CLARK REGIONAL WASTEWATER DISTRICT

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Transmittal Cover

Project: 2022 Annual Pretreatment Report
Industrial Pretreatment
Date: February 14, 2023

To:	Attention:	No. Copies	Action Requested	Transmitted Via
Washington State Department of Ecology	Carey Cholski	1 Original 1 Copy	Records	WQWebSubmittal
City of Battle Ground	Mark Herceg	1 Copy	Records	Email
City of Vancouver	Frank Dick	1 Copy	Records	Email
City of Ridgefield	Chuck Green	1 Copy	Records	Email

DESCRIPTION:

2022 Annual Pretreatment Report

MESSAGE:

Enclosed please find the 2022 Annual Pretreatment Report. The report describes the Clark Regional Wastewater District's Pretreatment Program for the Salmon Creek Treatment Plant during the 2022 reporting period of January 1, 2022, through December 31, 2022.

This submittal fulfills the Pretreatment Program reporting requirements as outlined in Section S6 of NPDES Permit No. WA0023639.

C: File
Heath Henderson, District Engineer

CLARK REGIONAL WASTEWATER DISTRICT

COMMISSIONERS
Norm Harker
Denny Kiggins
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GENERAL MANAGER
John M. Peterson, P.E.

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Phone (360) 750-5876 Fax (360) 750-7570 www.crwwd.com

February 14, 2023

Carey Cholski
Permit Administrator
Washington State Dept. of Ecology
PO Box 47775
Olympia, WA 98504-7775

RE: 2022 Pretreatment Report
WA0023639

Dear Ms. Cholski:

Enclosed you will find the 2022 Pretreatment Report for the Salmon Creek Treatment Plant prepared by Clark Regional Wastewater District (District). This report is being submitted as required by the NPDES Permit No. WA0023639.

If you have any questions, please contact me at 360.993.8833 or by email at kthomas@crwwd.com.

Sincerely,

Kristen Thomas

Digitally signed by Kristen Thomas
DN: cn=Kristen Thomas, o, ou, email=kthomas@crwwd.com, c=US
Date: 2023.02.14 07:45:47 -08'00'

Kristen Thomas
Regulatory Compliance Manager

Enclosure

c: Mark Herceg, Public Works Director, City of Battle Ground
Frank Dick, Wastewater Engineer, City of Vancouver
Chuck Green, Public Works Director, City of Ridgefield
Robin Krause, Principal Engineer, Clark Regional Wastewater District
Heath Henderson, Engineering Director, Clark Regional Wastewater District

ACCREDITED AGENCY A•P•W•A

CLARK REGIONAL WASTEWATER DISTRICT

2022

Clark Regional Wastewater District

Pretreatment Report

Salmon Creek Treatment Plant

ACCREDITED AGENCY A•P•W•A

CLARK REGIONAL WASTEWATER DISTRICT

Mission

Providing customer-focused, professional wastewater services in an environmentally and financially responsible manner.

Vision

To be an active partner in Clark County, to support economic development and to manage and protect water resources.

Values

The Values of Clark Regional Wastewater District are "SERVICE":

Safe and healthy workplace for all employees

Employees who are talented and motivated professionals that work together in a spirit of cooperation and with respect for all individuals

Responsibility, integrity, and fairness in managing the environmental and financial resources entrusted to the District

Valued partner involved and active within our community

Innovation and learning, creating an environment of personal and professional growth

Communication that is active, open, honest, and timely

Efficient and effective solutions that meet the needs of our customers and our community

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PROGRAM SUMMARY

INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit (Permit) for the Salmon Creek Treatment Plant (SCTP), WA0023639, issued by the Department of Ecology (Ecology), requires § S6.A.4, that the Permittee provide Ecology with an annual report of its non-delegated Pretreatment Program activities during the previous calendar year. In 2022, the SCTP was monitored in accordance with the pretreatment requirements set forth in the Permit. A summary of program activities is provided in this report.

The SCTP is owned by the Discovery Clean Water Alliance (Alliance), which provides regional wastewater transmission and treatment services for its Members: Clark Regional Wastewater District (District), Clark County, the City of Ridgefield, and the City of Battle Ground. The SCTP is operated via agreement by a Member agency. Effective July 1, 2022, SCTP operations were transferred from Clark County to the District. The District also serves as the Administrative Lead for the Alliance and is responsible for executive, administrative, finance/treasury, and engineering services, including oversight of the Pretreatment Program. As such, the District identifies, surveys, monitors, and inspects Industrial Users (IUs) of the SCTP, including Significant Industrial Users (SIUs), Minor Industrial Users (MIUs), and Food Service Establishments (FSEs). Continuous surveying of new businesses is conducted throughout the year.

Figure 1 – Salmon Creek Treatment Plant Tributary Areas

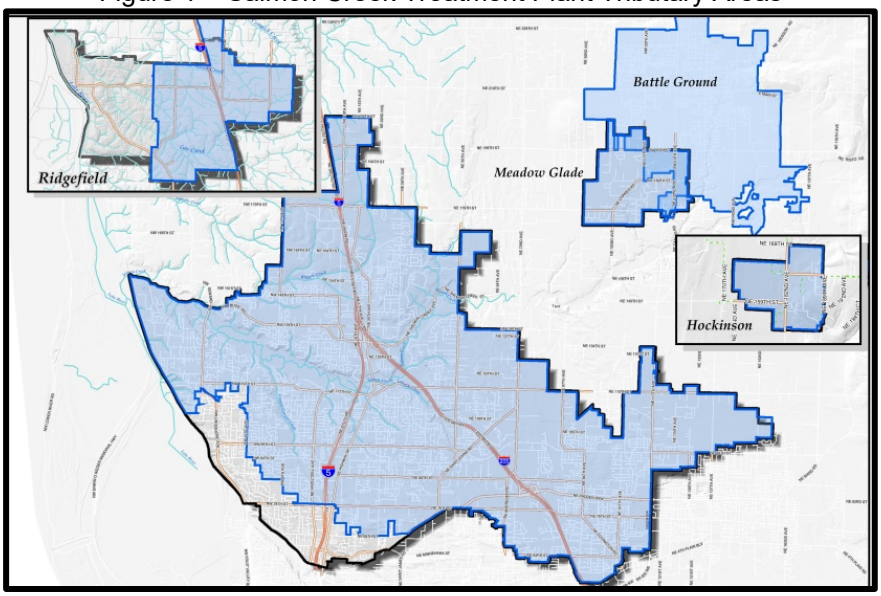

Figure 1 depicts the areas discharging into the SCTP through either the District or City of Battle Ground wastewater collection system and the Alliance regional transmission system. The Columbia River is the receiving water for all flow discharged from the Publicly Owned Treatment Works (POTW).

PROGRAM UPDATE

This report summarizes the District's non-delegated pretreatment program activities during 2022 in accordance with NPDES permit requirements. As of January 1, 2023, the District began implementing an approved, delegated program on behalf of the Alliance. Activities related to delegation that occurred in 2022 are also noted in this report.

In 2022, there were three (3) SIUs (see Appendix A) discharging to the SCTP. All SIUs are located within the District service area and are categorical industrial users: one (1) 40 CFR 433 Metal Finishing and two (2) 40 CFR 469 Electrical and Electronics Components. All SIUs were inspected and monitored in 2022. Seven (7) IUs were also monitored as MIUs during 2022. Appendix B summarizes user monitoring activities.

DELEGATION OF AUTHORITY

The Alliance has worked collaboratively with Ecology and its Members over the past several years to develop required materials for a locally administered pretreatment program. In April 2022, the District submitted to Ecology a Submission for Approval for local delegation of authority for the Alliance Pretreatment Program. The District worked closely with Ecology throughout the program development and review process. After completion of Ecology review and public comment period, Ecology approved the program by letter on October 10, 2022. The approved program, including the Alliance Pretreatment Regulations, was adopted by the Alliance Board of Directors on December 16, 2022 and became effective via administrative order from Ecology on January 1, 2023. The Alliance Pretreatment Regulations were thus adopted as the sewer use ordinances (SUOs) for the District and the City of Battle Ground, effective January 1, 2023.

USER NON-COMPLIANCE & ENFORCEMENT

SCTP did not experience any interference, inhibition, or pass-through from industrial sources in 2022. No enforcement actions were taken against any industrial user in 2022.

INDUSTRIAL USER SURVEY

The District employs both continuous, routine survey measures and periodic, additional survey efforts to ensure that all IUs in the service area are identified and categorized. Industries that may require wastewater discharge permits are primarily identified through a review of Commercial/Industrial Pretreatment surveys. Surveys are submitted to the District and the City of Battle Ground as part of the development review process, which includes all new industrial or commercial users, as well as tenant improvements. Users are also identified through windshield surveys, records review, and interagency communications. All potential new users are required to submit a survey, and all surveys are reviewed by the District. If any industrial user is identified as a potential SIU (PSIU), the user is required to submit a Pretreatment Application form to the District. Pretreatment Applications are reviewed by District staff in consultation with Ecology as needed. No new SIUs or PSIUs were identified in 2022. One (1) additional MIU (ICD Coatings) was identified and monitored in 2022 (see Appendix B).

Food service establishments (FSEs) are identified through the development review process, as well as through notifications from and coordination with Clark County Public Health's Food Safety Program. A new or newly identified FSE is required to submit an FSE Survey (Appendix C), which is reviewed by the District for compliance with grease removal requirements. FSEs are then monitored through the FOG program.

A comprehensive User Survey was completed in 2022 and included in the delegation submittal. A summary of IUs monitored in 2022 is provided in Table 1.

Table 1 – IU SURVEY SUMMARY

Classif.	Name	Permit #	Exp Date	Category	SIC Code
SIU	ProTech Industries, Inc.	ST 6194	10/31/2023	433.17	3329
SIU	nLight Corp.	ST 6025	6/30/2023	469	3674
SIU	IMAT Inc.	ST 6162	10/31/2023	469	3674
MIU	Waste Connections	LOD 02-2018	4/30/2023	N/A	4953
MIU	Quartz Mtn Distillers	LOD 01-2021	5/31/2026	N/A	2085
MIU	Oldcastle	LOD 03-2018	10/31/2023	N/A	3251/5231
MIU	Fresenius	LOD 02-2021	6/14/2026	N/A	8092
MIU	Andersen Dairy	LOD 04-2021	11/14/2026	N/A	5451
MIU	HH Processors	LOD 03-2022	7/11/2023	N/A	3999
MIU	ICD Coatings	LOD 02-2022	2/28/2023	N/A	325510

PRIORITIES AND ACCOMPLISHMENTS FOR REPORTING YEAR

Public Education and Outreach

The District continued its education and outreach efforts in 2022 as part of the "Sewer Smart" program, which encourages users to be mindful of the discharge of Fats, Oils, and Grease (FOG), non-dispersible material, and other topics related to pollution prevention. These efforts included newsletter distribution, the Freeze the Grease program, and online outreach.

The Sewer Smart Logo

The District newsletter has continued outreach efforts focusing on pollution prevention habits that are formed at home. As in past years, each issue included a cartoon depicting the wastewater collection system and treatment process. Both the District and Alliance websites also contain Pollution Prevention information, including a flyer and outreach video that provide practical information about conventional and emerging pollutants and specific tips for making informed choices about the use and disposal of household products.

Fats, Oils, and Grease (FOG) Program

The FOG program is conducted by the District throughout the District's collection system and within the City of Battle Ground by Interlocal Agreement. The District monitors FOG Users through inspections and review of pumpout reports received through the Preferred Pumper Program (PPP), a collaboration of local pumping companies and municipalities to share information and ensure that FSEs properly clean and maintain their grease removal devices. These reports from pumpers detail the condition and amount of grease in the device at time of service and help determine compliance and appropriate maintenance frequency.

In 2022, the District monitored 370 active FSEs (up from 361 FSEs in 2021), including 77 FSEs in the City of Battle Ground and 28 FSEs in the City of Ridgefield. District staff completed 375 facility inspections in 2022.

Regional Coordination and Training

In 2022, the District continued to be an active member in the Oregon Association of Clean Water Agencies (ACWA) Pretreatment subcommittee, the National Association of Clean Water Agencies (NACWA) Pretreatment Committee, and the Portland Metro area's Preferred Pumper Program (PPP). The District also continued to participate in the Local Interagency Networking Cooperative (LINC), as well as the American Public Works Association (APWA) PreFOG subcommittee. The District Regulatory Compliance Manager attended several trainings in 2022, including the Pacific Northwest Source Control Training Association (PNSCTA) Pretreatment Workshop and the National Association of Clean Water Agencies (NACWA) National Pretreatment Conference. The District also participates on the planning committee for the PNSCTA Pretreatment Workshop.

PROGRAM RESOURCES

PROGRAM STAFFING

The Regulatory Compliance Manager is responsible for all program administration activities, with oversight from the Principal Engineer – Transmission and Treatment. FOG Inspections were completed primarily by Engineering Inspection staff in 2022. The District utilizes additional support staff as needed, including GIS, Development Review, maintenance/inspection, and administrative support. The District currently uses contract laboratories in the area for analysis of treatment plant and industrial monitoring conducted throughout the year.

The District will be recruiting for a new Pretreatment Specialist position in early 2023. The Pretreatment Specialist will report to the Regulatory Compliance Manager and will support pretreatment and FOG program administration.

RESOURCES & SUPPLIES

The District plans and budgets on an ongoing basis for pretreatment program needs. A current equipment list is provided in Table 2.

Table 2 – PRETREATMENT EQUIPMENT INVENTORY

1	Myron L Ultra Pen PT2 pH and Temp Meter
1	Myron L Ultra Pen PT5 Dissolved Oxygen Meter
1	Hach HQ2200 Portable pH Meter
1	ISCO GLS Compact Composite Sampler and accessories
2	Sigma 950 Area Velocity Flow Meter
1	American Sigma Composite Sampler
1	2018 Nissan Frontier

PLANT PERFORMANCE

PRIORITY POLLUTANT MONITORING

The SCTP influent, effluent, and biosolids were monitored for metals and priority pollutants in accordance with NPDES permit requirements in 2022. Analytical results are provided in Appendix D.

In accordance with the Permit, the SCTP influent, effluent and biosolids are monitored quarterly for metals and annually for priority pollutants. Additional biosolids monitoring is conducted throughout the year in accordance with permit and land application requirements. All metal concentrations were found to be below inhibition levels, and removal rates remained consistent with previous years. Other priority pollutants monitored were either not detected or below inhibitory concentrations.

BIOSOLIDS PRODUCTION

Biosolids production data is provided in Appendix E. Total biosolids produced in 2022 were 1,266 dry tons, as compared with 1,249 dry tons in 2021.

LOCAL LIMIT EVALUATION

Local limits were protective of water quality, beneficial biosolids reuse, and plant performance in 2022. Influent concentrations and loadings for local limit-regulated pollutants are compared to the Maximum Allowable Headworks Loadings (MAHLs) in Appendix F, indicating that current limits are protective of the treatment facilities. The District completed a comprehensive Local Limits Reassessment as part of the delegation process, and updates to local limits were facilitated through the adoption of the Alliance Pretreatment Regulations and will be effective in 2023.

PROGRAM GOALS

The pretreatment program goals for 2023 are as follows:

1. Fully implement and administer the approved Alliance Pretreatment Program.
2. Recruit and onboard Pretreatment Specialist to support program administration.
3. Continue to actively monitor legislative and regulatory processes and participate in local and regional committees to remain informed of changes impacting NPDES and pretreatment programs.
4. Develop new and continue ongoing public outreach strategies and activities.
5. Continue to advance public health and environmental programs in Clark County through active partnerships and interagency collaboration.

APPENDIX A: SIGNIFICANT INDUSTRIAL USERS

SIGNIFICANT INDUSTRIAL USERS	REPORTING QUARTER	DISTRICT INSPECTIONS	DISTRICT SAMPLING	SELF-MONITORING REPORTS	LIMIT VIOLATIONS	REPORTING STATUS	Average Monthly Flow (GPD)
PRO-TECH INDUSTRIES, INC.	1	0	0	1	0	C	
14113 NE 3rd Court	2	0	0	1	0	C	
Vancouver, WA 98685	3	0	0	1	0	C	
WA Permit No. ST 6194, effective 11/1/18	4	1	1	1	0	C	
40 CFR Part 433.17							235
No exceedances or excursions from permit requirements were self-reported or detected during annual inspection/sampling. This SIU will be inspected and sampled in 2023.							
nLIGHT PHOTONICS CORPORATION	1	0	0	3	0	C	
5408 NE 88th Street	2	0	0	3	0	C	
Vancouver, WA 98665	3	0	0	3	0	C	
WA Permit No. ST 6025, effective 7/1/18	4	1	1	3	0	C	
40 CFR Part 469							3839
No exceedances or excursions from permit requirements were self-reported or detected during annual inspection/sampling. This SIU will be inspected and sampled in 2023.							
IMAT INC.	1	0	0	3	0	C	
12516 NE 95th Street	2	0	0	3	0	C	
Vancouver, WA 98682	3	0	0	3	0	C	
WA Permit No. ST 6162, effective 11/1/18	4	1	1	3	0	C	
40 CFR Part 469							78
No exceedances or excursions from permit requirements were self-reported or detected during annual inspection/sampling. This SIU will be inspected and sampled in 2023.							

C = Compliance: NC = Non-compliance; SNC = Significat Non-compliance; NSCIU = Non-Significant Categorical Industrial User
Self-Monitoring Reports indicate the number of reports submitted in reporting quarter.

APPENDIX B: MINOR INDUSTRIAL USERS

MINOR INDUSTRIAL USERS	REPORTING QUARTER	DISTRICT INSPECTIONS	DISTRICT SAMPLING	SELF-MONITORING REPORTS	LIMIT VIOLATIONS	REPORTING STATUS
WASTE CONNECTIONS	1	0	0	1	0	C
9411 NE 94th Avenue	2	0	0	1	0	C
Vancouver, WA 98662	3	0	0	1	0	C
LOD 2-2018 expires April 30, 2023 (metals, pH, O&G, BOD, TSS, Cn)	4	0	0	1	0	C
	Avg Monthly Flow (GPD): Not reported					
OLDCASTLE BUILDING ENVELOPE	1	0	0	1	0	C
1611 SE Commerce Avenue	2	0	0	1	0	C
Battle Ground, WA 98604	3	0	0	1	0	C
LOD 3-2018 expires October 31, 2023 (Cu, Ag, TSS, pH)	4	0	0	1	0	C
	Avg Monthly Flow (GPD): 997					
HH PROCESSORS	1	0	0	1	0	C
14708 NE 13th Court	2	0	0	1	0	C
Vancouver, WA 98685	3	0	0	1	0	C
LOD 3-2021 expires July 11, 2023 (flow, pH)	4	0	0	1	0	C
	Avg Monthly Flow (GPD): 12					
QUARTZ DISTILLERS	1	0	0	1	0	C
4601 NE 78th Street, Suite 210	2	0	0	1	0	C
Vancouver, WA 98686	3	0	0	1	0	C
LOD 1-2021 expires May 31, 2026 (flow, pH)	4	0	0	1	0	C
	Avg Monthly Flow (GPD): 17					
FRESENIUS MEDICAL CARE	1	0	0	NA	0	C
3921 SW 13th Avenue	2	0	0	NA	0	C
Battle Ground, WA 98604	3	0	0	NA	0	C
LOD 2-2021 expires June 14, 2026 (pH)	4	0	0	NA	0	C
	Avg Monthly Flow (GPD): Not reported					
ANDERSEN DAIRY	1	0	0	1	0	C
305 E Main Street	2	0	0	1	0	C
Battle Ground, WA 98604	3	0	0	1	0	C
LOD 4-2021 expires November 14, 2026 (flow, pH)	4	0	0	1	0	C
	Avg Monthly Flow (GPD): 1350					
ICD COATINGS	1	1	0	NA	0	C
7350 S Union Ridge Parkway	2	0	0	3	0	C
Ridgefield, WA 98642	3	0	0	3	0	C
LOD 2-2022 expires February 28, 2023 (flow, pH)	4	1	0	3	0	C
	Avg Monthly Flow (GPD): 537					

Compliance: NC = Non-compliance; Self-Monitoring Reports indicate the number of reports submitted in reporting quarter.

APPENDIX C: FSE SURVEY FORM

CLARK REGIONAL WASTEWATER DISTRICT

FOOD SERVICE ESTABLISHMENT GREASE REMOVAL DEVICE SURVEY

Please see directions for completing this form on the reverse side.

1. Facility Name: _____
2. Facility Contact: _____
3. Mailing/Billing Address: _____
4. Contact Telephone Number: _____ 5. Facility Telephone Number: _____
6. Email Address: _____
7. Facility Address: _____
8. Establishment Type:

	Bakery		Daycare		School Cafeteria
	Brewery		Fast Food		Sports Grill
	Coffeehouse		Grocery		Steakhouse
	Commercial Cafeteria		Hotel		Winery
	Convenience Store		Pizzeria		
	Corporate Cafeteria		Restaurant		

9. Hours of Operation: _____ 10. Seating Capacity: _____
11. Meals Served: Breakfast ☐ Lunch ☐ Dinner ☐ Lounge ☐ 12. Number of Meals Served Per Day: _____
13. Is There Food Preparation on the Premises: Yes ☐ No ☐ If No, skip to bottom of page, sign and submit.
14. Food Type (Check all that apply):

	Asian		Ice Cream		Pizza		Southern
	Barbecue		Italian		Sandwich/Soup		Western
	Burgers		Mexican		Seafood		
	Doughnuts/Pastries		Middle Eastern		Smoothies		
	Other:						

15. Number of Fixtures:

	Deep Fryers		Tilt Kettles		3-Compartment Sinks		Floor Sinks
	Grills		Wok Ranges		Dishwashers		Low Temp Sanitizer
	Ovens		1-Compartment Sinks		Garbage Disposals		Pre-Wash Sinks
	Stove		2-Compartment Sinks		Floor Drains		Mop Sinks
	Other:						

16. Grease Removal Device (GRD) Location/Type (Include additional devices in blank boxes):

Location	Size	Manufacturer / Model (if unknown, leave blank)
Exterior Grease Inceptor	☐Gal ☐ lb. ☐ gpm	
Interior Under Sink Trap	☐Gal ☐ lb. ☐ gpm	
Interior Floor Trap	☐Gal ☐ lb. ☐ gpm	
	☐Gal ☐ lb. ☐ gpm	
	☐Gal ☐ lb. ☐ gpm	

17. GRD Cleaning Frequency (How often do you clean the GRD?):

	Daily		Bi-Weekly		Weekly
	Monthly		Quarterly		Annually

18. Who Cleans GRD? ☐ Self ☐ Vendor/Contractor 19. Date of Last Cleaning: _____
20. GRD Service Company: _____
21. Yellow/Fryer Grease Rendering Container on Site? Yes ☐ No☐
22. Yellow/Fryer Grease Rendering Company: _____

I, _____ *certify that to the best of my knowledge the above information is correct*

(Print Name and Title)

_____ _____

(Signature) *(Date)*

APPENDIX D: SCTP MONITORING DATA

Total Metals per EPA 200 series									
1st Quarter 2022									
CAS ID#	Influent Sampled: 3/4/22				Effluent Sampled: 3/4/22				Percent Removal
	Results in mg/L (*except Hg*)								
	Parameter	INF	MRL	Q	*Parameter*	EFF	MRL	Q	
7440-36-0	Antimony	ND	0.00100		Antimony	ND	0.00100		NA
7440-38-2	Arsenic	0.00155	0.00100		Arsenic	0.00128	0.00100		17%
7440-41-7	Beryllium	ND	0.000200		Beryllium	ND	0.0000200		NA
7440-43-9	Cadmium	ND	0.000200		Cadmium	ND	0.000200		NA
7440-47-3	Chromium	ND	0.00200		Chromium	ND	0.00200		NA
7440-50-8	Copper	0.0138	0.00200		Copper	0.0038	0.00200		73%
7439-92-1	Lead	0.000323	0.000200		Lead	ND	0.000200		69%
7439-97-6	Mercury (ug/L)	0.0998	0.000500		Mercury (ug/L)	0.00159	0.000500		98%
7439-98-7	Molybdenum	0.00115	0.00100		Molybdenum	ND	0.00100		57%
7440-02-0	Nickel	ND	0.00200		Nickel	ND	0.00200		NA
7782-49-2	Selenium	ND	0.00100		Selenium	ND	0.00100		NA
7440-22-4	Silver	0.000073	0.000020		Silver	ND	0.0000200		86%
7440-28-0	Thallium	0.000016	0.000200	J	Thallium	0.000011	0.0000200	J	31%
7440-66-6	Zinc	0.0514	0.00400		Zinc	0.0341	0.00400		34%

Total Metals per EPA 200 series / HG per EPA 1631E									
2nd Quarter 2022									
CAS ID#	Influent Sampled: 6/16/22				Effluent Sampled: 6/16/22				Percent Removal
	Results in mg/L (*except Hg*)								
	Parameter	INF	MRL	Q	*Parameter*	EFF	MRL	Q	
7440-36-0	Antimony	ND	0.00100		Antimony	ND	0.00100		NA
7440-38-2	Arsenic	0.00212	0.00100		Arsenic	0.00142	0.00100		33%
7440-41-7	Beryllium	ND	0.0000200		Beryllium	ND	0.0000200		NA
7440-43-9	Cadmium	ND	0.000200		Cadmium	ND	0.000200		NA
7440-47-3	Chromium	0.00202	0.00100		Chromium	ND	0.00100		75%
7440-50-8	Copper	0.0659	0.00200		Copper	0.02430	0.00200		63%
7439-92-1	Lead	0.000828	0.000200		Lead	ND	0.000200		88%
7439-97-6	Mercury (ug/L)	0.0151	0.000500		Mercury (ug/L)	0.00261	0.000500		83%
7439-98-7	Molybdenum	0.00274	0.00100		Molybdenum	ND	0.00100		82%
7440-02-0	Nickel	0.00354	0.00200		Nickel	ND	0.00200		72%
7782-49-2	Selenium	0.00114	0.00100		Selenium	ND	0.00100		56%
7440-22-4	Silver	0.000323	0.0000200		Silver	0.000033	0.0000200		90%
7440-28-0	Thallium	ND	0.0000200		Thallium	ND	0.0000200		NA
7440-66-6	Zinc	0.142	0.00400		Zinc	0.0364	0.00400		74%

Total Metals per EPA 200 series									
3rd Quarter 2022									
CAS ID#	Influent Sampled: 9/9/22				Effluent Sampled: 9/9/22				Percent Removal
	Results in mg/L (*except Hg*)								
	Parameter	INF	MRL	Q	*Parameter*	EFF	MRL	Q	
7440-36-0	Antimony	ND	0.00100		Antimony	ND	0.00100		NA
7440-38-2	Arsenic	0.00214	0.00100		Arsenic	0.00127	0.00100		41%
7440-41-7	Beryllium	ND	0.000020		Beryllium	ND	0.0000200		NA
7440-43-9	Cadmium	ND	0.000200		Cadmium	ND	0.000200		NA
7440-47-3	Chromium	0.00231	0.00200		Chromium	ND	0.00200		57%
7440-50-8	Copper	0.0423	0.00200		Copper	0.0187	0.00200		56%
7439-92-1	Lead	0.00152	0.000200		Lead	0.000209	0.000200		86%
7439-97-6	Mercury (ug/L)	0.0317	0.000500		Mercury (ug/L)	0.00147	0.000500		95%
7439-98-7	Molybdenum	0.00834	0.00100		Molybdenum	0.00124	0.00100		85%
7440-02-0	Nickel	0.00341	0.00200		Nickel	ND	0.00200		71%
7782-49-2	Selenium	0.00116	0.00100		Selenium	ND	0.00100		57%
7440-22-4	Silver	0.000196	0.0000200		Silver	0.000021	0.0000200		89%
7440-28-0	Thallium	ND	0.0000200		Thallium	ND	0.0000200		NA
7440-66-6	Zinc	0.158	0.00400		Zinc	0.0767	0.00400		51%

Total Metals per EPA 200 series / HG per EPA 1631E									
4th Quarter 2022									
CAS ID#	Influent Sampled: 10/27/22				Effluent Sampled: 10/27/22				Percent Removal
	Results in mg/L (*except Hg*)								
	Parameter	INF	MRL	Q	*Parameter*	EFF	MRL	Q	
7440-36-0	Antimony	ND	0.00100		Antimony	ND	0.00100		NA
7440-38-2	Arsenic	0.00201	0.00100		Arsenic	0.00177	0.00100		12%
7440-41-7	Beryllium	ND	0.000200		Beryllium	ND	0.000200		NA
7440-43-9	Cadmium	ND	0.000200		Cadmium	ND	0.000200		NA
7440-47-3	Chromium	ND	0.00200		Chromium	ND	0.00200		NA
7440-50-8	Copper	0.0230	0.00200		Copper	0.0168	0.00200		27%
7439-92-1	Lead	0.000558	0.000200		Lead	ND	0.000200		82%
7439-98-7	Molybdenum	0.00249	0.00100		Molybdenum	0.00170	0.00100		32%
7440-02-0	Nickel	ND	0.00200		Nickel	ND	0.00200		NA
7782-49-2	Selenium	ND	0.00100		Selenium	ND	0.00100		NA
7440-22-4	Silver	ND	0.000200		Silver	ND	0.000200		NA
7440-28-0	Thallium	ND	0.000200		Thallium	ND	0.000200		NA
7440-66-6	Zinc	0.0707	0.00400		Zinc	0.0628	0.00400		11%

< - 1/2 of the reporting limit was used for all non-detectable data in percent removal calculations

Qualifiers:

J: Estimated Result. Result detected below lowest point of calibration curve but above specified MDL.

Salmon Creek Treatment Plant (WA0023639) Priority Pollutant Monitoring					
PARAMETER	UNITS	INFLUENT	EFFLUENT	PERCENT REMOVAL	BIOSOLIDS (MG/KG)
Volatile Organic Compounds (EPA 624/5035/8260C)		6/17/2022	6/17/2022		2/25/2022
ACROLEIN	µg/l	<5.00	<5.00	NA	<0.680
ACRYLONITRILE	µg/l	<2.00	<2.00	NA	<0.104
BENZENE	µg/l	<0.250	<0.250	NA	<0.034
BROMOFORM	µg/l	<1.00	<1.00	NA	<0.034
CARBON TETRACHLORIDE	µg/l	<1.00	<1.00	NA	<0.034
CHLOROBENZENE	µg/l	<0.500	<0.500	NA	<0.034
CHLORODIBROMOMETHANE	µg/l	<1.00	<1.00	NA	<0.034
CHLOROETHANE	µg/l	<5.00	<5.00	NA	<0.034
2-CHLOROETHYLVINYL ETHER	µg/l	<10.0	<10.0	NA	<6.4
CHLOROFORM	µg/l	<1.00	<1.00	NA	<0.034
DICHLOROBROMOMETHANE	µg/l	<1.00	<1.00	NA	<0.034
1,1-DICHLOROETHANE	µg/l	<0.500	<0.500	NA	<0.034
1,2-DICHLOROETHANE	µg/l	<0.500	<0.500	NA	<0.034
1,1-DICHLOROETHYLENE	µg/l	<0.500	<0.500	NA	<0.034
1,2-DICHLOROPROPANE	µg/l	<0.500	<0.500	NA	<0.034
1,3-DICHLOROPROPYLENE	µg/l	<1.00	<1.00	NA	<0.034
ETHYLBENZENE	µg/l	<0.500	<0.500	NA	<0.034
METHYL BROMIDE	µg/l	<0.500	<0.500	NA	<0.034
METHYL CHLORIDE	µg/l	<5.00	<5.00	NA	<0.034
METHYLENE CHLORIDE	µg/l	<10.0	<10.0	NA	<0.068
1,1,2,2-TETRACHLOROETHANE	µg/l	<0.500	<0.500	NA	<0.034
TETRACHLOROETHYLENE	µg/l	<0.500	<0.500	NA	<0.034
TOLUENE	µg/l	1.35	<1.00	63%	0.093
1,2-TRANS-DICHLORETHYLENE	µg/l	<0.500	<0.500	NA	<0.034
1,1,1-TRICHLOROETHANE	µg/l	<0.500	<0.500	NA	<0.034
1,1,2-TRICHLOROETHANE	µg/l	<0.500	<0.500	NA	<0.034
TRICHLORETHYLENE	µg/l	<0.500	<0.500	NA	<0.034
VINYL CHLORIDE	µg/l	<0.500	<0.500	NA	<0.034
Tentatively Identified Compounds (TICs)					
Dimethyl sulfide	µg/l	2.4	<5.0		
D-Limonene	µg/l	1.1	<5.0		
Sulfur Dioxide	µg/l	21	<5.0		

Pesticides/PCBs (EPA 608.3)					
ALDRIN	µg/l	<0.312	<0.286	NA	<0.058
ALPHA-BHC	µg/l	<0.312	<0.286	NA	<0.029
BETA-BHC	µg/l	<0.312	<0.286	NA	<0.029
GAMMA-BHC	µg/l	<0.312	<0.286	NA	<0.029
DELTA-BHC	µg/l	<0.312	<0.286	NA	<0.029
CHLORDANE	µg/l	<3.91	<3.57	NA	<0.029
4,4-DDT	µg/l	<0.312	<0.286	NA	<0.058
4,4-DDE	µg/l	<0.312	<0.286	NA	<0.029
4,4-DDD	µg/l	<0.312	<0.286	NA	<0.058
DIELDRIN	µg/l	<0.312	<0.286	NA	<0.029
ALPHA-ENDOSULFAN	µg/l	<0.312	<0.286	NA	<0.029
BETA-ENDOSULFAN	µg/l	<0.312	<0.286	NA	<0.058
ENDOSULFAN SULFATE	µg/l	<0.312	<0.286	NA	<0.058
ENDRIN	µg/l	<0.312	<0.286	NA	<0.029
ENDRIN ALDEHYDE	µg/l	<0.312	<0.286	NA	<0.058
HEPTACHLOR	µg/l	<0.312	<0.286	NA	<0.029
HEPTACHLOR EPOXIDE	µg/l	<0.312	<0.286	NA	<0.058
PCB-1242	µg/l	<0.0990	<0.0952	NA	<0.170
PCB-1254	µg/l	<0.0990	<0.0952	NA	<0.080
PCB-1221	µg/l	<0.0990	<0.0952	NA	<0.330
PCB-1232	µg/l	<0.0990	<0.0952	NA	<0.310
PCB-1248	µg/l	<0.0990	<0.0952	NA	<0.098
PCB-1260	µg/l	<0.0990	<0.0952	NA	<0.130
PCB-1016	µg/l	<0.0990	<0.0952	NA	<0.210
TOXAPHENE	µg/l	<10.4	<9.52	NA	<2.900

Salmon Creek Treatment Plant (WA0023639) Priority Pollutant Monitoring					
PARAMETER	UNITS	INFLUENT	EFFLUENT	PERCENT REMOVAL	BIOSOLIDS (MG/KG)
Semivolatile Organic Compounds (EPA 625.1)		6/17/2022	6/17/2022		2/25/2022
2-CHLOROPHENOL	µg/l	<2.02	<0.189	NA	<2.3
2,4-DICHLOROPHENOL	µg/l	<2.02	<0.189	NA	<2.3
2,4-DIMETHYLPHENOL	µg/l	<2.02	<0.189	NA	<2.3
4,6-DINITRO-O-CRESOL	µg/l	<10.1	<0.943	NA	<14
2,4-DINITROPHENOL	µg/l	<10.1	<0.943	NA	<14
2-NITROPHENOL	µg/l	<4.04	<0.377	NA	<2.3
4-NITROPHENOL	µg/l	<4.04	<0.377	NA	<14
P-CHLORO-M-CRESOL	µg/l	<4.04	<0.377	NA	<2.3
PENTACHLOROPHENOL	µg/l	<4.04	<0.377	NA	<14
PHENOL	µg/l	8.10 (J)	<0.755	95%	<2.3
2,4,6-TRICHLOROPHENOL	µg/l	<2.02	<0.189	NA	<2.3
ACENAPHTHENE	µg/l	<0.404	<0.0377	NA	<2.3
ACENAPHTHYLENE	µg/l	<0.404	<0.0377	NA	<2.3
ANTHRACENE	µg/l	<0.404	<0.0377	NA	<2.3
BENZIDINE	µg/l	<20.2	<1.89	NA	<14
BENZO(A)ANTHRACENE	µg/l	<0.404	<0.0377	NA	<2.3
BENZO(A)PYRENE	µg/l	<0.606	<0.0566	NA	<2.3
3,4 BENZO-FLUORANTHENE	µg/l	<0.606	<0.0566	NA	<2.3
BENZO(K)FLUORANTHENE	µg/l	<0.606	<0.0566	NA	<2.3
BENZO(GHI)PERYLENE	µg/l	<0.404	<0.0377	NA	<2.3
BIS (2-CHLOROETHOXY) METHANE	µg/l	<1.01	<0.0943	NA	<2.3
BIS (2-CHLOROETHYL)-ETHER	µg/l	<1.01	<0.0943	NA	<2.3
BIS (2-CHLOROISO-PROPYL) ETHER	µg/l	<1.01	<0.0943	NA	<2.3
BIS (2-ETHYLHEXYL) PHTHALATE	µg/l	37.5	3.94	89%	11.0
BIS (2-ETHYLHEXYL) PHTHALATE*	µg/l	<7.84	0.519	93%	NA
BIS (2-ETHYLHEXYL) PHTHALATE**	µg/l	<8.08	0.286	96%	NA
BIS (2-ETHYLHEXYL) PHTHALATE***	µg/l	<8.25	0.712	91%	NA
4-BROMOPHENYL PHENYL ETHER	µg/l	<1.01	<0.0943	NA	<2.3
BUTYL BENZYL PHTHALATE	µg/l	<8.08	<0.755	NA	<2.3
2-CHLORONAPHTHALENE	µg/l	<0.404	<0.0377	NA	<2.3
4-CHLORPHENYL PHENYL ETHER	µg/l	<1.01	<0.0943	NA	<2.3
CHRYSENE	µg/l	<0.404	<0.0377	NA	<2.3
DIBENZO(A,H) ANTHRACENE	µg/l	<0.404	<0.0377	NA	<2.3
1,2-DICHLOROBENZENE	µg/l	<0.500	<0.5	NA	<2.3
1,3-DICHLOROBENZENE	µg/l	<0.500	<0.5	NA	<2.3
1,4-DICHLOROBENZENE	µg/l	1.20	<0.5	79%	<2.3
3,3-DICHLOROBENZIDINE	µg/l	<20.2	<1.89	NA	<2.3
DIETHYL PHTHALATE	µg/l	<8.08	<0.755	NA	<2.3
DIMETHYL PHTHALATE	µg/l	<8.08	<0.755	NA	<2.3
2,4-DINITROTOLUENE	µg/l	<4.04	<0.377	NA	<2.3
2,6-DINITROTOLUENE	µg/l	<4.04	<0.377	NA	<2.3
DI-N-OCTYL PHTHALATE	µg/l	<8.08	<0.755	NA	<2.3
DI-N-BUTYL PHTHALATE	µg/l	<8.08	<0.755	NA	<2.3
1,2-DIPHENYLHYDRAZINE	µg/l	<1.01	<0.0943	NA	<2.3
FLUORANTHENE	µg/l	<0.404	<0.0377	NA	<2.3
FLUORENE	µg/l	<0.404	<0.0377	NA	<2.3

Qualifiers:
J: Estimated Result. Result detected below lowest point of calibration curve, but above specified MDL.

* additional sample collected for Bis(2-ethylhexyl)phthalate only, 3/4/22
** additional sample collected for Bis(2-ethylhexyl)phthalate only, 9/9/22
*** additional sample collected for Bis(2-ethylhexyl)phthalate only, 10/27/22

Salmon Creek Treatment Plant (WA0023639) Priority Pollutant Monitoring					
PARAMETER	**UNITS**	**INFLUENT**	**EFFLUENT**	**PERCENT REMOVAL**	**BIOSOLIDS (MG/KG)**
HEXACHLOROBENZENE	µg/l	<0.404	<0.0377	NA	<2.3
HEXACHLOROBUTADIENE	µg/l	<1.01	<0.0943	NA	<2.3
HEXACHLOROCYCLOPENTADIENE	µg/l	<2.02	<0.189	NA	<2.3
HEXACHLOROETHANE	µg/l	<1.01	<0.0943	NA	<2.3
INDENO(1,2,3-CD) PYRENE	µg/l	<0.404	<0.0377	NA	<2.3
ISOPHORONE	µg/l	<1.01	<0.0943	NA	<2.3
NAPHTHALENE	µg/l	<0.808	<0.0755	NA	<2.3
NITROBENZENE	µg/l	<4.04	<0.377	NA	<2.3
N-NITROSODI-N-METHYLAMINE	µg/l	<1.01	<0.0943	NA	<14
N-NITROSODI-N-PROPYLAMINE	µg/l	<2.83	<0.0943	NA	<2.3
N-NITROSODI-N-PHENYLAMINE	µg/l	<1.01	<0.0943	NA	<2.3
PHENANTHRENE	µg/l	<0.404	<0.0377	NA	<2.3
PYRENE	µg/l	<0.404	<0.0377	NA	<2.3
1,2,4-TRICHLOROBENZENE	µg/l	<1.01	<0.0943	NA	<2.3
Tentatively Identified Compounds (TICs)					
1-Hexanol, 2-ethyl-	µg/l	9.9	<0.75		
Benzeneacetic Acid	µg/l	25	<0.75		
Caffeine	µg/l	30	<0.75		
Cholesterol	µg/l	8.4	<0.75		
cis-Vaccenic Acid	µg/l	170	<0.75		
Dodecanoic Acid	µg/l	36	<0.75		
Ethanol, 2-phenoxy-	µg/l	9.8	<0.75		
Indole	µg/l	10	<0.75		
n-Decanoic Acid	µg/l	21	<0.75		
n-Nonadecanol-1	µg/l	42	<0.75		
Octadecanoic Acid	µg/l	130	<0.75		
Squalene	µg/l	83	<0.75		
Tetradecanoic Acid	µg/l	35	1.5		
3-Penten-2-ol	µg/l	<8.1	1.5		
Chloroxylenol	µg/l	<8.1	1.0		
Cholest-4-en-3-one	µg/l	<8.1	0.35		
Cyclopenta(g)-2-benzopyran, 1,3,4	µg/l	<8.1	0.95		

Salmon Creek Treatment Plant (WA0023639) Priority Pollutant Monitoring					
PARAMETER	**UNITS**	**INFLUENT**	**EFFLUENT**	**PERCENT REMOVAL**	**BIOSOLIDS (mg/kg)**
PERMIT-SPECIFIED PARAMETERS		6/16/2022	6/16/2022		2/25/2022
PHENOLICS, TOTAL	MG/L	0.081	0.15	NA	<2.3
CYANIDE	MG/L	0.0103	<0.00500	76%	0.97
OIL & GREASE (Total)	MG/L	56.7	<4.72	100%	56900
PHOSPHORUS	MG/L	3.57	1.23	66%	20800
SULFATE	MG/L	13.5	17.9	NA	4860
SULFIDE	MG/L	0.016 (J)	<0.05	NA	770
CHLORIDE	MG/L	44.9	50.1	NA	NT
FLUORIDE	MG/L	<1.00	<1.00	NA	<28
BORON	MG/L	0.106	0.178	NA	37.0
NITRATE	MG/L	0.0450	5.67	NA	<3.5
TOTAL INORGANIC NITROGEN	MG/L	35.2	5.90	83%	17300
ACETONE	**µg/l**	94.8	<20.0	100%	1600
STYRENE	**µg/l**	<1.00	<1.00	NA	<34
IRON	MG/L	0.345	0.0504	85%	6400
HARDNESS	MG/L	99.5	90.9	9%	NA
SALINITY	G/KG	<2.0	<2.0	NA	NA
TOTAL DISSOLVED SOLIDS	MG/L	286	301	NA	NA

BIOSOLIDS MONITORING RESULTS

Salmon Creek Wastewater Treatment Plant (NPDES Permit WA0023639)

Total Metals Units:mg/Kg (ppm), dry wt.

Analyte	Analysis Method	Threshold*	Event 1 24-Feb	Event 2 27-Apr	Event 3 18-May	Event 4 20-Jul	Event 5 26-Sep	Event 6 29-Nov	Annual Average
Arsenic (As)	6020A	41	5.4	6.1	5.5	5.7	6.8	6.1	6.0
Cadmium (Cd)	6020A	39	1.08	1.22	1.13	1.08	1.07	0.97	1.09
Chromium (Cr)	6020A	1200	25.2	19.6	22.7	21.2	24.5	18.9	22.0
Copper (Cu)	6020A	1500	265	303	263	274	325	305	289
Lead (Pb)	6020A	300	7.78	8.12	6.79	7.23	7.40	7.89	7.54
Mercury (Hg)	7471B	17	0.87	0.82	0.51	<0.13	0.45	0.55	0.64
Molybdenum (Mo)	6020A	75	21.4	23.8	23.3	22.7	23.3	23.7	23.0
Nickel (Ni)	6020A	420	17.2	19.3	16.2	17.4	19.7	16.8	17.8
Selenium (Se)	6020A	36	6.7	8.4	8	8.4	8.3	8	8.0
Zinc (Zn)	6020A	2800	850	995	877	884	1090	1050	958
Silver (Ag)	6020A	N/A	2.44	2.54	2.69	2.67	3.32	2.36	2.67
Beryllium (Be)	6020A	N/A	<0.13	<0.13	<0.12	<0.14	<0.13	<0.13	ND
Antimony (Sb)	6020A	N/A	1.61	2.01	2.28	2.14	2.55	2.36	2.16
Thallium (Tl)	6020A	N/A	<0.13	<0.13	<0.12	<0.14	<0.13	<0.13	ND
*Chromium VI (Cr 6)	SW7196A	N/A	<17	3.50	<3.3	<3.5	<2.02	<3.92	3.5

*Chromium VI testing per General Permit Biosolids Management (page 23).

Biosolids Nutrient Analysis Units: mg/kg dry

Analyte	EPA Method							Average
Ammonia-Nitrogen	SM4500-NH3G	17,300	18,900	15,700	18,000	17,100	15,500	17083
Total Kjeldahl Nitrogen	351.4	56,900	81,200	73,700	88,500	85,700	90,600	79433
Total Solids (mg/kg)	SM2540G	14.10	13.7	13.9	13.3	14.3	14.4	13.95
Total Volatile Solids (mg/kg)	SM2540G	11.2	10.7	10.9	10.3	11.4	11.2	11
Phosphorus	SM4500-PB+E	20,800	23,000	27,700	29,000	32,400	28,700	26933
Nitrate-Nitrogen	353.2M/353.2M	<3.5	<0.24	<3.5	<3.5	<9.0	<9.0	ND
Nitrite-Nitrogen	353.2M	<3.5	<3.5	<3.4	<3.5	<8.4	<8.3	ND
pH	9045D	7.78	8.11	8.11	7.97	7.78	7.70	N/A

Biosolids monitoring conducted in accordance with General Permit for Biosolids Management requirements

* Threshold refers to pollutant limits for land application per WAC 173-308

ND = Not detected

APPENDIX E: BIOSOLIDS PRODUCTION REPORT

2022 - ANNUAL BIOSOLIDS (SLUDGE) PRODUCTION REPORT

	Cubic Yards	Dry Pounds	Wet Pounds
January	1,134	298,064	1,950,112
February	1,021	258,650	1,755,781
March	1,357	332,145	2,334,358
April	1,184	280,019	2,036,380
May	1,380	321,131	2,372,935
June	1,376	326,713	2,366,516
July	1,348	326,219	2,318,370
August	1,202	297,849	2,067,112
September	1,293	315,905	2,224,118
October	1,394	335,675	2,397,159
November	1,223	300,334	2,104,112
December	1,223	302,486	2,103,127
Total	15,133.77	3,695,190	26,030,081
Tons Processed		1,848	13,015
Metric Tons		1,676	11,807

DRY TON BALANCE:

From Ridgefield	1.79
Processed (no RF)	1845.81
Total Processed	1847.60
To Long (NSF)	703.29
To Local (M&J)	249.09
To Local (Denali)	288.99
Total Applied	1241.37
Est. Recycled Dry Tons	**606.23**

Monthly Dry Tons Hauled			
	NSF	M&J	Denali
January	76.69		
February	93.74		
March	104.71		
April	72.91		
May	36.04		
June			
July			
August		249.1	218.46
September	45.48		70.53
October	117.07		
November	114.5		
December	42.15		
Total	703.29	249.1	288.99

Current Avg. TS (Annual Summary)	**14.23**
Estimated Ave. Capture Rate %	68.5

Visual Levels of Biosolids Storage Bays (2020)
(estimates taken at end of each month)

	Visual CY Bay 1	Visual CY Bay 2	Visual CY Bay 3	Visual CY Bay 4	Total est. CY (94.1/log)	Estimate WT (x 0.86)	Dry Tons Hauled	Estimated Bay DT (at avg TS%)
Previous Year Carryover >					50	43		56.0
JAN	377				377	324	77	46
FEB	471			141	612	526	94	75
MAR	471			188	659	567	105	81
APR	659			565	1,224	1,052	73	150
MAY	471			659	1,130	971	36	138
JUN	471			1,318	1,789	1,538	0	219
JUL	565	471	1,318	1,318	3,671	3,157	0	449
AUG	659	1,036	1,318	1,318	4,330	3,724	468	530
SEP	50				50	43	116	6
OCT	175				175	151	117	21
NOV	175				175	151	115	21
DEC	188			471	659	567	42	80.6

Assumptions:
94.1 CY per foot = each section (188.27 CY/entire stop log height)
0.86 x cubic yards = wet tons

TOTAL DRY TONS PRODUCED IN 2022 = 1,266.00

APPENDIX F: LOCAL LIMITS EVALUATION

Parameter	Avg Inf Conc (mg/L)	Actual Loading (lbs/day)	MAHL (lbs/day)	Safety Factor
Arsenic	0.00196	0.149	2.58	17
Cadmium	<0.0002	<0.015	0.71	>47
Chromium	0.00217	0.166	3.61	22
Copper	0.0363	2.770	35.36	13
Lead	0.00081	0.062	3.59	58
Mercury (ug/L)	0.04887	0.0037	0.142	38
Molybdenum	0.00368	0.281	0.96	3
Nickel	0.00348	0.265	9.59	36
Selenium	0.00115	0.088	0.75	>10
Silver	0.00020	0.015	3.776	251
Zinc	0.10553	8.053	19.1	2.4
Cyanide	0.0103	0.786	4.69	6

2022 Average Influent Flow: 9.15 MGD