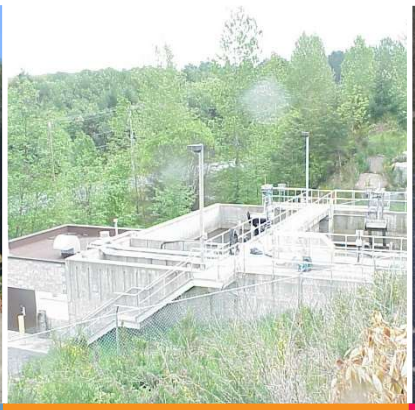
REGIONAL DISTRICT OF NANAIMO






2025 Annual Report

Duke Point Pollution Control Centre

February 2026

Submitted to the BC Ministry of Environment and Parks
envauthorizationsreporting@gov.bc.ca

ISO 14001 | Environment
pwc
pwc.com/ca/certificate

www.rdn.bc.ca

Executive Summary

The Regional District of Nanaimo (RDN) owns and operates Duke Point Pollution Control Centre (DPPCC), located at 925 Jackson Road in the Duke Point Industrial Park in Nanaimo. Treated effluent from DPPCC is discharged into the Northumberland Channel.

DPPCC is regulated by the Ministry of Environment and Parks under Operational Certificate ME-05989, issued on August 12, 2004 (see Appendix A). The authorized treatment works include a secondary sewage treatment plant, effluent disinfection works, sludge management works, an outfall extending approximately 242 m from mean low water to a minimum depth of 43 m below mean low water, and related appurtenances.

This report was written by RDN staff as a requirement of the Operational Certificate. The summary of 2025 monitoring data at DPPCC is as follows:

Summary of Compliance	Operational Certificate	2025	Non-compliances
Maximum Daily Flow	1,800 m^3/day	359.0 m^3/day	0
Average Daily Flow	950m^3/day	136.1 m^3/day	0
Average Daily $cBOD_5$	30 mg/L	4.56 mg/L	0
Average Daily TSS	30 mg/L	7.13 mg/L	1
Geometric Mean Fecal Coliforms Concentration	1,000 colonies/100mL	<82 CFU/100mL	1
Average pH	6-9	7.10	0

*The operational certificate sets the average daily rate of discharge based on an annual averaging period, where average daily flow = 250 m^3/day + 50 m^3/day * (calendar year – 2003) to a maximum of 950 m^3/day in the year 2017.

- **Flow** – The average daily flow for DPPCC was 136.1 m^3/day, well below the permitted daily flow of 950 m^3/day. The maximum daily flow, 359.0 m^3, recorded in March was also well below the permitted maximum daily discharge of 1,800 m^3/day. The total annual flow in 2025 was 46,238.9 m^3/ year. There were no flow exceedances.
- **5-day Carbonaceous Biochemical Oxygen Demand** – The average five-day carbonaceous biochemical oxygen demand ($cBOD_5$) concentration in the influent and effluent was 149 mg/L and 4.56 mg/L, respectively. The permitted level for $cBOD_5$ is 30 mg/L. The average $cBOD_5$ removal efficiency in 2025 was 96.9%. There were no $cBOD_5$ exceedances in 2025.
- **Total Suspended Solids** – The average total suspended solids (TSS) concentration in the influent and effluent was 225 mg/L and 7.13 mg/L, respectively. The permitted level of TSS is 30 mg/L. The average TSS removal efficiency in 2025 was 96.8%. There was one TSS exceedance in 2025.
- **Geometric Mean Fecal Coliforms** – The geometric mean of the fecal coliform concentrations within the effluent was <82 CFU/100 mL. The permitted level is 1,000 CFU/100 mL. In 2025, there was one fecal coliform exceedance. Appendix D has information on this exceedance.
- **pH** – The average pH level of the effluent was 7.10, within the permitted range. In 2025, there were no pH non-compliances.

Table of Contents

1) Introduction

The Regional District of Nanaimo (RDN) owns and operates the Duke Point Pollution Control Centre (DPPCC) located at 925 Jackson Road. DPPCC provides secondary wastewater treatment to the Duke Point Industrial Park in Nanaimo, the BC Ferries Duke Point terminal, and the RDN Cedar sewer service area. Treated effluent from DPPCC is discharged into the Northumberland Channel.

The operation of DPPCC is regulated by the Ministry of Environment and Parks (ENV) under Operational Certificate ME-05989 issued August 12, 2004 (see Appendix A). Authorized works include mechanical screens, two sequencing batch reactor basins, an aerated sludge holding tank, a connection line to the outfall, an outfall (with diffuser) extending approximately 282 m from mean low water to a depth of approximately 40 m below mean low water, and related appurtenances. Ultraviolet disinfection is located after the sequencing batch reactor.

This report was written by RDN staff as a requirement of the Operational Certificate to summarize and interpret the 2025 DPPCC monitoring data.

1.1 Environmental Management System

The RDN's Wastewater Services department's Environmental Management System (EMS) is certified to ISO 14001:2015 standard. ISO 14001 is an international Environmental Management System standard based on a model of continual improvement. The overall aim of ISO 14001 is to support environmental protection and prevent pollution in balance with socio-economic needs. Visit www.rdn.bc.ca/environmental-management-system for more information.

2) Operational Certificate Requirements

2.1 Authorized Discharges

Section 1.1.1 of Operational Certificate states the maximum rate at which effluent may be discharged from DPPCC is:

- 1,800 m^3/day.

Section 1.1.2 of the Operational Certificate states that the average daily rate of discharge based on an annual averaging period is as follows:

- Average daily flow = 250 m^3/day + 50 m^3/day * (calendar year - 2003) to a maximum of 950 m^3/d in the year 2017.

Section 1.1.3 of Operational Certificate states that the characteristics of the discharge shall not exceed:

- 5-Day Carbonaceous Biochemical Oxygen Demand ($cBOD_5$): 30 mg/L
- Total Suspended Solids: 30 mg/L
- Fecal Coliforms: 1,000 colonies/100 ml
- pH: 6 to 9.

2.2 Receiving Environment Monitoring and Outfall Inspection

Receiving Environment Monitoring is completed by West Coast Reduction, who shares the outfall with the RDN. GreatPacific Consulting Ltd. is contracted to perform the monitoring and sends the reports directly to ENV.

The DPPCC outfall was inspected in November 2022 by GreatPacific Consulting Ltd. and found to be in good condition. The report was forwarded via separate cover to ENV. The next outfall inspection is scheduled for 2027.

3) Flow Monitoring

3.1 Flow

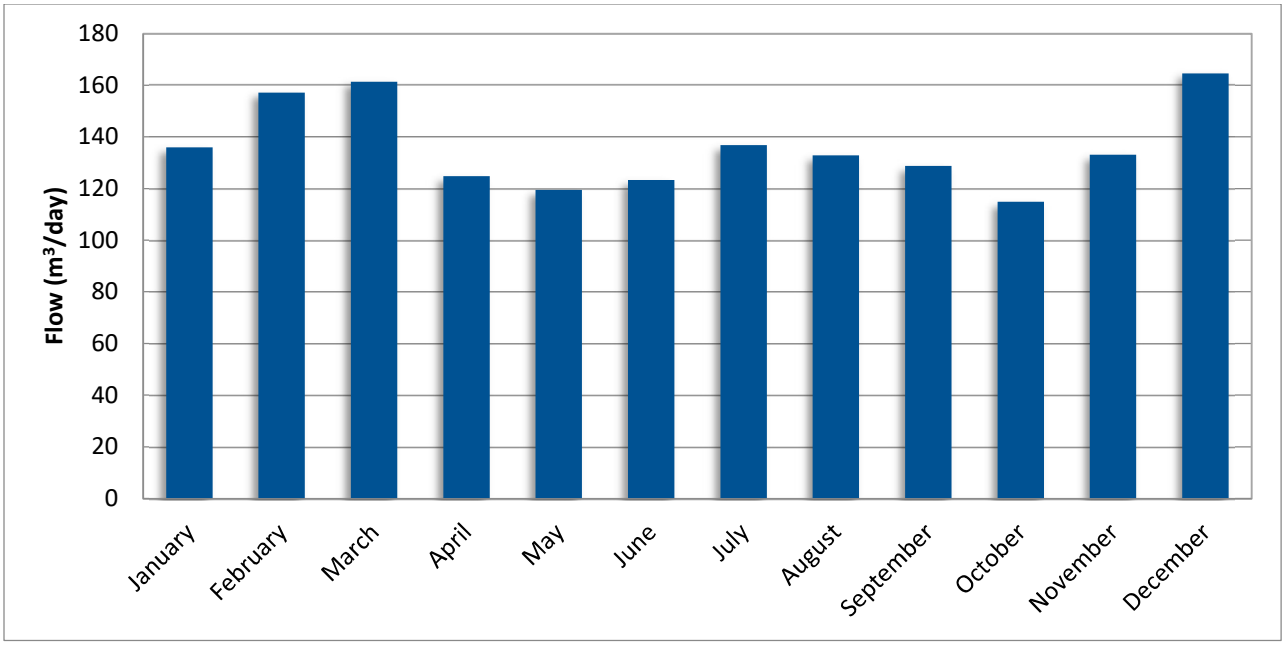
Flows are calculated based on the effluent decant volumes and determined by a hydrostatic pressure sensor in the basin. The average daily flow for DPPCC was 136.1 m^3/day in 2025, well below the permitted average daily flow of 950 m^3/day. The highest daily flow of 359.0 m^3 was recorded in March and was also well below the permitted maximum daily discharge of 1,800 m^3/day. The total annual flow for 2025 was 49,798.4 m^3. There were no flow exceedances in 2025.

Results are summarized in Table 1 and Figure 1. Daily flow monitoring data for DPPCC for 2025 are presented in Appendix B.

Table 1. 2025 Summary of Flows from DPPCC

Month	Average Daily Flow (m^3/day)	Total Flow (m^3)	Maximum Flow (m^3/day)	Minimum Flow (m^3/day)	Permit Exceedances
January	136.0	4,216.0	198.9	109.8	0
February	157.2	4,558.1	247.0	74.5	0
March	161.4	5,002.7	359.0	111.0	0
April	124.8	3,744.5	160.7	101.9	0
May	119.4	3,702.4	167.6	96.0	0
June	123.3	3,698.5	160.7	93.1	0
July	136.9	4,242.8	207.7	101.9	0
August	132.9	4,118.6	173.5	96.0	0
September	128.8	3,863.6	161.0	101.5	0
October	114.8	3,559.5	199.0	55.9	0
November	133.1	3,991.5	196.0	90.0	0
December	164.5	5,100.3	267.0	119.5	0
Average	**136.1**				
Total		**49,798.4**			**0**
Maximum			**359.0**		
Minimum				**55.9**	

Figure 1. 2025 Average Daily Flow Per Month



3.1.1 Historical Trends

Historical flow data are summarized in Table 2 and Figures 2 and 3. In June 2016, operators repaired a leak in the MacMillan Road forcemain.

Table 2. Historical Trends: DPPCC Flow

Year	Average Daily Flow (m^3/day)	Maximum Daily Flow (m^3/day)	Total Flow (m^3)	Permitted Average Daily Flow (m^3/day)	Non-Compliances	
					Average Daily Flow	Max Daily Flow
2016	94.8	316.0	34,735.1	900	0	0
2017	138.6	365.3	50,669.6	950	0	0
2018	146.3	360.6	53,545.8	950	0	0
2019	135.1	314.0	49,313.3	950	0	0
2020	142.7	431.2	52,277.2	950	0	0
2021	154.3	702.0	56,316.7	950	0	0
2022	151.2	524.0	55,311.2	950	0	0
2023	146.1	436.0	53,375.3	950	0	0
2024	150.2	425.0	55,016.9	950	0	0
2025	136.1	359.0	49,798.4	950	0	0

Figure 2. Historical Trends: Average Daily Flow from DPPCC

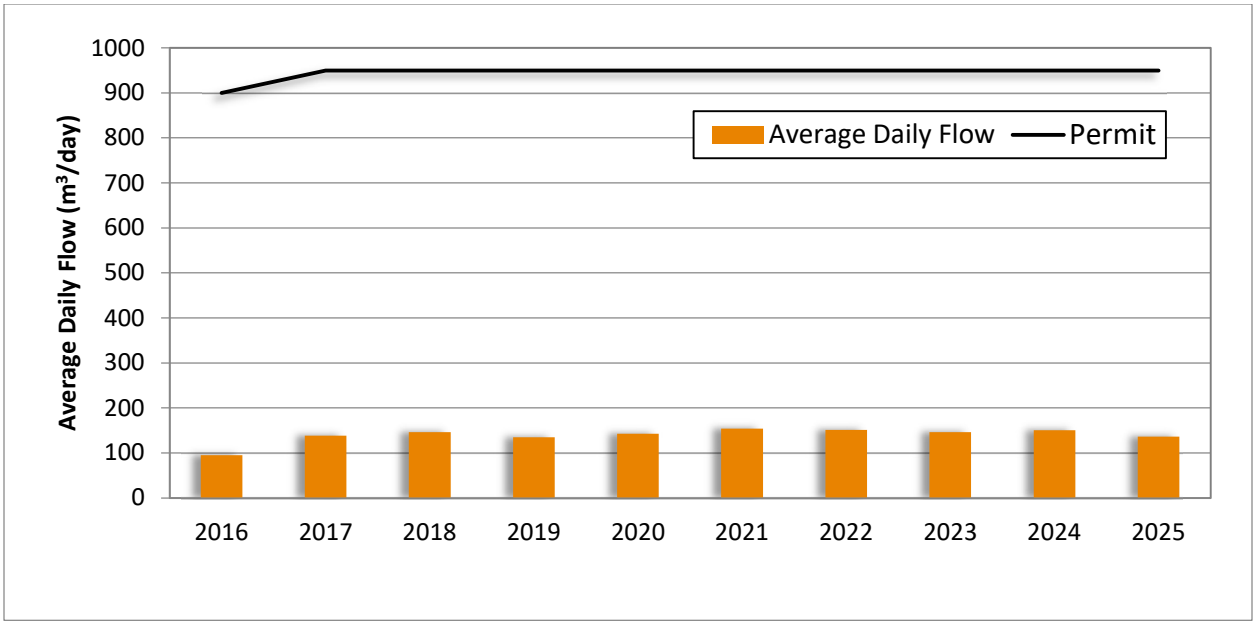
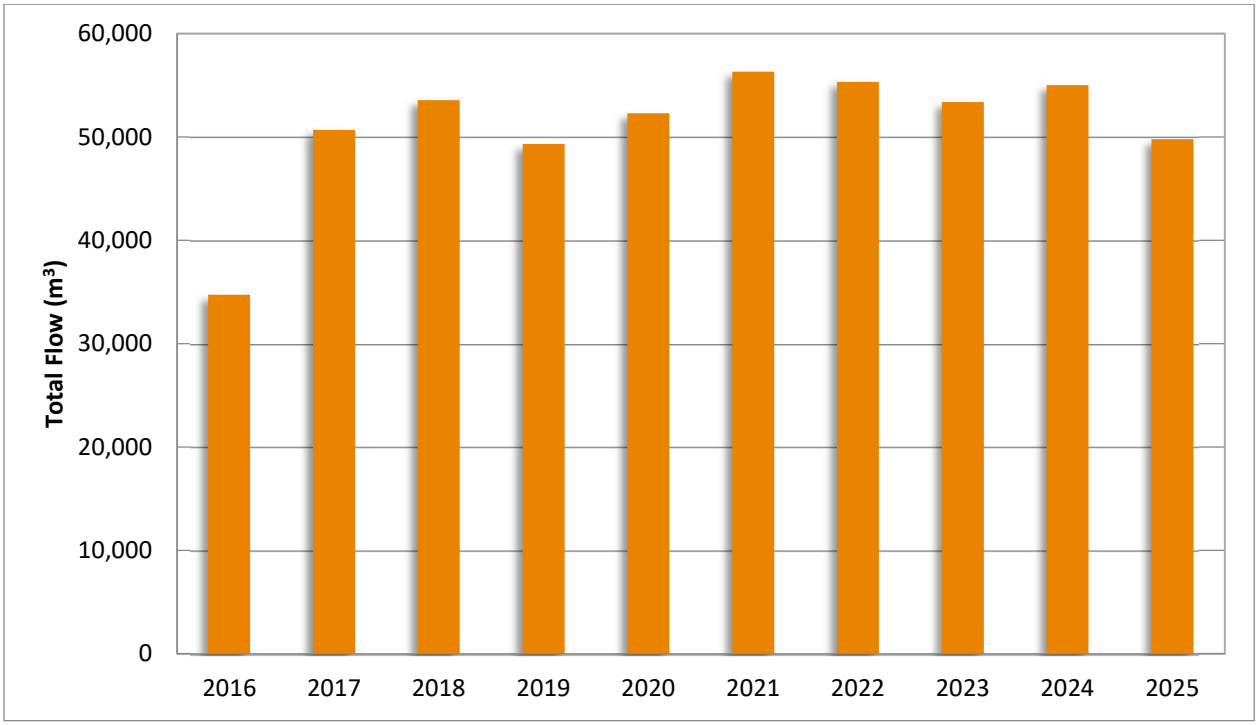


Figure 3. Historical Trends: Total Flow from DPPCC



4) Effluent Monitoring

4.1 5-Day Carbonaceous Biochemical Oxygen Demand ($cBOD_5$)

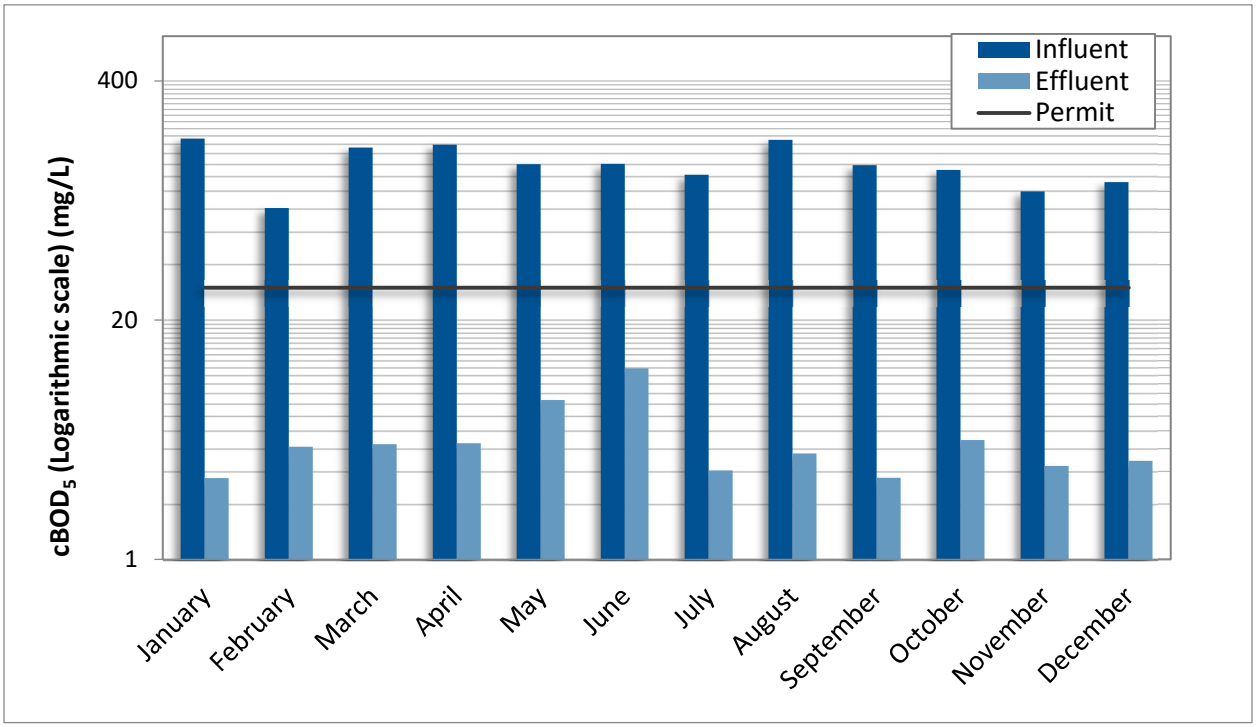
Carbonaceous Biochemical oxygen demand ($cBOD_5$) is a measure of the quantity of oxygen consumed by microorganisms to break down organic matter in water with contribution from nitrogen reducing bacterial suppressed. A high $cBOD_5$ means that there will be less oxygen available to support aquatic life. Thus, high $cBOD_5$ levels result in the contamination of the receiving (marine) environment.

The Operational Certificate requires $cBOD_5$ testing of the effluent once a month and the maximum permitted concentration is 30 mg/L. Lab staff test $cBOD_5$ weekly. The average $cBOD_5$ concentration for influent and effluent was 149 mg/L and 4.56 mg/L, respectively. The average $cBOD_5$ removal efficiency in 2025 was approximately 96.9%. There were no $cBOD_5$ exceedances in 2025. Results of $cBOD_5$ sampling are summarized in Table 3 and Figure 4. Appendix B contains the weekly $cBOD_5$ data for DPPCC for 2025.

Table 3. 2025 Influent & Effluent $cBOD_5$

Month	Average $cBOD_5$ (mg/L)		Average % Reduction in $cBOD_5$	Non-Compliances
	Influent	Effluent		
January	194	2.77	98.6%	0
February	81	4.09	95.0%	0
March	174	4.23	97.6%	0
April	180	4.28	97.6%	0
May	141	7.35	94.8%	0
June	141	10.94	92.3%	0
July	124	3.04	97.5%	0
August	191	3.76	98.0%	0
September	139	2.78	98.0%	0
October	131	4.44	96.6%	0
November	100	3.22	96.8%	0
December	113	3.43	97.0%	0
Average	**149**	**4.56**	**96.9%**	
Total				**0**

Figure 4. 2025 Influent & Effluent Monthly Average $cBOD_5$



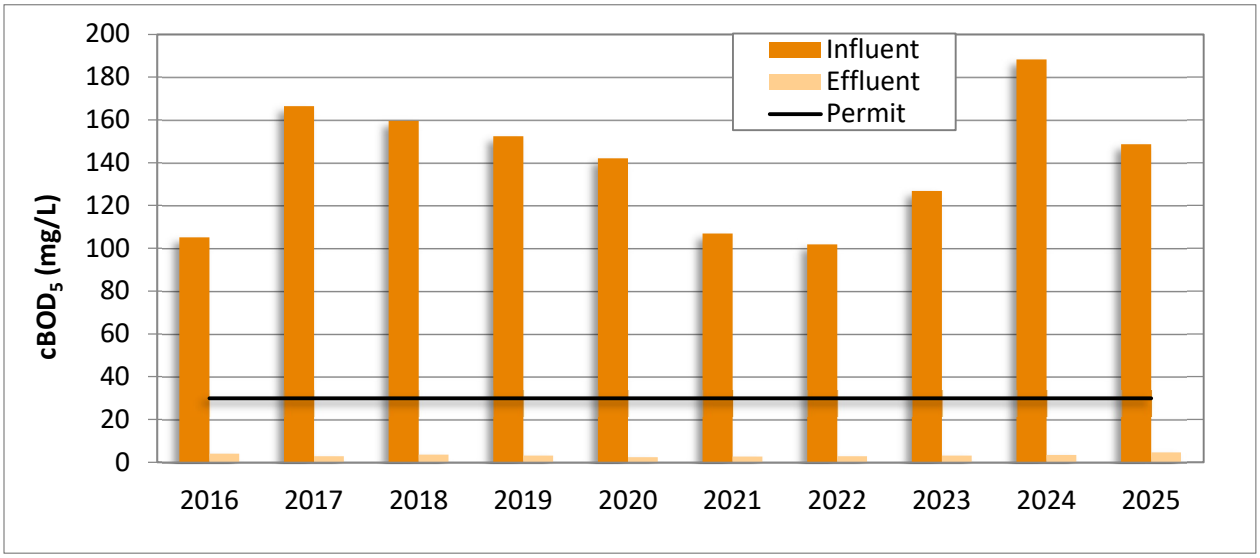
4.1.1 Historical Trends

Historical influent and effluent $cBOD_5$ concentrations, reduction efficiencies and the number of exceedances reported over the past ten years are summarized in Table 4 and Figure 5. Data from 2025 are consistent with previous years.

Table 4. Historical Trends: Influent & Effluent $cBOD_5$

Year	Average BOD_5 (mg/L)		Average % Reduction in BOD_5	Non-Compliances
	Influent	Effluent		
2016	105	4.04	96.2%	0
2017	166	2.85	98.3%	0
2018	159	3.53	97.8%	0
2019	152	3.12	98.0%	0
2020	142	2.36	98.3%	0
2021	107	2.66	97.5%	0
2022	102	2.75	97.3%	0
2023	127	3.12	97.5%	0
2024	188	3.48	98.1%	0
2025	149	4.56	96.9%	0

Figure 5. Historical Trends: Influent & Effluent $cBOD_5$ (Yearly Averages)



4.2 Total Suspended Solids

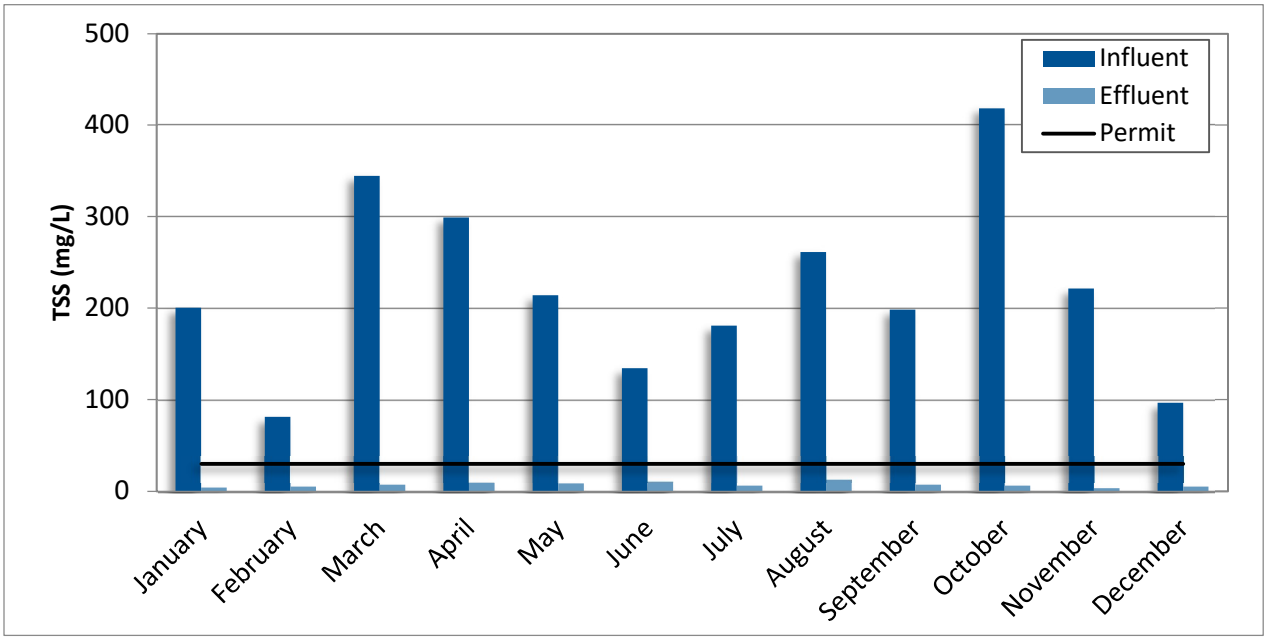
Total Suspended Solids (TSS) are solid pollutants that can be captured on a fine filter paper. They are visible in water and decrease water clarity. High concentrations of TSS can harm aquatic life. The Operational Certificate requires TSS testing of the effluent once a month, with a maximum permitted concentration of 30 mg/L. Laboratory staff test TSS weekly. The average TSS concentration for influent and effluent was 225 mg/L and 7.13 mg/L, respectively. The average TSS removal efficiency in 2025 was approximately 96.8%. TSS concentration results for 2025 are summarized in Table 5 and Figure 6. Weekly TSS monitoring data are presented in Appendix B.

In 2025, there was one TSS operational certificate exceedance on August 14, 2025. The non-conformance was attributed to an error with the grab sampling procedure. The sampling procedure was updated. More information on this non-conformance can be found in Appendix D.

Table 5. 2025 Influent & Effluent TSS

Month	Average TSS (mg/L)		Average % Reduction in TSS	Exceedances (TSS>30 mg/L)
	Influent	Effluent		
January	200.4	4.00	98.0%	0
February	81	5.10	93.7%	0
March	345	7.00	98.0%	0
April	299	10.15	96.6%	0
May	214	8.56	96.0%	0
June	134	11.25	91.6%	0
July	181	6.04	96.7%	0
August	261	13.35	94.9%	1
September	198	7.10	96.4%	0
October	418	6.20	98.5%	0
November	221.5	3.14	98.6%	0
December	96.5	5.12	94.7%	0
Average	**225**	**7.13**	**96.8%**	
Total				**1**

Figure 6. 2025 Influent & Effluent Monthly Average TSS



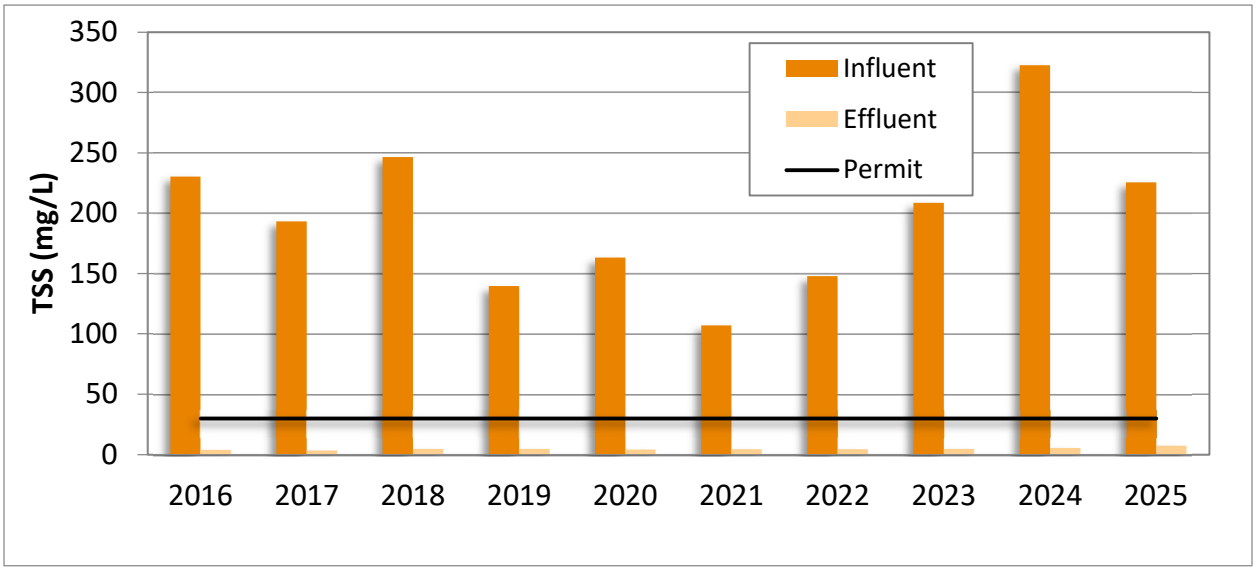
4.2.1 Historical Trends

Historical influent and effluent TSS concentrations, reduction efficiencies and the number of exceedances reported over the past ten years are summarized in the Table 6 and graphed in Figure 7. Data from 2025 are consistent with previous years.

Table 6. Historical Trends: Influent & Effluent TSS

Year	Average TSS (mg/L)		Average % Reduction in TSS	Non-Compliances
	Influent	Effluent		
2016	230	3.82	98.3%	0
2017	193	3.25	98.3%	0
2018	247	4.48	98.2%	0
2019	140	4.64	96.7%	0
2020	163	4.02	97.5%	0
2021	107	4.27	96.0%	0
2022	148	4.39	97.0%	0
2023	209	4.50	97.8%	0
2024	323	5.51	98.3%	0
2025	225	7.13	96.8%	1

Figure 7. Historical Trends: Influent & Effluent Yearly Average TSS



4.3 Fecal Coliforms

The Operational Certificate requires fecal coliform testing of the effluent to be completed six times a year, with a maximum permitted concentration of 1,000 colonies per 100 mL. Wastewater Services staff conducted this testing seven times in 2025. The geometric mean of the fecal coliform concentrations in effluent in 2025 was <82 colony forming units (CFU)/100mL.

The RDN has occasionally had Operational Certificate exceedances in fecal coliforms. The RDN has replaced all the ageing ultraviolet lamps and sleeves and implemented an aggressive maintenance plan to ensure the current disinfection system is reliable. In late 2022, the RDN replaced the original UV disinfection unit with a new UV disinfection unit

In 2025, there was one operational certificate exceeding in fecal coliforms. On July 17, 2025, the fecal coliform result was 16,608 CFU/100 mL which exceeded the operational certificate limit of 1,000 fecal

coliforms/100 mL. The non-conformance was attributed to a stuck wiper blade that wasn't cleaning the UV system. The wiper was repaired, and operational checks were added to ensure wipers are functioning.

More information on this non-conformance can be found in Appendix D.

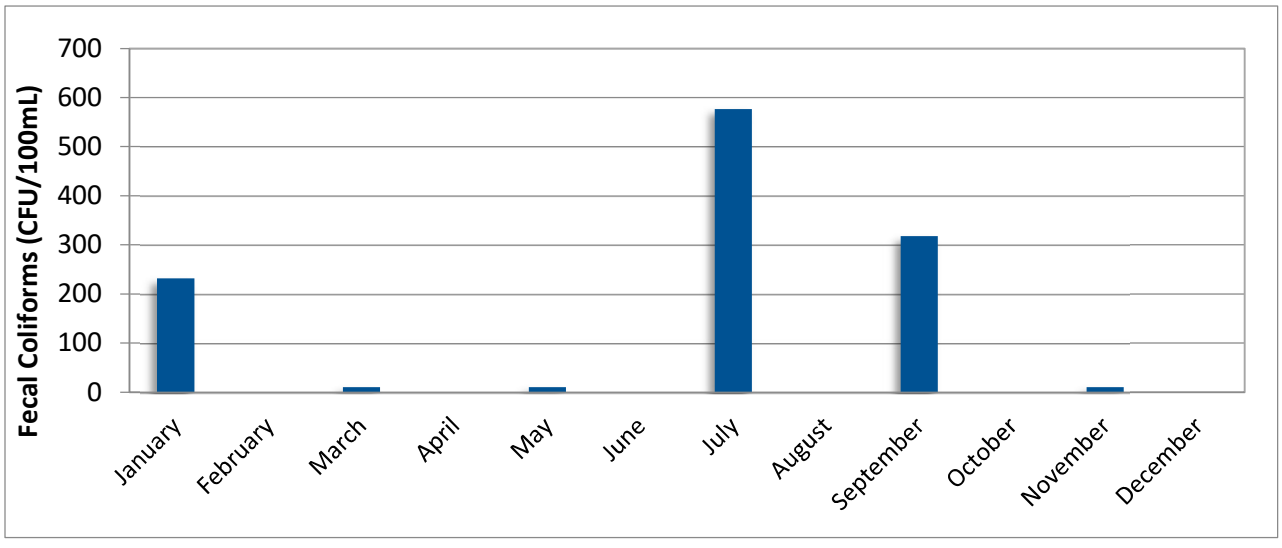
Results are summarized in Table 7 and graphed in Figure 8. Fecal coliform monitoring data for DPPCC for 2025 are presented in Appendix B.

Table 7. 2025 Fecal Coliform Concentrations

Month	Effluent Average Fecal Coliforms* (CFU#/100mL)	Non-Compliance
January	232	0
February		
March	<10	0
April		
May	<10	0
June*		
July	576	1
August		
September	318	0
October		
November	<10	0
December		
Geometric Mean (Annual)	**<82**	
Total		**1**

< Results included geometric mean average.
CFU = colony forming units; * indicates geometric mean.
ND = not determined

Figure 8. 2025 Effluent Fecal Coliform Concentrations (Monthly Geometric Mean)



< Results included geometric mean average.

4.3.1 Historical Trends

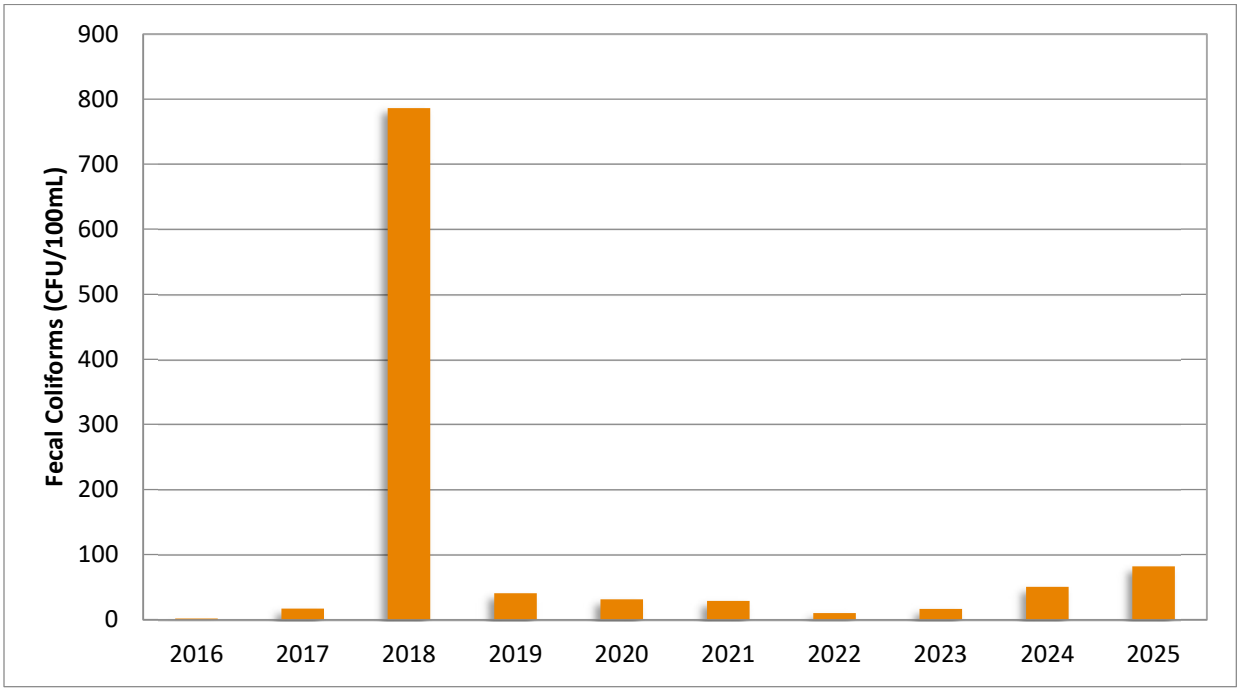
Historical effluent fecal coliform concentrations reported over the past ten years are summarized in Table 8 and graphed in Figure 9. There was a peak in 2018 due to issues with the ultraviolet disinfection system. The ultraviolet disinfection system was replaced in 2022.

Data from 2025 were consistent with previous years.

Table 8. Historical Trends: Effluent Fecal Coliform Concentrations (Yearly Averages)

Year	Effluent Average Fecal Coliforms (CFU/mL)	Non-Compliances
2016	1.8	0
2017	16.8	1
2018	785.9	4
2019	40.5	0
2020	31.0	1
2021	28.8	0
2022	10.0	0
2023	16.6	0
2024	50.5	1
2025	81.8	1

Figure 9. Historical Trends: Yearly Geometric Mean Effluent Fecal Coliform Concentration



4.4 pH

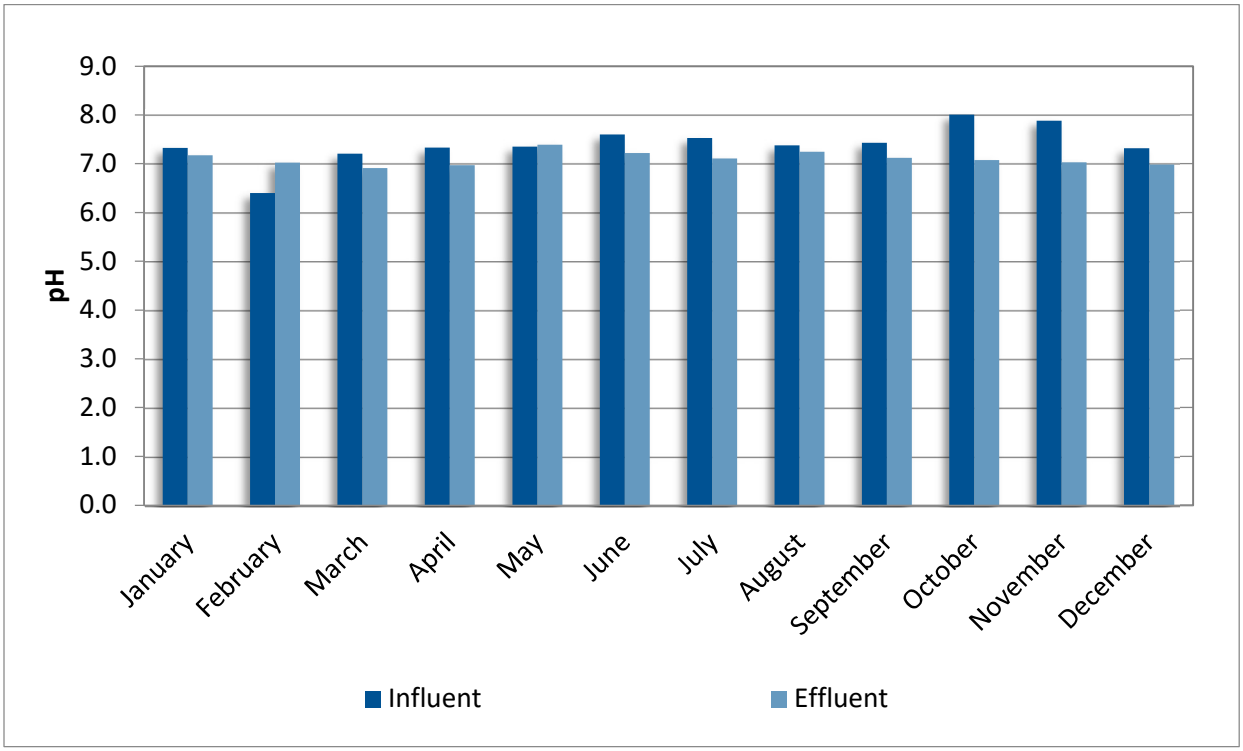
The Operational Certificate requires pH testing of the effluent once a month. Results must be within the pH range of 6.0 to 9.0. Wastewater Services' staff conducts weekly testing. The average pH for influent

and effluent was 7.62 and 7.08, respectively. There were no pH exceedances in 2025. Results are summarized in Table 9 and graphed in Figure 10. Weekly pH monitoring data for DPPCC are presented in Appendix B.

Table 9. 2025 Influent & Effluent Average pH

Month	Average pH		Non-Compliances
	Influent	Effluent	
January	7.32	7.18	0
February	6.40	7.02	0
March	7.21	6.91	0
April	7.33	6.97	0
May	7.35	7.39	0
June	7.60	7.22	0
July	7.53	7.11	0
August	7.38	7.25	0
September	7.43	7.12	0
October	8.01	7.08	0
November	7.89	7.03	0
December	7.32	6.98	0
Average	**7.40**	**7.10**	
Total			**0**

Figure 10. 2025 Influent & Effluent Monthly Average pH



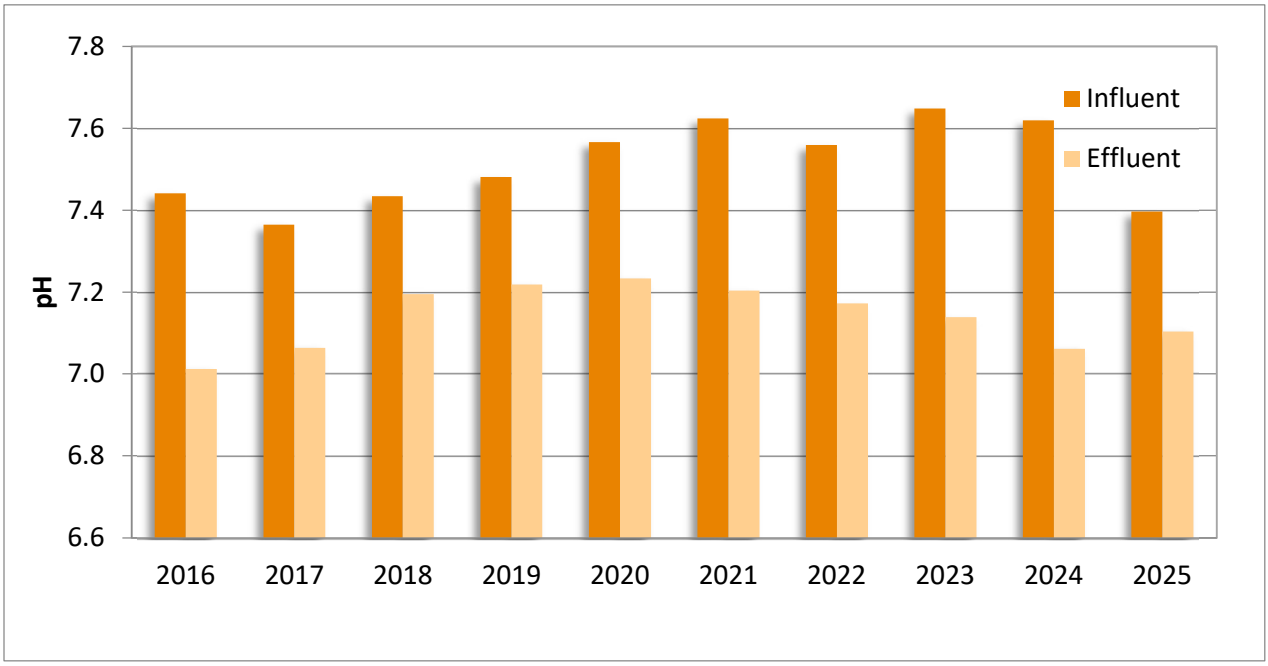
4.4.1 Historical Trends

Historical influent and effluent pH concentrations reported over previous years are summarized in Table 10 and Figure 11. Data from 2025 are consistent with previous years.

Table 10. Historical Trends: Influent & Effluent Average pH

Year	Influent Average pH		Non-Compliances
	Influent	Effluent	
2016	7.44	7.01	0
2017	7.36	7.06	0
2018	7.43	7.20	0
2019	7.48	7.22	0
2020	7.57	7.23	0
2021	7.62	7.20	0
2022	7.56	7.17	0
2023	7.65	7.14	0
2024	7.62	7.06	0
2025	7.40	7.10	0

Figure 11. Historical Trends: Influent & Effluent pH



4.5 Ammonia

Ammonia is one of the typical constituents found in domestic wastewater. Ammonia can be harmful to both freshwater and marine fish and is monitored along with toxicity to determine potential impacts to the receiving environment.

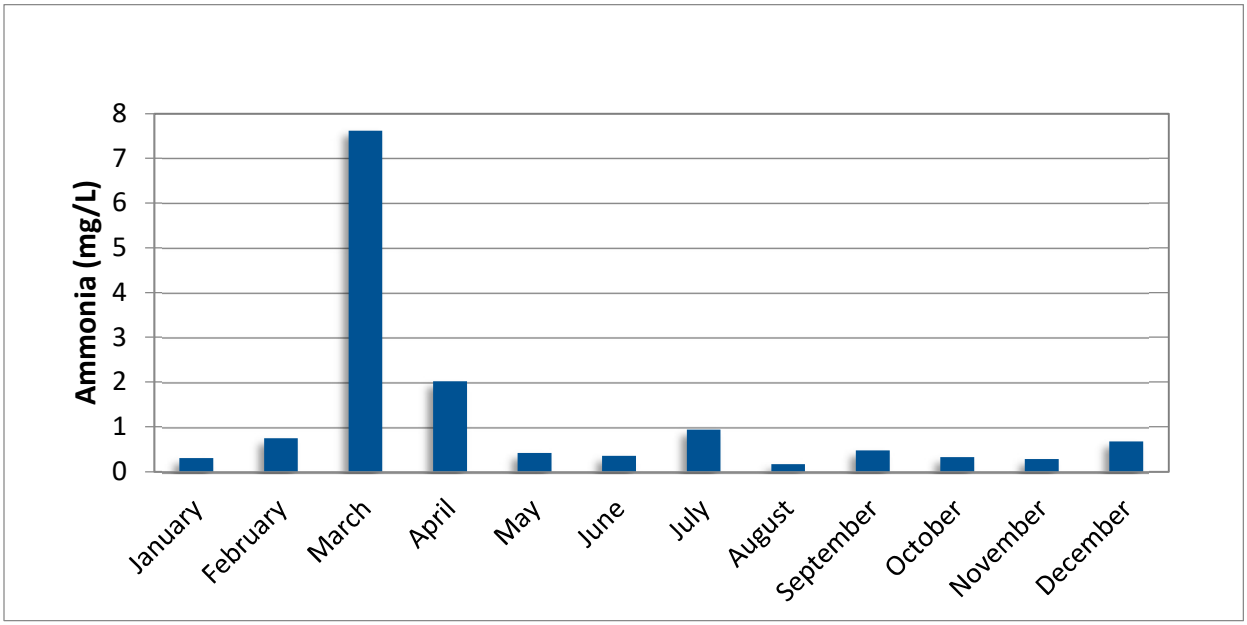
The Operational Certificate requires quarterly testing of ammonia nitrogen in the effluent. Testing was done weekly in 2025, and the effluent average ammonia nitrogen concentration was <1.107 mg/L.

Table 11 and Figure 12 show the average monthly effluent ammonia concentration. Ammonia tests were completed using Hach TNT and ISE methodology. Appendix B contains the daily results.

Table 11. 2025 Effluent Ammonia Nitrogen

Month	Effluent Ammonia Nitrogen (mg/L)*
January	0.299
February	0.747
March	7.618
April	2.016
May	0.418
June	0.353
July	0.939
August	<0.165
September	0.471
October	0.323
November	0.282
December	0.674
AVERAGE	**<1.107**

Figure 12. 2025 Monthly Effluent Ammonia Nitrogen



4.5.1 Historical Trends

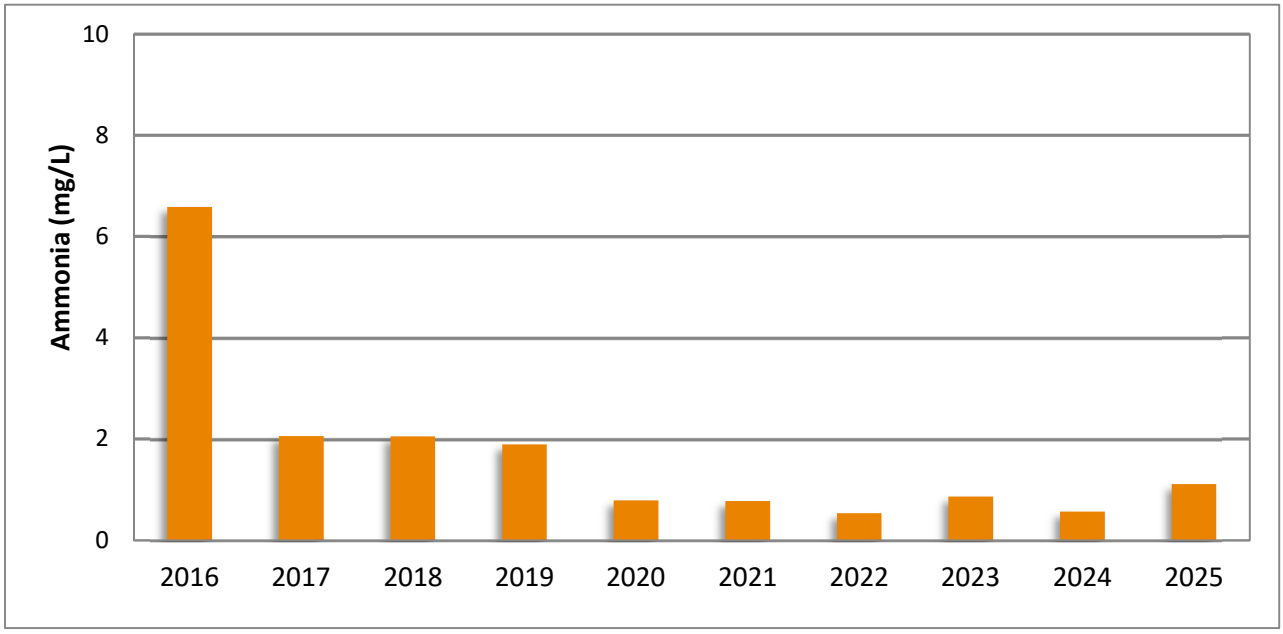
Historical average ammonia nitrogen concentrations in the effluent are summarized in the Table 12 and Figure 13. DPPCC effluent ammonia nitrogen concentrations have shown a high degree of variability and

since 2020, there has been a decreasing trend in ammonia nitrogen. Annual variability may be due to operational adjustments made to account for the flow increase, which has changed wasting rate and oxygen necessary in the basins. Additionally, if the bacteria in the basin are low in numbers or do not have enough oxygen or alkalinity, the amount of ammonia that is converted to different (less harmful) forms in the nitrogen cycle changes. Temperature also influences treatment due to the activity level of the bacteria in the basin.

Table 12. Historical Trends: Effluent Ammonia Nitrogen

Year	Effluent Average Ammonia Nitrogen (mg/L)
2016	6.586
2017	2.057
2018	2.049
2019	1.889
2020	0.786
2021	0.775
2022	0.531
2023	0.859
2024	0.562
2025	1.107

Figure 13. Historical Trends: Effluent Ammonia Nitrogen



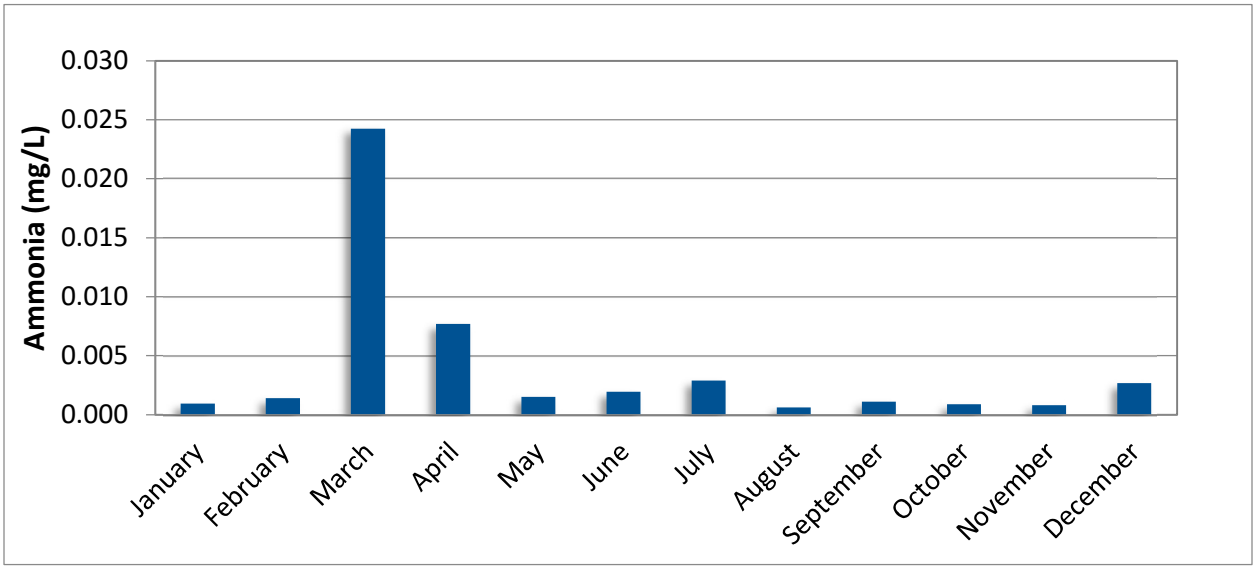
4.6 Un-ionized Ammonia

Un-ionized Ammonia is tested weekly at the RDN certified laboratory at Greater Nanaimo Pollution Control Centre. Table 13 and Figure 14 present average monthly effluent ammonia concentration (Hach TNT and ISE methodologies). Appendix B contains the daily results.

Table 13. 2025 Effluent Un-ionized Ammonia Nitrogen

Month	Effluent Un-ionized Ammonia Nitrogen (mg/L)
January	0.000940
February	0.00140
March	0.0242
April	0.00770
May	0.00152
June	0.00194
July	0.00288
August	0.000629
September	0.00111
October	0.000876
November	0.000806
December	0.00269
AVERAGE	**0.00389**

Figure 14. 2025 Monthly Effluent Un-Ionized Ammonia (as Nitrogen)



4.7 96-Hour Rainbow Trout Toxicity Test

This test, or bioassay, determines the toxicity of a material by studying the reaction of a living organism exposed to it. An LC_{50} 96-hour test is the accepted method to determine the toxicity of water and wastewater. This means the lethal concentration at which 50% of test organisms die within 96 hours. The result is given as a percentage, referring to the amount of effluent, in relation to dilution water, used in the test. A toxicity test of 100% is not acutely toxic. The lower the toxicity result (expressed as a percentage) the more acutely toxic the effluent.

The Operational Certificate requires the effluent be tested for toxicity once a year. Annual testing is conducted in June by an external laboratory. Appendix C contains the laboratory test results. The result for 2024 was >100% based on a sample from June 26, 2025.

4.7.1 Historical Trends

Historical effluent toxicity results reported over previous years are summarized in the Table 14.

Table 14. Historical Trends: Effluent LC_{50} Toxicity

Year	Effluent LC_{50} Toxicity (%)
2016	66
2017	>100
2018	>100
2019	>100
2020	>100
2021	>100
2022	>100
2023	>100
2024	>100
2025	>100

5) Odour

5.1 Odour Concern Records

No odour concerns were reported for DPPCC in 2025.

5.2 Odour Episodes

An odour episode is any disruption in the regular operation of the treatment plant that may cause odour. There were no odour episodes for 2025.

6) Solids

DPPCC separates solids from the mixed liquor during the “settle” phase of the sequence. Sludge is then transported to the Chase River Pump Station (CRPS) septage receiving site where it is conveyed to the Greater Nanaimo Pollution Control Centre for treatment.

The annual volume of sludge transported from DPPCC to CRPS in the past ten years is presented in Table 15. Approximately 1012.9 m^3 of sludge was transported from DPPCC in 2025.

Sludge production increased after 2021 in comparison to previous years due an increase in the wasting rate to keep the sludge at an acceptable age to increase effluent quality.

Table 15. Historical Trends: Sludge Transported to CRPS (m^3)

Year	Sludge transported to CRPS from DPPCC (m^3)
2016	778.0
2017	798.2
2018	703.9
2019	1107.7
2020	664.1
2021	1131.4
2022	1108.3
2023	1404.5
2024	1096.5
2025	1012.9

7) Environmental Incidents

As part of the RDN's ISO 14001 Environmental Management System certification, records are maintained regarding any environmental incidents (i.e., spills, fires, etc.) are associated with the RDN's wastewater infrastructure and treatment facilities. There were no Environmental Incidents recorded in 2025 for DPPCC and the Duke Point collection system.

8) Upgrades and Major Projects

8.1 Upgrades and Repairs Completed in 2025

- No upgrades or repairs were completed in 2025

8.2 Studies and Projects Completed in 2025

- ISO 14001:2015 surveillance audit.

8.3 Upgrades and Repairs Planned for 2026

- UV Lamps and Sleeves Replacement
- Commissioning of Basin #1
- New SC200 Universal Controller and Dissolved Oxygen Probe for Basin #1.

8.4 Studies and Projects Planned for 2026

- ISO 14001:2015 surveillance audit.

9) Education Programs

9.1 Source Control

Source Control Bylaw No. 1730 regulates the discharge of waste into any sewer or drain connected to an RDN sewage facility, including discharges to municipal collection systems. The bylaw provides a process for issuing Waste Discharge Permits and a fee structure based on waste strength and volume. The Bylaw also lists prohibited waste items and has provisions for fees and enforcement.

Trucked Liquid Waste Rates and Regulations Bylaw No. 1732 includes source control provisions including a schedule of prohibited wastes and a schedule of restricted wastes. It also includes enforcement tools.

9.2 Water Conservation

The RDN has a water conservation and outreach program, called Team WaterSmart, for municipalities in the region and electoral areas. The RDN's Board also approved a Water Conservation Plan in 2020. This plan was completed in collaboration with member municipalities.

9.3 SepticSmart

SepticSmart is and RDN educational program that provides information on septic system operation and maintenance. It aims to prolong the life of functioning systems in the region. More information on the SepticSmart Program is available at: https://www.rdn.bc.ca/septicsmart.

The SepticSmart program includes an information package, annual workshops and a rebate program. Two SepticSmart workshops were held in 2025. To date, the SepticSmart rebate program has issued more than $450,000 in rebates to homeowners to help with septic tank repairs and maintenance.

9.4 Liquid Waste Management Plan

The RDN Liquid Waste Management Plan (LWMP) is a long-range plan to support sustainable wastewater management in the region. This plan authorizes the RDN to find community-driven and cost-effective solutions to protect public health and achieve a standard level of wastewater treatment over time. The BC Minister of the Environment approved the RDN's LWMP in October 2014. An annual report for the LWMP will be submitted under separate cover in June.

In December 2023, the RDN submitted a request to the Province of BC for an LWMP Amendment.

9.5 Website

The RDN's Wastewater Services department website www.rdn.bc.ca/wastewater-services is regularly updated and provides education material related to wastewater treatment, environmental management, pollution prevention and septic system maintenance (the SepticSmart program).

The Get Involved RDN webpage is an online public engagement space that hosts outreach information specific to the regional projects. In 2025, there were no major DPPCC projects highlighted.

Appendix A – Operational Certificate ME-05989

BRITISH COLUMBIA

2 10 VANCOUVER

File: ME-05989

Date: AUG 12 2004

REGISTERED MAIL

Regional District of Nanaimo
6300 Hammond Bay Rd
Nanaimo BC V9T 6N2

Dear Regional District of Nanaimo:

Enclosed is **Operational Certificate ME-05989** issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the Operational Certificate. An annual fee will be determined according to the Waste Management Permit Fees Regulation.

This Operational Certificate does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the Operational Certificate Holder. It is also the responsibility of the Operational Certificate Holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

.../2

Ministry of Water, Land and Air Protection
Regional Operations
Vancouver Island Region
Mailing/Location Address:
2080 Labieux Rd
Nanaimo BC V9T 6J9
Telephone: (250) 751-3100
Facsimile: (250) 751-3103
http://www.gov.bc.ca/
http://www.gov.bc.ca/wlap/

Administration of this Operational Certificate will be carried out by staff from the Vancouver Island Region office. **Plans, data and reports pertinent to the Operational Certificate are to be submitted to the Regional Environmental Protection Manager at Ministry of Water, Land and Air Protection, Regional Operations, Vancouver Island Region, 2080 Labieux Road, Nanaimo, British Columbia, V9T 6J9.**

Yours truly,

R. Alexander
for Director, *Environmental Management Act*
Vancouver Island Region

cc: Environment Canada
Ministry of Health
Land and Water British Columbia Inc., Victoria

Enclosure

HDR July 29/04
ACL 2004/08/04

BRITISH COLUMBIA

MINISTRY OF WATER, LAND AND AIR PROTECTION

Vancouver Island Region
Environmental Protection
2080-A Labieux Road
Nanaimo, British Columbia
V9T 6J9
Telephone: 250 751-3100
Fax: 250 751-3103

ME-05989

Under the Provisions of the Environmental Management Act

Regional District of Nanaimo

6300 Hammond Bay Road

Nanaimo,British Columbia

V9T 6N2

is authorised to discharge effluent to Northumberland Channel from a municipal sewage treatment facility located at Duke Point, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. AUTHORISED DISCHARGES

1.1 This subsection applies to the discharge of effluent from a **MUNICIPAL SEWAGE TREATMENT FACILITY**. The rate and characteristics of the discharge apply to the last accessible point prior to connection to the outfall. The site reference number for this discharge is E254792.

1.1.1 The maximum authorised rate of discharge is 1,800 m^3/d.

1.1.2 The average daily rate of discharge based on an annual averaging period is as follows:

Average daily flow = 250 m^3/d + 50 m^3/d * (calendar year – 2003) to a maximum of 950 m^3/d in the year 2017.

1.1.3 The characteristics of the discharge shall not exceed:

5-day Biochemical Oxygen Demand	30 mg/L
Total Suspended Solids	30 mg/L
Fecal Coliform	1,000 colonies/100 mL
pH	6 to 9

1.1.4 The authorised works are mechanical screens, secondary treatment plant, ultra violet disinfection, aerated sludge holding tank, a connection line to the outfall, an outfall (with diffuser) extending approximately 282 m from mean low water to a depth of approximately 40 m below mean low water, and related appurtenances approximately located as shown on attached Site Plan A.

R.Alexander
for Director, *Environmental Management Act*

Date Issued: AUG 12 2004
Date Amended:
(most recent)

OPERATIONAL CERTIFICATE: **ME-05989**

ACL 2004/08/05

1.1.5 The authorised works must be complete and in operation on and from the date of this operational certificate.

1.1.6 The location of the facilities from which the discharge originates is Lot 15, Section 3, Range 8, Nanaimo District Plan VIP63717.

1.1.7 The location of the point of discharge is Northumberland Channel.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works and Emergency Procedures

The Regional District of Nanaimo shall inspect the authorised works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the Regional District of Nanaimo which prevents effective operation of the approved method of pollution control, the Regional District of Nanaimo shall notify the Director immediately and take appropriate remedial action. The Director may reduce or suspend the operation of the Regional District of Nanaimo to protect the environment until the approved method of pollution control has been restored.

2.2 Bypasses

The Regional District of Nanaimo shall ensure that no waste is discharged without being processed through the authorised works unless prior written approval is received from the Director.

2.3 Plans - New Works

Plans and specifications for expanding the works authorised in Subsection 1.1.4 shall be certified by a qualified professional, and submitted to the Regional Manager, Environmental Protection for review prior to the start of construction. A qualified professional must certify that the works have been constructed in accordance with such plans.

2.4 Posting of Outfall

The Regional District of Nanaimo shall erect a sign along the alignment of the outfall above high water mark. The sign shall identify the nature of the works. The wording and size of the sign requires the approval of the Director.

R.Alexander
for Director, *Environmental Management Act*

2.5 Outfall Inspection

The Regional District of Nanaimo shall conduct an inspection of the outfall line every 5 years, or as may otherwise be required by the Director. An outfall inspection report shall be submitted to the Regional Manager, Environmental Protection within 60 days from the date of the inspection.

2.6 Sludge Management

Sludge generated from the treatment plant shall be managed in a manner approved by the Director.

2.7 Effluent Upgrading

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the Regional District of Nanaimo may be required to provide additional treatment facilities.

2.8 Odour Control

Should objectionable odours, attributable to the operation of the sewage treatment plant, occur beyond the property boundary, as determined by the Director, measures or additional works will be required to reduce odour to acceptable levels.

2.9 Operating Plan

The Regional District of Nanaimo shall develop an Operating Plan, as per Section 16 of the Municipal Sewage Regulation. The plan shall be submitted to the Regional Manager, Environmental Protection by December 31, 2004.

2.10 Facility Classification and Operator Certification

The Regional District of Nanaimo shall have the works authorised by this operational certificate classified (and the classification shall be maintained) by the Environmental Operators Certification Program Society (Society). The works shall be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director shall be notified of the classification level of the facility and certification level of the operators, and changes of operators and/or operator certification levels within 30 days of any change.

R.Alexander
for Director, *Environmental Management Act*

Date Issued: AUG 12 2004
Date Amended:
(most recent)

OPERATIONAL CERTIFICATE: **ME-05989**

ACL 2004/08/05

Alternatively, the works authorised by this operational certificate shall be operated and maintained by persons who the Regional District of Nanaimo can demonstrate to the satisfaction of the Director, are qualified in the safe and proper operation of the facility for the protection of the environment.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Flow Measurement

Provide and maintain a suitable flow measuring device and record twice per week the effluent volume discharged over a 24-hour period.

3.1.2 Sampling and Analysis

The Regional District of Nanaimo shall install a suitable sampling facility and obtain samples of the effluent in accordance with the following schedule:

Parameter	Frequency (type)
5-day Biochemical Oxygen Demand	monthly (grab)
Total Suspended Solids	monthly (grab)
NH_4-N	quarterly (grab)
Fecal Coliforms	six times a year (grab)
Toxicity	once a year (grab)
pH	monthly (grab)

3.2 Receiving Environment Monitoring

A receiving environment monitoring program shall be established in consultation with the Director who will advise the Regional District of Nanaimo in writing of the program requirements.

The responsibility for carrying out the receiving environment monitoring program is shared jointly by the Regional District of Nanaimo and West Coast Reduction Ltd. The responsibility for the cost of the program is determined under the terms of a Joint Use Agreement between the two parties.

R.Alexander
for Director, *Environmental Management Act*

Date Issued: AUG 12 2004
Date Amended:
(most recent)

OPERATIONAL CERTIFICATE: **ME-05989**

ACL 2004/08/05

3.3 Monitoring Procedures

3.3.1 Sampling and Analytical Procedures

Sampling and flow measurement shall be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2003 Edition (Permittee)," or most recent edition, or by suitable alternative procedures as authorised by the Director. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1 800 663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorised by the Director. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1 800 663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

3.4 Reporting

Maintain data of analyses and flow measurements for inspection and every 6 months submit the data, suitably tabulated, to the Regional Manager, Environmental Protection for the previous 6 months. All reports shall be submitted within 30 days of the end of the 6 month period. Based on the results of the monitoring program, the Regional District of Nanaimo monitoring requirements may be extended or altered by the Director.

An annual report, which includes a summary and interpretation of the discharge and receiving environment monitoring results for the previous year, shall be submitted to the Regional Manager, Environmental Protection within 60 days of the end of the calendar year. The summary and interpretation of the receiving environment monitoring results obtained as required in Section 3.2 shall be prepared by an independent qualified professional. The annual report shall provide an assessment of the impact of this discharge on the receiving environment and recommend changes (if any) to the monitoring program.

R.Alexander
for Director, *Environmental Management Act*

Date Issued: AUG 12 2004
Date Amended:
(most recent)

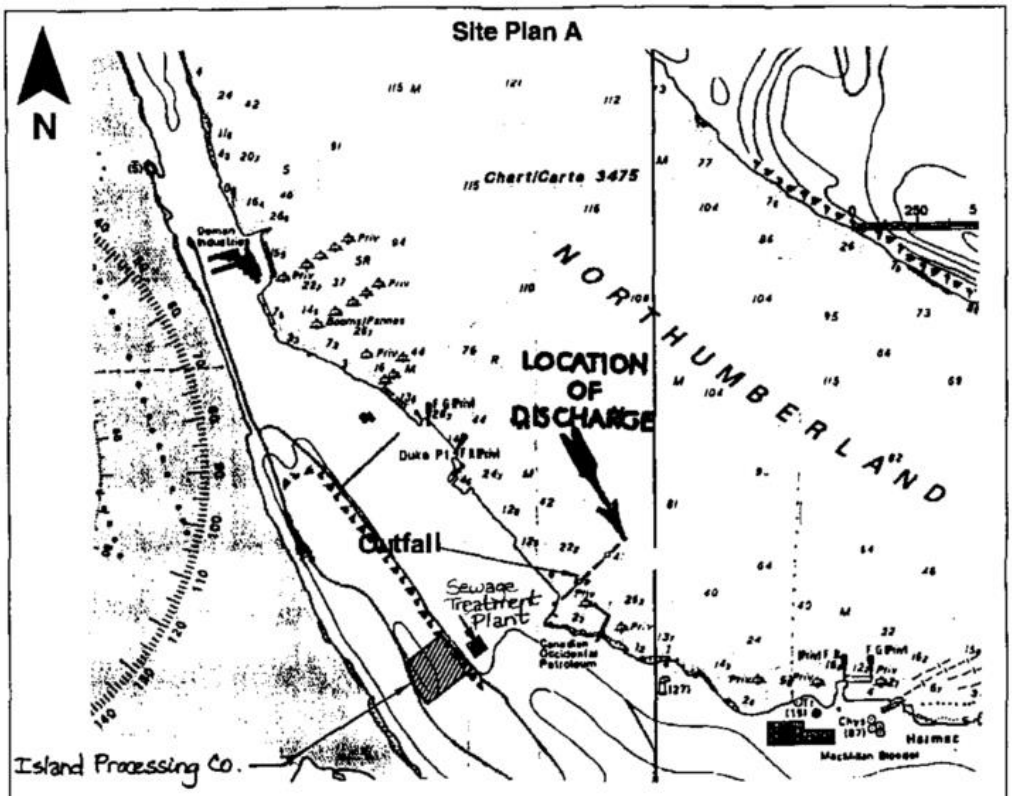
OPERATIONAL CERTIFICATE: **ME-05989**

ACL 2004/08/05

PROVINCE OF
BRITISH COLUMBIA

Environmental Protection

Site Plan A



Location Map

Scale: 1:20,000

OPERATIONAL CERTIFICATE:
ME-05989

Date: AUG 12 2004

R. Alexander
for Director, *Environmental Management Act*
Region: Vancouver Island

ACL 2004/08/05

BRITISH COLUMBIA

VANCOUVER 2010

August 31, 2005

File: ME-05989
PE-16725

Regional District of Nanaimo
6300 Hammond Bay Rd
Nanaimo BC V9T 6N2

West Coast Reduction Ltd.
c/o 1900-1040 W Georgia St
Vancouver BC V6E 4H3

Sean DePol

ATTENTION: ~~Dennis Trudeau, Manager, Liquid Waste~~
Regional District of Nanaimo

Ken Ingram, Environmental Coordinator
West Coast Reduction

Dear Messrs Trudeau and Ingram:

Re: Receiving Environment Monitoring for the Shared Outfall at Duke Point

In accordance with Section 3.2 of Operational Certificate ME-05989 and Section 3.2 of Waste Management Permit PE-16725, the following receiving environment monitoring program shall be conducted.

Water column profiles shall be taken quarterly at four monitoring stations, established for the baseline receiving environment monitoring study (see "Duke Point Marine Outfall Water Column Characterisation (Pre-Discharge Assessment)", September 2002, by Komex International Ltd.), shown as #1, #2, #3 and #4 on the attached Site Plan.

. . . /2

Ministry of Environment
Vancouver Island Region
Environmental Protection Division
Mailing Address:
2080A Labieux Rd
Nanaimo BC V9T 6J9
Telephone: 250 751-3100
Facsimile: 250 751-3103
Website: http://wlapwww.gov.bc.ca

Measurements of the following parameters shall be obtained in the water column at each monitoring station at the halocline and at depths of 0, 2, 4, 6, 8, 10, 15, 20, 25, 30, 35 and 40 metres (or to bottom, by 5 metre increments):

Dissolved Oxygen, mg/L;
Salinity, g/kg or $^{o}/_{oo}$;
Temperature, ^{o}C;
pH.

Measurements of fecal coliforms and NH_3-N shall be obtained in the water column at each monitoring station at depths of 0 m and at the halocline. An additional measurement of NH_3-N shall be obtained in the water column at each monitoring station at a depth of 40 metres.

Sampling shall be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2003 Edition (Permittee)," or most recent edition, or by suitable alternative procedures as authorised by the Regional Waste Manager. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorised by the Regional Waste Manager. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

These monitoring requirements may be reconsidered by the Director after the second annual reports required under Section 3.4 of the Operational Certificate ME-05989 and Section 3.4 of the Waste Management Permit PE-16725 have been submitted and reviewed.

. . . /3

Please attach this letter to the Operational Certificate ME-05989 and Waste Management Permit PE-16725.

Yours truly,

R. Alexander
for Director, *Environmental Management Act*

cc: West Coast Reduction

Appendix B – Internal Flow Monitoring & Laboratory Raw Data (Operational Certificate Data)

2025 DPPCC Influent Flow (m^3/day)												
Day	January	February	March	April	May	June	July	August	September	October	November	December
1	139.2	87.2	140.1	160.0	114.1	115.6	101.9	137.0	115.0	141.0	163.0	135.0
2	152.4	117.6	117.0	160.7	157.0	124.4	160.7	116.0	125.0	145.0	91.1	147.0
3	152.0	122.6	129.0	144.0	125.0	112.7	118.8	130.0	103.8	77.0	90.0	170.5
4	192.0	121.2	120.0	106.8	112.7	123.0	157.0	112.7	131.0	144.0	98.0	159.7
5	198.9	128.0	139.0	101.9	99.2	127.4	109.8	138.2	119.0	131.0	131.3	174.0
6	179.2	128.4	117.0	111.0	110.5	114.6	142.0	173.5	148.9	137.0	101.0	132.0
7	168.5	127.0	114.7	116.0	109.8	121.5	125.7	132.4	126.4	113.0	136.2	180.0
8	147.9	110.7	148.9	143.0	116.6	102.9	121.5	121.5	128.4	120.5	115.6	174.7
9	162.7	101.2	191.0	124.5	102.0	115.9	151.9	117.5	129.4	121.5	116.0	188.5
10	124.5	113.1	191.0	149.0	99.9	141.9	207.7	108.6	118.0	66.7	135.0	214.6
11	136.2	145.0	196.0	108.5	109.8	123.5	129.4	147.0	127.0	92.1	99.0	145.0
12	130.0	74.5	188.2	118.6	96.0	114.7	118.6	149.8	136.0	84.3	125.0	150.9
13	130.0	123.9	150.0	123.0	140.1	136.0	140.1	151.2	149.0	74.5	164.0	119.5
14	132.3	123.0	163.6	128.0	120.0	103.0	170.2	151.2	122.0	85.3	147.9	147.0
15	119.6	136.2	112.7	147.0	119.6	102.9	122.7	158.7	118.0	72.5	137.2	178.3
16	120.5	164.0	111.0	134.0	138.0	160.7	143.0	129.4	131.0	55.9	134.8	249.9
17	120.5	190.1	121.5	129.0	112.7	143.0	143.0	145.0	161.0	118.0	159.6	204.0
18	109.8	197.9	142.0	103.1	110.0	110.7	135.2	122.0	144.1	118.0	111.0	267.0
19	136.2	222.0	131.0	140.1	108.0	120.7	112.7	120.5	128.4	91.1	196.0	218.6
20	118.5	191.1	153.0	116.0	115.6	160.0	126.4	114.6	144.1	94.2	141.1	134.3
21	126.9	201.8	187.0	118.0	109.5	150.0	147.0	146.0	132.0	115.0	122.5	160.0
22	113.7	247.0	359.0	120.5	119.8	125.4	147.0	160.7	139.0	110.7	141.1	120.0
23	129.6	237.0	173.0	132.0	167.6	116.6	117.5	119.6	120.0	120.0	111.0	120.0
24	114.7	227.0	185.0	122.0	132.0	129.4	132.3	147.5	130.0	104.0	115.0	184.0
25	111.0	245.6	203.0	109.0	112.7	111.0	119.0	146.4	120.0	127.0	148.0	147.0
26	110.0	216.0	170.0	106.8	107.3	127.4	137.0	118.2	155.0	143.0	177.0	139.2
27	110.7	158.7	184.0	105.0	121.6	131.3	141.0	152.8	101.5	134.0	140.0	160.7
28	131.0	143.1	179.0	112.0	119.5	93.1	132.3	96.0	113.0	147.0	158.0	145.0
29	134.3		179.0	133.0	129.4	106.0	144.0	128.0	110.6	137.2	175.0	145.0
30	125.1		163.0	122.0	152.8	133.2	155.0	115.6	137.0	140.0	111.0	160.0
31	138.2		144.0		113.6		132.5	111.0		199.0		129.0
Total:	**4,216**	**4,401**	**5,003**	**3,745**	**3,702**	**3,698**	**4,243**	**4,119**	**3,864**	**3,560**	**3,992**	**5,100**
Days of Data	31	28	31	30	31	30	31	31	30	31	30	31
Number of Days in Month	31	29	31	30	31	30	31	31	30	31	30	31
Estimated Flow per Month	**4,216**	**4,558**	**5,003**	**3,745**	**3,702**	**3,698**	**4,243**	**4,119**	**3,864**	**3,560**	**3,992**	**5,100**
Non compliance (max flow)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Maximum Daily Flow: 1,800 m^3/day

2025 Influent 5-Day Biochemical Oxygen Demand (BOD_5) (mg/L)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1					> 352							
2	128									164		
3				366			149					
4									208			< 31.2
5						290						
6		62.2	148								102	
7								270				
8					190							
9	83.5									187		
10				136			180					
11												146
12						< 23.8						
13		108	214									
14								117				
15					203			< 8.30				
16	292									158		
17				112			119					
18									116			161
19						110						
20		70.0	210									
21								328				
22					29.5							
23	NR									< 53.0		
24				114			41.8					
25				172					93.0			
26												
27		85.5	228								98.0	
28								233				
29												
30	274									94.5		
31							128					
Average:	**194**	**81.4**	**174**	**180**	**141**	**<141**	**124**	**<191**	**139**	**<131**	**100**	**<113**

> Results excluded from average

$cBOD_5$ non-compliances are highlighted in yellow

2025 Effluent 5-Day Biochemical Oxygen Demand (BOD_5) (mg/L)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1					10.20					2.12		
2	4.07											
3				3.36			3.16		3.96			2.20
4												
5						21.70						
6		4.14	2.86								3.10	
7								5.46				
8					7.60					3.80		
9	2.48											
10				3.68			3.22					2.06
11												
12						5.89						
13		5.67	3.16									
14								4.66				
15					6.88					4.62		
16	1.96											
17				4.94			3.02		1.33			5.03
18												
19						6.86						
20		3.72	7.05					2.74				
21												
22					4.70					2.58		3.92
23	NR											
24				5.15			3.67		3.04			
25												
26						9.31					3.34	
27		2.83	3.84					2.16				
28												
29										9.10		3.92
30	2.56											
31							2.13					
Average:	**2.77**	**4.09**	**4.23**	**4.28**	**7.35**	**10.94**	**3.04**	**3.76**	**2.78**	**4.44**	**3.22**	**3.43**
Non-Compliance:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Quarterly Average (for WSER)	**3.70**			**7.52**			**3.21**			**3.82**		

DCPCC Maximum $cBOD_5$: 30 mg/L
WSER Quarterly Average $cBOD_5$ Limit: 25 mg/L
$cBOD_5$ non-compliances are highlighted in yellow

2025 Influent Total Suspended Solids (TSS) (mg/L)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1					656							
2	130									1,510		
3				225			138					
4									623			12.0
5						292						
6		60.0	210								168	
7								222				
8					80.0							
9	72.0									210		
10				213			472					
11									66.7			113
12						76.7						
13		102	480								423	
14								96.0				
15					153			8.40				
16	426									207		
17				100			116					
18									70.0			157
19						82.0						
20		106	460								220	
21								703				
22					36.7							
23	118									77		
24				397			6.00					
25				560					33.3			
26						86.7						
27		56.7	228								75.0	
28								277				
29					144							
30	256									88		104
31							172					
Average:	**200**	**81.2**	**345**	**299**	**214**	**134**	**181**	**261**	**198**	**418**	**222**	**96.5**

2025 Effluent Total Suspended Solids (TSS) (mg/L)												
Day	January	February	March	April	May	June	July	August	September	October	November	December
1					13.4					4.80		
2	7.00											
3				5.80			10.4		7.80			4.00
4												
5						16.0						
6		7.20	4.40								4.75	
7								11.2				
8					9.60					6.20		
9	2.40											
10				8.20			5.20		< 2.25			2.60
11												
12						13.8					1.40	
13		7.00	4.80									
14								30.4				
15					11.0					7.20		
16	3.00											
17				16.4			6.80		< 2.25			8.00
18												
19						6.00					2.00	
20		2.60	12.2					6.00				
21												
22					4.60					3.40		4.40
23	3.00											
24				10.2			5.00		6.40			
25												
26						9.20					4.40	
27		3.60	6.60					5.80				
28												
29					4.2					9.40		6.60
30	4.60											
31							2.80					
Average:	**4.00**	**5.10**	**7.00**	**10.15**	**8.56**	**11.25**	**6.04**	**13.35**	**<7.10**	**6.20**	**3.14**	**5.12**
Non-Compliance:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
Quarterly Average (for WSER)	**5.26**			**9.88**			**8.89**			**4.94**		

DPPCC Maximum TSS: 30 mg/L
WSER Quarterly Average $cBOD_5$ Limit: 25 mg/L
The < signs were removed to average results
TSS non-compliances are highlighted in yellow

2025 Influent pH

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	7.23									8.55		
2				7.13			7.44					
3									7.14			7.74
4						7.52						
5		7.24	7.16					7.34			7.63	
6								7.13				
7					7.51							
8	7.50									8.72		
9				7.69			7.76					
10												7.19
11						7.48						
12			7.84									
13								7.57				
14		5.14			7.19							
15	7.09									7.86		
16				7.40			7.59					
17									7.56			7.03
18						7.52						
19			7.10								8.14	
20								7.67				
21												
22	7.24									7.38		
23				7.28								
24									7.59			
25						7.88						
26		6.81	6.72					7.04				
27								7.52				
28												
29	7.56									7.54		
30				7.16			7.33					
31												
Average:	**7.32**	**6.40**	**7.21**	**7.33**	**7.35**	**7.60**	**7.53**	**7.38**	**7.43**	**8.01**	**7.89**	**7.32**

2025 Effluent pH												
Day	January	February	March	April	May	June	July	August	September	October	November	December
1					7.55					7.11		
2	7.09											
3				6.98			7.32		6.97			
4												
5						7.24						
6			6.87								7.03	
7								7.26				
8					7.91							
9	7.10											
10				7.09					7.00			
11												
12						7.20						
13			6.89									
14								7.23				
15					7.17					7.14		
16	7.25											
17				6.88	6.94		7.01		7.27			6.92
18												
19						7.14						
20			7.21					7.25				
21												
22										7.02		7.04
23	7.35											
24				6.92					7.25			
25												
26						7.29						
27		7.02	6.67									
28												
29										7.03		
30	7.09											
31							6.99					
Average:	**7.18**	**7.02**	**6.91**	**6.97**	**7.39**	**7.22**	**7.11**	**7.25**	**7.12**	**7.08**	**7.03**	**6.98**
Non-Compliance:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

DPPCC pH concentration permitted range: 6 to 9

2025 Effluent Fecal Coliform Concentration (CFU/100mL)												
Day	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6			< 10									
7												
8												
9	232											
10												
11												
12												
13												
14												
15												
16												
17							16,608		318			
18												
19											< 10	
20												
21												
22					< 10							
23												
24							20					
25												
26												
27												
28												
29												
30												
31												
Mean	**232**		**10**		**10**		**8314**		**318**		**10**	
Geometric Mean	**232**		**10**		**10**		**576**		**318**		**10**	
Non-Compliance	**0**		**0**		**0**		**1**		**0**		**0**	

DPPCC Fecal Coliform Concentration Permit Limit: 1,000 Colonies/100mL

The < signs were removed to determine the geometric mean of the results.

2025 Effluent Ammonia (mg/L as N)												
Day	January	February	March	April	May	June	July	August	September	October	November	December
1					< 0.141					0.162		
2	0.282											
3				0.278			0.607		1.060			0.415
4												
5						0.474						
6		0.321	4.15								0.544	
7								0.165				
8					0.308					0.232		
9	0.212											
10				0.304			2.22		0.212			0.690
11												
12						0.171					0.225	
13		0.317	9.01									
14								< 0.141				
15					0.352					0.359		
16	0.167											
17				5.87			0.210		0.226			0.304
18												
19						0.539					0.180	
20		1.550	12.80					0.190				
21												
22					0.752					0.244		1.08
23	0.216											
24				1.61			1.16		0.386			
25												
26						0.226					0.177	
27		0.800	4.51					0.164				
28												
29					0.261					0.620		0.881
30	0.616											
31							0.497					
Average:	**0.299**	**0.747**	**7.62**	**2.016**	**0.418**	**0.353**	**0.939**	**<0.165**	**0.471**	**0.323**	**0.282**	**0.674**

2025 Effluent Un-ionized Ammonia (mg/L as N)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1					0.00000					0.00040		
2	0.000818											
3				0.00164			0.00255		0.00170			0.00120
4												
5						0.00275						
6		0.00151	0.0133								0.00201	
7								0.00104				
8					0.00330					0.00125		
9	0.000572											
10				0.00164			0.00511		0.00047			0.00200
11												
12						0.00091					0.000428	
13		0.00086	0.0234									
14								0.00000				
15					0.00120					0.00097		
16	0.000785											
17				0.0235			0.00105		0.00097			0.00079
18												
19						0.00270					0.000450	
20		0.00155	0.0435					0.00110				
21												
22					0.00233					0.00056		0.00346
23	0.000864											
24				0.00402			0.00371		0.00130			
25												
26						0.00140					0.000336	
27		0.00168	0.0167					0.00038				
28												
29					0.000757					0.00120		0.00599
30	0.00166											
31							0.00199					
Average:	**0.000940**	**0.00140**	**0.0242**	**0.00770**	**0.00152**	**0.00194**	**0.00288**	**0.000629**	**0.00111**	**0.000876**	**0.000806**	**0.00269**

Appendix C – External Laboratory Test Results

Sample ID: DPPCC EFFLUENT		
Parameter	**Units**	**June 26, 2025**
pH		7.3
Survival Rate (Rainbow Trout)	%	>100

Appendix D – Operational Certificate Non-Conformance Reports

Operational Certificate Non-Compliances

Date of Non-compliance	Describe the Issue	Result	Immediate Actions Taken	Describe the Suspected Cause	Suggested Corrective Actions
DPPCC TSS (x1)					
July 17, 2025	A high TSS was recorded at DBPCC.	30.4 mg/l	Operations investigated possible causes, found and error with the sample procedure.		
DPPCC FECAL COLIFORMS (x1)					
August 14, 2025	The fecal coliform levels in the effluent sample for DPPCC came back over the permit limit.	16,668 cfu/100 mL	Operators were sent to DPPCC to investigate the UV system. UV system was found to be under dosing. Cleaning and possible replacement have been planned for the following week along with a retest.	UV lamp intensity was running in "auto" and would not increase intensity or add additional UV banks when needed.	EI inspected UV lamp system with OPs and determined that the UV intensity needed to be on "manual" so additional lamps would come on the maintain the needed UV intensity; The DPPCC UV procedure was also updated to reflect this and OPs was updated.

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