharges to the Spokane River at river mile 92.4. Upstream, the City of Post Falls wastewater treatment plant discharges at river mile 100.5, and the City of Coeur d'Alene wastewater treatment plant discharges at river mile 110. The nearest upstream river PCB sampling location is at the Lake Coeur d'Alene Outlet Gage (Blackwell Island) at river mile 111.3. The nearest downstream river PCB sampling location is at Greenacres Gage (Barker Road) at river mile 90.3. The results of the upstream and downstream sampling are summarized in Table 3 and Table 4, respectively. The downstream total PCB concentrations do not appear to consistently comply with the 7 pg/L human health criteria-based water quality standard, although occasionally the measurements do indeed fall below the standard when blank censored for quality assurance. The total PCB concentrations appear to be increasing from the upstream to the downstream sampling locations, but since two other treatment plants and potentially other non-point sources also discharge between these two sampling locations, it is difficult to determine what portion of the total PCB concentrations in the river water column might be attributed to the District's discharge.

Table 3. Lake Coeur d'Alene Outlet Gage Total PCB Measurements 2014 to 2016

		Total PCB Concentration (pq/L)			
	Sample Collection Date	Uncensored	3x Blank Censored	5x Blank Censored	10x Blank Censored
1	8/12/2014	42.1	15.8	7.4	7.4
2	8/14/2014	66.0	47.4	21.5	13.3
3	8/16/2014	48.1	10.3	8.3	8.3
4	8/18/2014	48.6	2.9	2.9	2.9
5	8/20/2014	46.8	8.0	8.0	8.0
6	8/22/2014	42.4	1.7	1.7	1.7
7	8/23/2014	39.3	0.9	0.9	0.9
8	8/24/2014	32.8	1.4	1.4	1.4
9	10/26/2014	62.0	17.8	12.3	10.7
10	(1) 3/24/2016	38.9	8.7	8.7	8.7
11	4/19/2016	54.8	30.7	18.9	18.9
12	5/24/2016	88.4	14.2	14.2	14.2
13	6/16/2016	61.5	3.0	3.0	3.0
	Minimum	32.8	0.9	0.9	0.9
	Geometric Mean	49.9	6.9	5.6	5.4
	Arithmetic Mean	51.7	12.5	8.4	7.6
	95% Percentile	75.0	37.4	19.9	16.1
	99% Percentile	85.7	45.4	21.1	18.4
	Maximum	88.4	47.4	21.5	18.9

Notes: (1) Data is presented as the average of duplicates.

Table 4. Greenacres Gage (Barker Road) Total PCB Measurements 2014 to 2018

		Total PCB Concentration (pq/L)			
	Sample Collection Date	Uncensored	3x Blank Censored	5x Blank Censored	10x Blank Censored
1	8/12/2014	53.6	21.8	12.9	11.1
2	8/14/2014	70.0	9.2	9.2	9.2
3	8/16/2014	49.0	9.6	9.6	9.6
4	8/18/2014	94.7	41.2	39.4	25.4
5	8/20/2014	55.2	8.7	8.7	8.7
6	(1) 8/22/2014	61.5	9.3	4.2	3.6
7	(2) 8/24/2014	49.4	7.1	7.1	7.1
8	8/18/2015	95.2	4.6	4.6	4.6
9	8/19/2015	80.0	6.6	6.6	6.6
10	8/20/2015	100.0	20.5	19.5	15.4
11	8/21/2015	181.0	108.1	63.2	10.3
12	(1) 8/22/2015	133.2	26.0	6.1	6.1
13	(1) 4/19/2016	36.8	8.6	6.1	6.1
14	8/5/2018	60.7	6.1	6.1	6.1
15	8/6/2018	48.7	8.3	6.5	6.5
16	8/7/2018	97.0	59.8	49.0	39.5
17	(2) 8/8/2018	48.9	5.1	5.1	5.1
18	(1) 8/4/2018	81.0	32.2	21.2	16.9
	Minimum	36.8	4.6	4.2	3.6
	Geometric Mean	71.2	13.8	10.7	8.9
	Arithmetic Mean	77.5	21.8	15.8	11.0
	95% Percentile	140.4	67.1	51.1	27.5
	99% Percentile	172.9	99.9	60.8	37.1
	Maximum	181.0	108.1	63.2	39.5

Notes:

(1) Data is presented as the average of duplicates or replicates as applicable.

(2) Grab sample and composite were collected the same day. Composite measurement is excluded from data set.

5. Evaluation of Existing Treatment and Highest Attainable Condition:

Treatment System Influent and Effluent PCB Water Quality Data

Table 5 and Table 6 summarize the District's influent and effluent PCB concentrations from year 2012 through the first quarter of 2019. In accordance with its discharge permit, treatment system influent and effluent samples are collected and analyzed quarterly using EPA Method 1668C. Values for congeners with a "U" qualifier (not detected at the concentration listed) or "J" qualifier (sample concentration is less than the lowest point on the calibration curve) were given a value of zero. Each of the uncensored congener measurements were censored using a 3x, 5x, or 10x blank censor factor. Values below the censor factor multiplied by the blank measurement were given a value of zero. The tables provide the results for all three blank censor factors.

Table 5. Treatment System Influent Total PCB Measurements 2012 to 2019

		Total PCB Concentration (pq/L)			
	Sample Collection Date	Uncensored	3x Blank Censored	5x Blank Censored	10x Blank Censored
1	1/10/2012	5,835	5,835	5,835	4,456
2	3/16/2012	4,208	4,165	4,165	3,724
3	4/24/2012	2,798	2,798	2,798	2,566
4	6/19/2012	1,684	1,684	1,684	1,446
5	8/21/2012	5,041	4,762	2,686	1,910
6	4/17/2013	4,080	4,080	3,707	3,194
7	1/18/2013	3,881	3,792	3,792	3,620
8	3/25/2013	4,019	3,987	3,281	2,594
9	4/25/2013	5,446	5,296	5,093	4,160
10	7/2/2013	5,268	4,519	4,480	4,267
11	4/23/2016	3,748	3,733	3,733	3,706
12	7/2/2016	3,974	3,955	3,955	3,661
13	8/25/2016	4,131	4,110	4,110	3,755
14	10/21/2016	9,195	9,195	9,195	9,195
15	2/16/2017	3,370	3,370	3,370	3,370
16	4/20/2017	5,034	5,034	5,034	5,001
17	6/21/2017	5,095	5,079	5,048	4,656
18	11/8/2017	4,498	3,603	3,297	2,828
19	1/5/2018	6,817	6,817	6,817	6,817
20	3/13/2018	3,266	3,266	3,266	3,266
21	5/14/2018	4,934	4,934	4,934	4,934
22	8/28/2018	4,064	4,064	4,064	4,064
23	10/16/2018	2,913	2,913	2,913	2,698
24	1/11/2019	4,644	4,644	4,308	4,308
25	3/22/2019	2,747	2,747	2,747	2,747
	Minimum	1,684	1,684	1,684	1,446
	Geometric Mean	4,203	4,117	3,943	3,620
	Arithmetic Mean	4,428	4,335	4,173	3,878
	95% Percentile	6,620	6,620	6,620	6,453
	99% Percentile	8,624	8,624	8,624	8,624
	Maximum	9,195	9,195	9,195	9,195

Table 6. Treatment System Effluent PCB Measurements 2012 to 2019

		Total PCB Concentration (pq/L)			
	Sample Collection Date	Uncensored	3x Blank Censored	5x Blank Censored	10x Blank Censored
1	1/31/2012	456	260	260	90
2	4/17/2012	76	66	66	66
3	7/10/2012	154	74	74	74
4	10/9/2012	330	124	124	124
5	1/16/2013	175	160	160	160
6	4/17/2013	412	106	83	83
7	7/24/2013	651	503	491	443
8	10/21/2013	541	440	425	425
9	1/21/2014	713	588	588	571
10	4/16/2014	1,116	1,085	1,009	971
11	7/17/2014	224	188	188	188
12	11/7/2014	426	220	217	200
13	1/29/2015	1,010	740	575	562
14	4/16/2015	837	636	599	599
15	7/27/2015	522	331	301	259
16	10/22/2015	324	160	159	134
17	2/1/2016	356	332	332	332
18	4/19/2016	285	264	264	264
19	7/2/2016	270	259	259	259
20	10/21/2016	260	257	257	257
21	4/20/2017	443	342	319	292
22	11/8/2017	267	113	94	94
23	2/9/2018	268	268	268	268
24	5/4/2018	146	75	75	75
25	8/13/2018	152	152	152	152
26	10/16/2018	0	0	0	0
27	12/6/2018	33	33	33	33
28	1/28/2019	175	123	78	21
	Minimum	0	0	0	0
	Geometric Mean	307	216	205	183
	Arithmetic Mean	379	282	266	250
	95% Percentile	950	704	595	589
	99% Percentile	1,087	992	899	871
	Maximum	1,116	1,085	1,009	971

The table below summarizes the percent removal through the treatment plant based on the geometric and arithmetic means of the influent and effluent total PCB measurements. The performance is presented for all three blank censor factors.

Table 7. Removal of Total PCBs through the Treatment System 2012 to 2019

	Uncensored	3x Blank Censored	5x Blank Censored	10x Blank Censored
Total PCB Concentration, Geometric Mean pg/L				
Influent	4203	4117	3943	3620
Effluent	307	216	205	183
Percent Removal	92.7%	94.7%	94.8%	95.0%
Total PCB Concentration, Arithmetic Mean pg/L				
Arithmetic Mean	4428	4335	4173	3878
Arithmetic Mean	379	282	266	250
Percent Removal	91.4%	93.5%	93.6%	93.6%

Highest Attainable (Interim Effluent) Condition (HAC)

For discharger-specific water quality standards variances, 40 CFR 131.14(b)(1)(ii)(A) requires the State to identify the "highest attainable interim criterion"; or "the interim effluent condition that reflects the greatest pollutant reduction achievable"; or "if no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the water quality standards variance, and the adoption and implementation of a Pollutant Minimization Program."

The data presented in Table 6 has been analyzed using the procedures outlined in Appendix E of the U.S. EPA's Technical Support Document for Water Quality-based Toxics Control (U.S. EPA 1991) and in the Washington State Department of Ecology's Permit Writer's Manual (Ecology 2018) for determination of performance-based effluent limits. These procedures assume a lognormal distribution of the data and 95th percentile probability to determine the highest average monthly occurrence and 99th percentile probability for the maximum day occurrence. The calculations for determining these values from the data set are summarized in Table 8. The highest attainable interim effluent condition for total PCBs would be 993 pg/L on a monthly average basis, based on using a 10x blank censor factor on the existing treatment system effluent data. The highest attainable interim effluent condition would be reevaluated every five years using the additional performance data collected during the evaluation period. Performance is expected to improve through implementation of the pollution minimization plan and optimization of the treatment system during the evaluation period.

Table 8. Derivation of Performance-Based Effluent Total PCB Criteria

		Total PCB Concentration (pq/L)		
	Sample Collection Date	LogNormal 3x Blank Censored	LogNormal 5x Blank Censored	LogNormal 10x Blank Censored
1	1/31/2012	5.6	5.6	4.5
2	4/17/2012	4.2	4.2	4.2
3	7/10/2012	4.3	4.3	4.3
4	10/9/2012	4.8	4.8	4.8
5	1/16/2013	5.1	5.1	5.1
6	4/17/2013	4.7	4.4	4.4
7	7/24/2013	6.2	6.2	6.1
8	10/21/2013	6.1	6.1	6.1
9	1/21/2014	6.4	6.4	6.3
10	4/16/2014	7.0	6.9	6.9
11	7/17/2014	5.2	5.2	5.2
12	11/7/2014	5.4	5.4	5.3
13	1/29/2015	6.6	6.4	6.3
14	4/16/2015	6.5	6.4	6.4
15	7/27/2015	5.8	5.7	5.6
16	10/22/2015	5.1	5.1	4.9
17	2/1/2016	5.8	5.8	5.8
18	4/19/2016	5.6	5.6	5.6
19	7/2/2016	5.6	5.6	5.6
20	10/21/2016	5.6	5.6	5.6
21	4/20/2017	5.8	5.8	5.7
22	11/8/2017	4.7	4.5	4.5
23	2/9/2018	5.6	5.6	5.6
24	5/4/2018	4.3	4.3	4.3
25	8/13/2018	5.0	5.0	5.0
26	10/16/2018	-	-	-
27	12/6/2018	3.5	3.5	3.5
28	1/28/2019	4.8	4.4	3.0
	LogNormal Transformed Mean	5.4	5.3	5.2
	LogNormal Transformed Variance	0.67	0.67	0.83
	Number of Samples Per Month (4x/year)	0.33	0.33	0.33
	Distribution Mean E(X)	302	286	276
	Distribution Variance V(X)	85966	78572	98714
	LogNormal Monthly Average MEANn	5.04	4.98	4.83
	LogNormal Monthly Average Variance σ2 VARn	1.34	1.36	1.58
	Monthly Average 95%ile Probability	1037	987	***993***
	Daily Maximum 99%ile Probability	1,442	1,377	***1,519***

6. **A description and schedule of actions that the discharger(s) proposes to ensure the underlying water quality standard(s) are met or the highest attainable use is attained within the variance period. Dischargers are also required to submit a schedule for development and implementation of a pollutant minimization plan for the subject pollutant(s).**

   The District has developed a list and schedule of actions that we will take to reach the Highest Attainable Condition (HAC) and make progress toward meeting water quality standards in the Water Reclamation Facility effluent. These actions are included in the Pollutant Minimization Plan that has been attached to this variance request.

7. **Any additional information the department deems necessary to evaluate the application.**

   A. Environmental Justice

   Environmental Justice is "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" according to EPA.

   The District will ensure environmental justice for all customers and impacted people by continuing the public information program, allowing all citizens the opportunity to comment and provide input into the future implementation of the actions taken in the Pollutant Minimization Plan. Any changes to District policies, bylaws, or utility rates will be done with the proper public notification and will be applied equitable and fairly to all District customers and with ample opportunity to participate and be involved through public meetings, and receiving public comments.

   The District has and will continue to inform the public of the issues and implications of PCBs in the wastewater through newsletters, publications and discussions in public meetings. Meetings are properly advertised and anyone from the public is welcome and encouraged to attend to be involved in the discussions regarding PCBs.

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LIBERTY LAKE SEWER AND WATER DISTRICT

POLLUTANT MINIMIZATION PLAN

Prepared by:

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INTRODUCTION

Through numerous studies conducted by the Washington Department of Ecology of the water quality in the Spokane River, a number of toxic chemicals have been found at levels that may pose risks to human health and our environment. Of these toxic chemicals this Plan will focus on polychlorinated biphenyls (*PCBs*), polybrominated diethyl ethers (*PBDEs*), and polychlorinated dibenzofurans / dioxins (*PCDFs / PCDDs*).

PCB manufacturing began in 1929. Nearly all of the PCBs used in the U.S. were manufactured by the Monsanto Chemical Company. They were widely used in electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products. They were also added to paint pigments, dyes, and carbonless copy paper. PCBs were manufactured and known under a number of trade names, the most common being Aroclor.

PCBs are found as 209 individual chemical compounds called congeners. Congeners having an equal number of chlorine substitutes are categorized as homologs. There are a total of 10 homologs. Because of their risks to human health and the environment the U.S. Congress banned the production of PCBs in 1979. Because PCBs do not readily break down they can be found throughout the environment.

In 2018 The Washington State Department of Ecology established a water quality standard for Total PCB's of 7 Picograms/Liter. Currently there is no treatment technology known to be available that would allow the District to treat the effluent to this standard or is there a testing method that can report PCB's to that level.

The District has determined that the best course of action is to take two approaches in dealing with the future low levels of PCBs that will be allowed in their WRF effluent; 1. Submit an application for a variance to the water quality standard, and 2. Evaluate the feasibility of removing the discharge from the river entirely. As part of the variance option this Pollutant Minimization Plan (PMP) was developed to outline actions that will be taken by the District to reduce PCB's in their Reclamation Plant effluent and reach the Highest Attainable Condition (HAC) and make progress toward meeting the water quality standard.

PLAN REQUIREMENTS

The requirement for a PMP is contained within Washington Administrative Code; WAC 173-201A-420(3)(e) as stated below:
"(e) A description and schedule of actions that the discharger(s) proposes to ensure the underlying water quality standard(s) are met or the highest attainable use is attained within the variance period. Dischargers are also required to submit a schedule for development and implementation of a pollutant minimization plan for the subject pollutant(s)."

To reduce the introduction of toxic chemicals into the Spokane River the Department of Ecology published the "Spokane River Toxics Reduction Strategy," August 2012. A Toxics Task Force was established with State and Federal agencies, municipal and industrial dischargers, tribal members, and other stakeholders. The Liberty Lake Sewer and Water District is an active member of the Task Force.

The District plans to take certain actions targeting reduction in PCB concentrations in their Reclamation Facility effluent discharge to the Spokane River. These actions can generally be classified into two categories: 1. Reductions in PCB concentrations from the wastewater collection system, and 2. Reduction of PCB concentrations in the facility effluent through treatment. This plan which will be updated and revised as these actions are implemented, their effectiveness is better quantified, and as required by the Water Quality Variance.

PLAN OBJECTIVES AND GOALS

The objectives of this plan are to identify feasible and reasonable actions that the District can implement that will result in reductions in PCB concentrations in the District Water Reclaimed Facility effluent that is discharged to the Spokane River.

The goal for the plan is to implement those actions and others identified through the Variance period to achieve the Highest Attainable Condition and the water quality standard if possible.

IDENTIFICATION OF TOXICS SOURCES

The District began testing for PCBs, PBDEs, PCDFs (*Furans*), and PCDDs (*Dioxins*) in December 2011. Bimonthly sampling of the influent and quarterly sampling of the effluent of the treatment facility have been taken since that time. All sampling and testing was accomplished in conformance with the approved Quality Assurance Project Plan (QAPP). Samples are tested and analyzed by Pacific Rim Laboratories, of Surrey, B.C. Test reports are sent to the District, have been provided to WSDOE with annual updates to the Toxics Management Plans, and are submitted with this variance request. A summary of influent and effluent test results and calculated loadings and removal rates are also provided with this submittal. Sampling and testing was done within the District's collection system in 2103, 2014, 2015, and 2016. From this testing it was determined that higher PCB concentrations were found in older residential areas.

PCB congeners found in the District's collection system were compared to those found in products tested by the City of Spokane resulting in the following conclusions and recommendations:

• PVC pipe contains a number of PCB congeners with a total PCB concentration of approximately 2 µg/kg. The District has miles of PVC pipe in its sewer collection system and some in its water distribution system. If PCBs are capable of leaching out of the pipe into solution this could be a source of PCBs in the District's wastewater. However, tests showed relatively high levels of PCB congener #209 in PVC pipe where this congener is nearly absent in the tests results from the District's collection system.

• Hand soap, laundry soap, dish soap, shampoo, and toothpaste all had various levels of PCBs. Although it is difficult to determine the effects that these products have in the District's collection system it is certainly safe to assume that all of those products are in the waste stream and are a source of PCBs.

• Green utility locate paint and white traffic paints that were tested also showed high levels of congener #209 so are also unlikely contributors to the PCBs found in the Districts sample locations. These products would be more commonly found in stormwater.

• Dust Guard, a dust palliative used on gravel roadways was found to have higher levels of congener #50. This congener was also absent in most test results from the District's collection system.

Other products tested which included asphalt products, crack sealer, hydroseed, motor oils and lubricants would be more prevalent in stormwater. Although it is possible for some of those products to enter into the District's collection system, given the locations that higher levels of PCBs were found their overall impact on PCB test results is likely less than that of the personal care products.

FURTHER ACTIONS BASED ON CONCLUSIONS (RECOMMENDATIONS)
PCB testing since 2016 has been restricted to the Water Reclamation Plant influent and effluent. Based on the data shown, the PCB sources within the collection system will be very difficult to identify until more data on PCB levels in products are better known and therefore future testing in these areas will not aid in identifying specific PCB sources. The District recently upgraded its Water Reclamation Facility with the addition of chemical addition and membrane filtration which is expected to improve PCB removal from the waste water, we believe that this action will show the most measurable progress that is currently achievable. Testing the removal of PCBs through the treatment process before the plant upgrade will provide a base line for determining that measurable progress. Determining the effectiveness of treatment on PCB removal will be necessary to optimize the operation of the facility and evaluate what actions if any can be taken to increase PCB removal through the treatment process.

ACTIONS TO ACHIEVE TOXICS REDUCTION

1. *Actions to Reduce PCB Concentrations Entering the District Facility:*

Although the conclusion reached from previous source testing the District did within the collection system was that there was no clear identifiable source that could be controlled, the District will continue to take actions that may result in reductions to PCBs that enter the system. Those actions include:

The District previously assembled a list of commercial customers. The commercial activity of each customer was evaluated based on its potential to discharge products that contain PCBs. Testing was completed on some of the customers wastewater where the commercial activity may result in high levels of PCBs entering the waste stream. That testing was inconclusive with no apparent source of high levels of PCBs.

The District will continue to evaluate existing and future customer activity in the collection system to determine if certain activities might be a source of high concentrations of PCBs. The District reviews plans for every new commercial customer that will connect to the sewer collection system. This review will include an evaluation of the customer's activities and the potential for those activities to result in high concentrations of PCBs entering the collection system. The District will then discuss alternatives of disposal of any waste stream that contains those high levels.

Stormwater

Previous studies and reports concluded that the District's wastewater collection system experiences very low infiltration and inflow (*I & I*). The source of PCBs entering a sewer collection system from storm water is typically direct connections of street runoff or roof drains. There are no such connections known to exist in the District's system and the small amount of I&I is believed to come from ground water infiltration or

from Liberty Lake which would likely contain low concentration levels of PCBs. As a result of these low levels of I & I and the probable source, this plan will not focus on the impacts of stormwater at this time.

Contaminated Soils and Sediments

Since it has been determined that very little stormwater enters the wastewater collection system, the source of PCBs in the District's sewer from contaminated soils and sediments is limited. Some potential sources are listed below:

- Soils and sediments entering during or as a result of new construction.
- Sediments entering manholes that are near the lake.
- Contaminated gravel road surfacing entering manholes (*particularly in the Dreamwood Bay area*).
- Street sweepings.
- Sediments removed from stormwater basins or drywells.
- Soils from car washes.
- PCBs entering the drinking water system from areas that infiltrate PCB contaminated stormwater.
- Water runoff carrying sediment to manhole lids that are located in low elevation areas.

To identify the potential for contaminated soils or sediments entering the facility the District will monitor construction activities during its routine inspections of pipe installations. Manholes adjacent to the lake will be inspected for susceptibility to silt migration as will manholes in graveled roadways that have had years of dust control through applications of oil. The City and County have been contacted regarding the disposition of street sweepings and sediments removed from stormwater inlets and drywells. Neither agency disposes of these in the sewer system. Car wash facilities will be inspected for proper maintenance and operation of pretreatment systems.

Manholes located outside of paved roadways will be inspected for potential silt intrusion.

Commercial Customer Activities

Using the list of commercial customers, the District has surveyed each customer that has a potential of being a PCB discharge source. This list was ranked as "high", "moderate", or "low" based on their potential for discharging PCBs from their commercial activity. Generally the activities identified would indicate that the most likely PCB sources from these businesses would include; used motor oil, paints, dyes, and sediments/oils removed in car washes. Many of these customers have installed oil/water separators; however, these are only effective if properly maintained. The District reviewed the product disposal and maintenance (*oil/water separators*) practices and BMPs of each business, discussed the obligations that each business has with regards to eliminating toxics from their waste stream in accordance with District resolution and provided guidance on what steps need to be taken to eliminate improper discharges. These actions will continue with existing and future customers that fall under this category of activities.

Public Education

The District will also continue to include information regarding sources of PCBs the effects they have on the treatment plant and the river in its newsletter to our customers. We will continue to discuss these same issues in Public Board meetings and encourage the City of Liberty Lake to undertake these same steps.

Product Procurement Practices

The District has reviewed our procurement practices with regards to products that are suspected of containing PCBs. We will investigate alternative products that contain no or less than 5 ppm levels of PCBs and adjust our purchases when and if appropriate. We will also discuss procurement practices with the City of Liberty Lake and Spokane County Parks and encourage them to participate in coordinated procurement practices and BMPs that are effective in eliminating PCBs from their discharge if they exist.

Changes to TSCA

The District will support efforts to change TSCA requirements that currently allow products at levels that are over 7 billion times the water quality standard. These actions will include writing letters of support and continued work on efforts of the Toxics Task Force to achieve regulatory changes through EPA.

2. *Actions to Reduce PCBs in the Water Reclamation Facility's effluent through treatment.*

From test results of the facility's influent and effluent, it is apparent that the treatment process is very effective in removing PCBs from wastewater before it enters the Spokane River. Removal rates are provided in this submittal. The plant expansion and upgrade that the District completed in 2007 (additional biological treatment) and the facility improvements completed in 2018 (chemical and membrane addition) are believed to have significantly improved the PCB removal efficiency of the plant.

The District has begun the facility optimization process for the new membrane filtration system added to the facility. This optimization will include changes and adjustments to the operation of the facility to determine the most optimal treatment operation that results in the best PCB removal while still complying with other NPDES permit requirements.

The District will continue quarterly sampling and testing of the influent and effluent to help better quantify the PCBs levels out of the plant and the effectiveness of the steps taken to reduce toxics introduced into the collection system.

3. *Actions to Reduce or Eliminate Effluent Discharge to the River*

The District will complete a feasibility study to determine if removal or reduction of effluent discharge to the river by reuse can be achieved at a reasonable cost.

PLAN IMPLEMENATION SCHEDULE

The District will continue implementation of this Pollutant Minimization Plan through on the following schedule:

CONTINUED DISCHARGE WITH VARIANCE	
ACTION	*SCHEDULE*
Customer Source Evaluation	Continuous
Public Education (Newsletter, Meetings)	Continuous
Review & Adjust Procurement Practices	Continuous
Testing at Treatment Facility	Quarterly
TSCA/Regulatory Changes	2020-2025
Treatment Facility Optimization	2019-2021
Effectiveness Evaluation	2021-2022
Additional Action Determination	2023
Implementation of Additional Actions	2024-2039

REDUCE OR ELIMINATE DISCHARGE THROUGH REUSE	
ACTION	*SCHEDULE*
Reuse Feasibility Analysis (wetland restoration)	2019-2020
Evaluation of Reuse Alternatives	2020-2022
Agreement Development/Approvals	2022-2023
Reuse Planning	2023-2024
Reuse Phase 1 Design Funding Acquisition	2024-2025
Reuse Phase 1 Design	2025-2026
Reuse Phase 1 Construction Funding Acquisition	2026-2027
Reuse Phase 1 Construction	2027-2028
Reuse Phase 2 Design Funding Acquisition	2030-2032
Reuse Phase 2 Design	2032-2033
Reuse Phase 2 Construction Funding Acquisition	2033-2034
Reuse Phase 2 Construction	2034-2035
Reuse Phase 3 Design Funding Acquisition	2038-2039
Reuse Phase 3 Design	2039-2040
Reuse Phase 3 Construction Funding Acquisition	2041-2042
Reuse Phase 3 Construction	2043-2044
Final Reuse Development and Implementation	2045-2049

ANNUAL REVIEW AND ADJUSTMENT

The District will review the additional data and information gathered through the activities described above annually. Summaries, conclusions, and recommendations for changes to the plan will be developed. The District will confer with WSDOE regarding adjustments to planned activities and a plan update will be completed when appropriate or required.

Index of Attachments