

Seaview Wastewater Treatment Plant and HCC/UHCC Trunk Main

Annual Resource Consents Report 2021/2022



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Control Sheet

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Prepared by: Benjamin Melese

Reviewed by: Joemar Cacnio

Approved by: Chris Laidlow

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0	Draft	13/07/2022	Initial draft for review
1	Final	29/07/2022	Approved, Manager Wastewater Contracts

Executive Summary

This report has been prepared on behalf of the Hutt City Council (HCC) for compliance with several resource consents. The resource consents have been divided into the following categories:

- Plant Discharge
 - o WGN050359 [24539]
- Wet Weather Discharge
 - o WGN 120142 [33406]
- Maintenance Discharge
 - o WGN 120142 [33407]
 - o WGN 120142 [33408]
 - o WGN 120142 [31740]
- Discharge to Air
 - o WGN 950162 (01)
 - o WGN 930193 (01)
 - o WGN 930193 (02)
- Others
 - o WGN 930194

This annual report will cover the period from 1 July 2021 to 30 June 2022.

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Resource Consents

This report has been prepared on behalf of the Hutt City Council (HCC) for compliance with the following resource consents:

WGN050359 [24539]

Effluent discharge from the Seaview WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN050359 [24539]. In general, this coastal permit allows the discharge of treated and disinfected wastewater to the coastal marine area through an existing outfall at Bluff Point. The outfall is located at map location NZMS 260: R27; 649.808.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN120142 [33406]

In addition to the above resource consent, the discharge from the Seaview WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN120142 [33406]. This discharge permit allows the temporary discharge of treated wastewater to the Waiwhetu Stream during and/or immediately after heavy rain events when flows exceed the capacity of the main outfall pipeline and the storm tank system is fully utilized. The location of the discharge is at map reference NZTM 1759407.5433210.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN120142 [33407]

Another resource consent that governs the discharge from the Seaview WWTP is under the Greater Wellington Regional Council consent file number WGN120142 [33407]. This discharge permit allows the temporary discharge of treated wastewater from Seaview Wastewater Treatment Plant to the coastal marine area, and onto the land where it may enter streams or coastal marine area from:

- Planned repairs
- Unplanned repairs
- Leaks associated with temporary repairs, and
- Minor leaks

in relation to the main outfall pipeline from Seaview Wastewater Treatment Plant to Pencarrow Head.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN120142 [33408]

Another resource consent that governs the discharge from the Seaview WWTP is under the Greater Wellington Regional Council consent file number WGN120142 [33408]. This discharge permit allows the temporary discharge of treated wastewater from Seaview Wastewater Treatment Plant to the Waiwhetu Stream when the main outfall pipeline is being repaired. The location of the discharge is at map reference NZTM 1759407.5433210.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN120142 [31740]

The coastal permit under the Greater Wellington Regional Council consent file number WGN120142 [31740] allows the construction of a temporary channel on the foreshore to direct treated wastewater discharged from the scour valves on the main outfall pipeline into the sea to allow pipeline repair to be undertaken. The locations for these discharges are between map locations NZTM 1759804.5433065 and NZTM 1754999.5420657.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN950162 (01)

The discharge to air resource consent permits the Seaview WWTP to discharge contaminants to the air from operation. The plant can discharge up to 7m³/s of combustion products and up to 53m³/s of air from the facility.

The following report will outline the conditions in this resource consent that are required for that annual report.

WGN930193 (1)

The coastal permit allows the Seaview WWTP to continuously discharge contaminants to the air from the outfall venting structures and vents. The discharge location is at map reference NZMS 260 R27:650.808.

This resource consent does not contain any conditions that require annual reporting.

WGN930193 (2)

The coastal permit allows the Seaview WWTP to continuously discharge contaminants to the air from the sewage outfall structure and the sewage effluent. The discharge location is at map reference NZMS 260 R27:650.808.

This resource consent does not contain any conditions that require annual reporting.

WGN930194

The coastal permit allows the HCC to occupy the foreshore and seabed of the coastal marine area for the purposes of continued use of the existing sewage pipeline and outfall structure. The location is at map reference NZMS 260 R27:650.808.

This resource consent does not contain any conditions that require annual reporting.

WGN050359 [24539]

Condition (2)

The rate of discharge shall not exceed:

3,100L/s or 268,000 m³/day (peak wet weather flow)

Below is a summary of the effluent flow for FY2021/2022. The flows are well below the consent limit of 268,000 cubic meters/day.

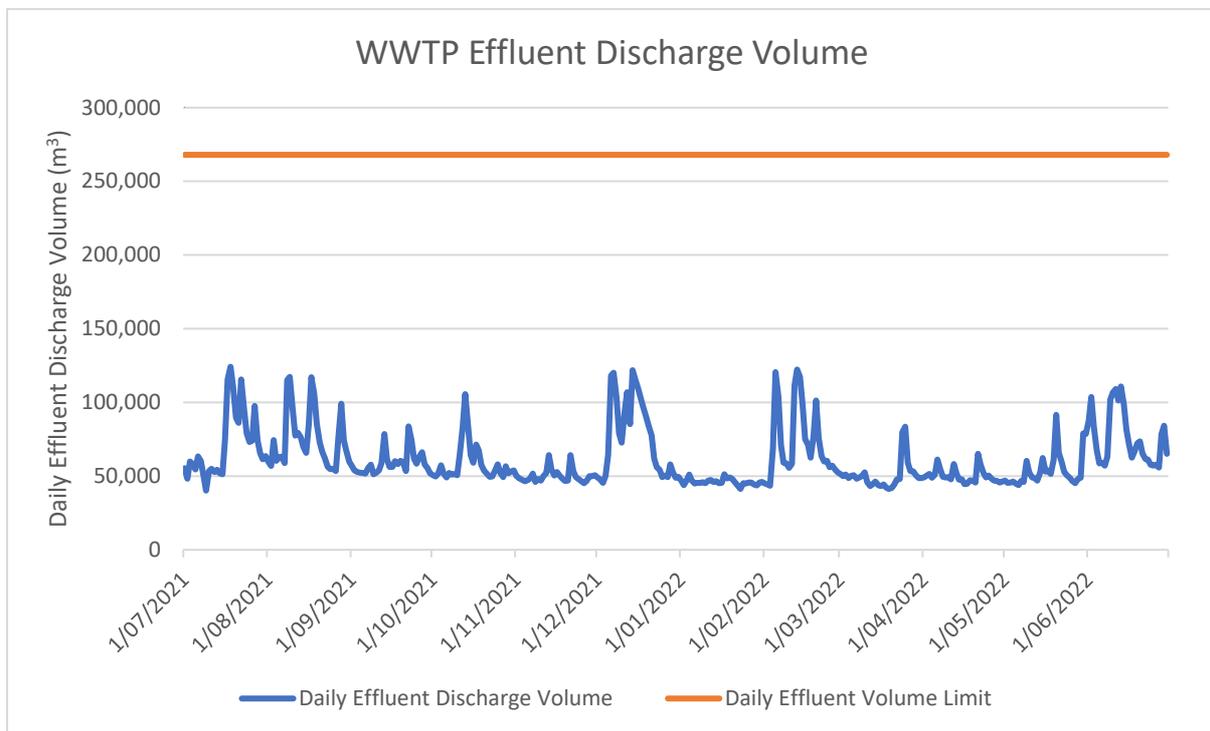


Figure 1: WWTP Effluent Flow Summary

Condition (9)

The following effluent standards shall apply at all times:

Carbonaceous Biochemical Oxygen Demand (cBOD₅)

Compliance is based on daily 24 hour flow proportioned composite sampling, with a running geometric mean and eighty-percentile calculated each day using 90 consecutive daily test results.

The geometric mean of 90 consecutive daily cBOD₅ values shall not exceed 50g/m³ and more than 20% of 90 consecutive daily values shall exceed 85g/m³.

Suspended solids

Compliance is based on daily 24 hour flow proportioned composite sampling, with a running geometric mean and eighty-percentile calculated each day using 90 consecutive daily test results.

The geometric mean of 90 consecutive daily suspended solids values shall not exceed 50g/m³ and more than 20% of 90 consecutive daily values shall exceed 85g/m³.

Faecal Coliforms

Compliance is based on daily grab samples to be taken between the hours of 10am and 4pm with a running geometric mean and eighty percentile calculated each day using 90 consecutive daily test results.

The geometric mean of 90 consecutive daily faecal coliform values shall not exceed 1000 per 100mL and no more than 20% of 90 consecutive daily values shall exceed 5000 per 100mL.

Below is a summary of the 90-day geometric mean and 90-day 80th percentile for the effluent Carbonaceous Biochemical Oxygen Demand (cBOD₅). The facility has been compliant to cBOD₅ requirements this FY2021/2022. Daily values can be viewed in the quarterly reports.

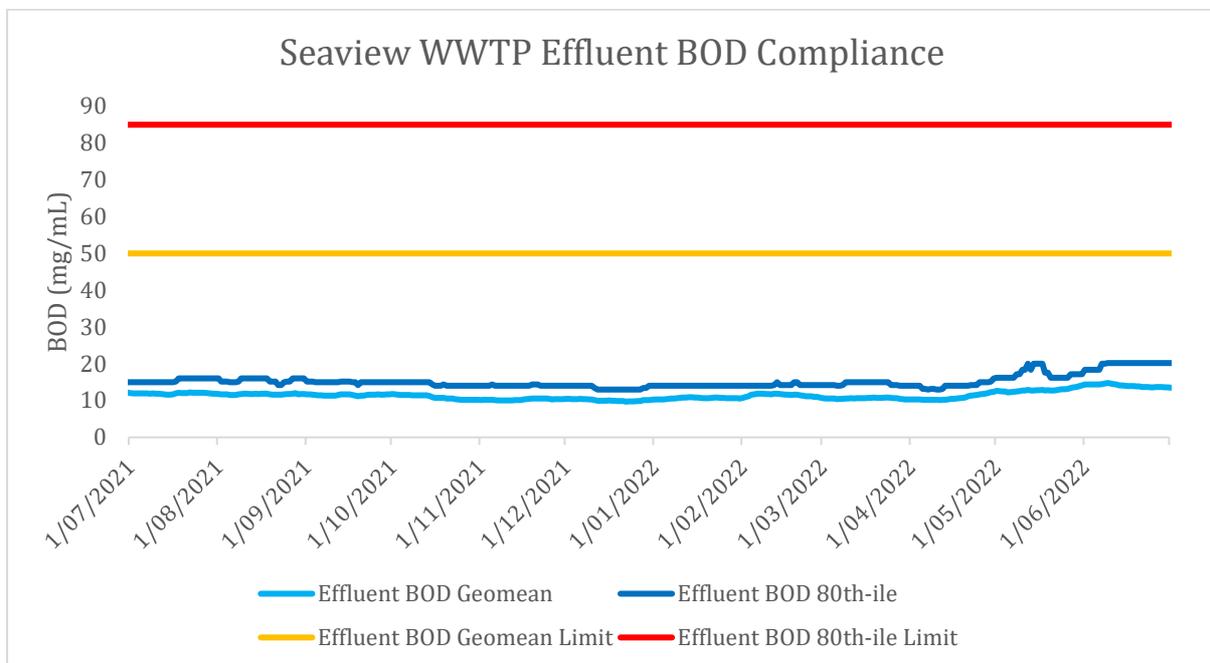


Figure 2: Effluent CBOD₅ Summary

A graphical representation of the daily effluent results can be found in Appendix i: Daily Effluent Results. The daily values can be found in quarterly reports and certificates of laboratory analysis can be provided upon request.

Below is a summary of the 90-day geometric mean and 90-day 80th percentile for the effluent total suspended solids. The facility has been compliant to the effluent suspended solids requirements this FY2021/2022. Daily values can be viewed in the quarterly reports.

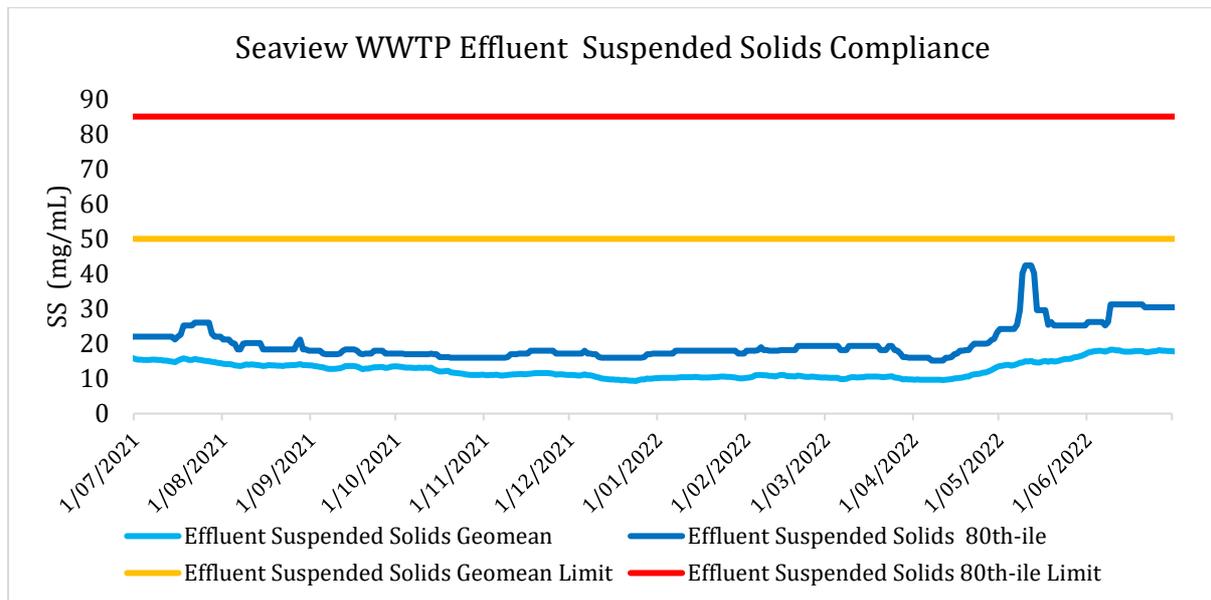


Figure 3: Effluent TSS Summary

Below is a summary of the 90-day geometric mean and 90-day 80th percentile for the effluent faecal coliform. The facility has been non-compliant to the effluent faecal coliform requirements since 28th December 2021. Daily values can be viewed in the quarterly reports.

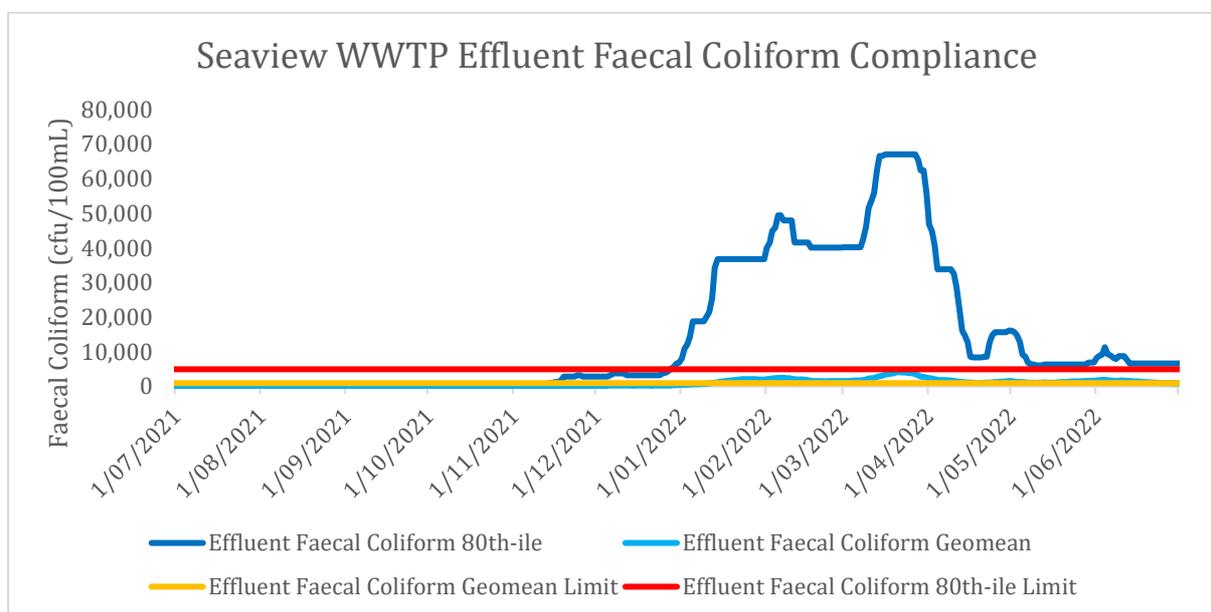


Figure 4: Effluent Faecal Coliform Summary

Condition (10)

The permit holder shall notify the Manager, Environmental Regulation, Wellington Regional Council immediately in the event that a running geometric mean and/or 80 percentile calculated daily from the monitoring programme exceeds the values stipulated in condition 9 for more than three consecutive days. Such a report shall include the likely reason for exceedance, and measures to be undertaken by the permit holder to remedy the situation. The permit holder shall also immediately notify the Medical Officer of Health of any such event.

The plant was non-compliant for the faecal coliform requirements for this consent period. Regional council requested an explanation on the non-compliant effluent quality on 3rd March 2022. Wellington Water provided a response on 8th April 2022.

In summary the non-compliance was caused by reduction of UV disinfection effectiveness as a result of algae coating the UV lamps, and due to wet weather events in the later part of the financial year.

Condition (11)

Based on 24 hour flow-proportioned composite samples collected and analysed once each month in accordance with conditions 6, 7 and 8 and Schedule 1 of this permit, all wastewater discharged through the outfall shall meet the following standards:

Analyte	Units	Standard:
		Over each 12-month period, from 1 July to 30 June, no more than 2 sample results shall exceed:

Dissolved Arsenic	mg/L	0.115
Dissolved	mg/L	0.035
Cadmium	mg/L	0.220
Dissolved	mg/L	0.065
Chromium	mg/L	0.350
Dissolved Copper	mg/L	0.220
Dissolved Nickel	mg/L	0.750
Dissolved Lead	mg/L	0.005
Dissolved Zinc	mg/L	0.200
Dissolved Mercury	mg/L	0.500

Cyanide

Phenol

Note:

1. Two exceedances out of 12 samples is permitted to meet a 95-percentile discharge compliance standard, based on a discharger's risk of no more than 10% (from 'New Zealand Municipal Wastewater Monitoring Guidelines' NZWERF/MfE 2002)
2. The treated wastewater standards above are based on the ANZECC (2000) marine water trigger levels for 'slightly to moderately disturbed ecosystems' multiplied by a factor of 50 to allow for reasonable mixing (the 50:1 dilution contour extends approximately 400 meters from the outfall).

Below is a summary of the monthly heavy metal analysis for the effluent. While there were some slight fluctuations, all parameters were below their consent limits.

Analyte	Limit	Unit	Jul-25	Aug-07	Sep-21	Oct-02	Nov-16	Dec-13	Jan-13	Feb-24	Mar-28	Apr	May	Jun
Oil and Grease	n/a	n/a	6	8.8	5	10	6	7	6	6.8	5	7	5	<5
Cyanide	0.2	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.0049	0.005	0.005	0.005	<0.005
Dissolved Arsenic	0.115	mg/L	0.001	0.0008	0.001	0.001	0.001	0.001	0.001	0.0013	0.0012	0.011	0.0011	0.0014
Dissolved Cadmium	0.035	mg/L	0.00005	0.00005	0.00005	0.0005	0	0.0001	0.0001	<0.0001	<0.00010	0.0001	0.0005	<0.00005
Dissolved Chromium	0.22	mg/L	0.001	0.0009	0.001	0.005	0.001	0.001	0.005	0.0006	0.00079	0.0011	0.00087	0.00098
Dissolved Copper	0.065	mg/L	0.0035	0.003	0.0032	0.003	0.0036	0.0026	0.0015	0.0015	0.0028	0.0015	0.0017	0.0023
Dissolved Lead	0.22	mg/L	0.0001	0.0002	0.0001	0.001	0.0001	0.0002	0.0002	0.00013	0.00016	0.0013	0.00015	0.00014
Dissolved Mercury	0.005	mg/L	0.00005	0.00005	0.00005	0.0005	0.00005	0.0001	0.0001	<0.0002	<0.00020	0.0002	0.00005	0.00075
Dissolved Nickel	0.35	mg/L	0.0017	0.0027	0.0013	0.0017	0.0013	0.0035	0.0027	0.013	0.004	0.014	0.001	0.0014
Dissolved Zinc	0.75	mg/L	0.017	0.015	0.019	0.025	0.023	0.015	0.0067	0.01	0.02	0.0001	0.01	0.017
Phenol	0.5	mg/L	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.08	0.002	0.002	0.02	<0.01
pH	n/a		7.6	7.6	7.8	7.6	7.5	7.6	7.6	7.8	7.6	8	7.4	7.5
Conductivity	n/a	mS/m	105	117	85	228	144	110	235	105	159	293	201	113
Nitrate-Nitrogen	n/a	mg/L	2.05	4.07	2.88	4.59	7.33	2.3	3.11	1.19	2.5	1	4.46	3.54
Dissolved Reactive Phospho	n/a	mg/L	2.5	1.1	2.88	1.6	1.81	1.59	2.13	1.19	2.52	1.3	1.82	1.25
Ammonia Nitrogen	n/a	mg/L	16.04	26	14.6	19	16	19.1	24.1	26	21	25	18.9	14.8
Total Phosphorus	n/a	mg/L	1.88	1.6	1.67	2.2	2.46	1.84	2.78	2.27	2.22	3.03	1.83	1.68
Formaldehyde	n/a	mg/L	see quarterly reports											

Table 1: Effluent Heavy Metal and other compounds analysis

Condition (13)

The permit holder shall collect representative coastal water samples from knee deep water at the following locations, once each month for six months through November to April inclusive each year, for the duration of this permit:

Fitzroy Bay 400 m SE of outfall (R27:651.807)
 Fitzroy Bay 100 m SE of outfall (R27:650.808)
 Fitzroy Bay 100 m NW of outfall (R27:648.808)
 Fitzroy Bay 400 m NW of outfall (R27:647.810)
 Pencarrow Head at Lighthouse (R27:647.816)
 Inconstant Point (R27:650.825)
 Hinds Point (R27:655.839)

The water samples shall be analysed for faecal coliform and enterococci bacteria.

Below is a summary of the coastal water sampling from November 2021 to April 2022 as required by the resource consent.

Date	Fitzroy Bay 400m SE of Outfall		Fitzroy Bay 100m SE of outfall		Fitzroy Bay 100m NW of outfall		Fitzroy Bay 400m NW of outfall		Pencarrow Head at Lighthouse		Inconstant Point		Hinds Point	
	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms						
	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL
30/11/2021	1.8	1.8	1.8	5.5	1.8	1.8	25	5.5	2.8	1.8	3.6	7.3	1.8	1.8
29/12/2021	1.8	1.8	1.8	1.8	1400	3900	29	150	7.3	11	25	86	1.8	1.8
31/01/2022	1.8	46	1.8	1.8	1.8	15	1.8	1.8	7.3	9.1	1.8	70	1.8	1.8
25/02/2022	1.8	3.6	1.8	5.5	1.8	1.8	1.8	5.5	1.8	5.5	1.8	1.8	1.8	5.5
7/03/2022	<1.8	1.8	2	1.8	<1.8	<1.8	<1.8	<1.8	<1.8	3.6	<1.8	<1.8	1.8	<1.8
26/04/2022	15	18	46	100	88	170	18	11	40	44	100	62	120	130

Table 2: Coastal Water Sampling

Condition (14)

The permit holder shall collect three replicate composite samples of the green-lipped mussel (*Perna canaliculus*) from the near shore waters at each of the following location during February or March of every second year, for the duration of this permit:

Fitzroy Bay 100 m NW of outfall (R27:648.808)

Fitzroy Bay 400 m NW of outfall (R27:647.810)

Pencarrow Head at Lighthouse (R27:647.816)

The flesh of the mussel samples shall be analysed for arsenic and trace metal (cadmium, chromium, copper, mercury, lead, nickel and zinc) concentrations.

No green-lipped mussels were collected in this reporting period and no mussel species have been found in the locations stated by the consent. GWRC has been informed on 8th of April 2021 and replied on 13th of April 2021 that it was reasonable that this was not undertaken due to the circumstances involved. Moving forward, GWRC had advised that a change in conditions may be required if sampling cannot be undertaken. The next green-lipped mussel sampling is scheduled for 2023.

Condition (18)

The permit holder shall provide to the Wellington Regional Council an annual monitoring report by 31 July each year summarising compliance with the conditions of this permit. This report shall include as a minimum:

- a) A summary of all monitoring undertaken in accordance with the conditions of this permit and a critical analysis of the information in terms of compliance and adverse environmental effects;
- b) A comparison of data with previously collected data in order to identify any emerging trends;
- c) Any reasons for non-compliance or difficulties in achieving compliance with the conditions of this permit;
- d) Any measures that have been undertaken, to improve the environmental performance of the wastewater treatment and disposal system; and
- e) Any other issues considered to be important;

Section (a)

Table 3 summarises all the treatment plant data monitored from July 2021 to June 2022. The median, minimum and maximum values are tabulated for each parameter.

Parameter	Units	Geomean Limit	Minimum	Median	80 th Percentile
WWTP Effluent Discharge	m ³	268,000	40,813	53,824	73,972
Daily Effluent BOD	g/m ³	50	4	11	15
Daily Effluent Suspended Solids	g/m ³	50	2	11	19
Daily Effluent Faecal Coliform	cfu/100mL	1,000	2	290	6,587

Table 3: Summary of Monitoring Results

Effluent BOD and suspended solids are expected to have less than minor effect in the receiving environment as these parameters were compliant for the whole reporting period.

In 2004, Cawthron Institute conducted an effluent dilution and dispersion study at the WWTP's main outfall at Bluff Point. They have concluded that 50:1 dilution can be achieved in receiving waters. Although the plant was not able to meet the required consent thresholds for faecal coliform in December 2021 to June 2022, the effect to the environment would have been mitigated by the high dilution capability of the receiving waters. Using the 80th percentile value for faecal coliform of 6,587 cfu/100 mL and a background concentration of 1.8 cfu/100 mL, the expected receiving water faecal coliform concentration would be 134 cfu/100 mL for a 50:1 dilution scenario. This is still lower than the beach bathing guideline limits for faecal coliform of 150 cfu/100 mL.

Section (b)

Below is the comparison of the effluent flow rates for the last five financial years.

WWTP Effluent Discharge Volume:

WWTP effluent discharge volume is used to establish a trend. In figure 5, it can be noted that the plant's effluent discharge volume is affected during wet weather.

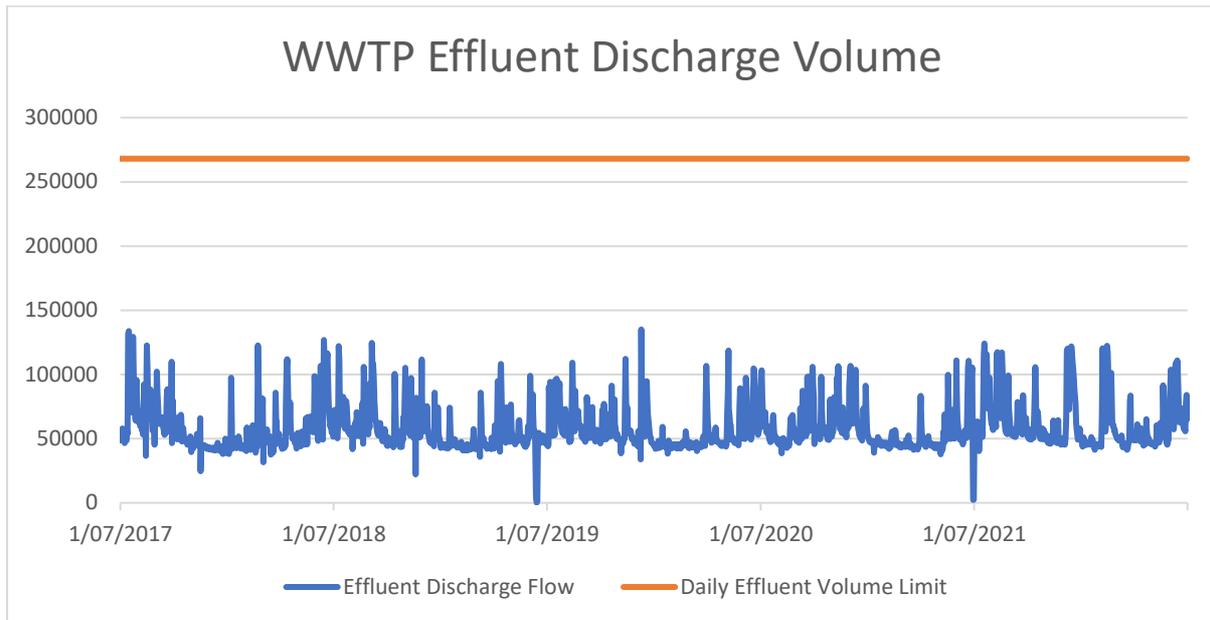


Figure 5: Effluent Discharge Flow

WWTP Effluent BOD₅:

To establish a trend, effluent BOD₅ 90-day rolling geometrical mean and 80th percentile in the last five financial years have been used. The plant is well below the compliance limits.

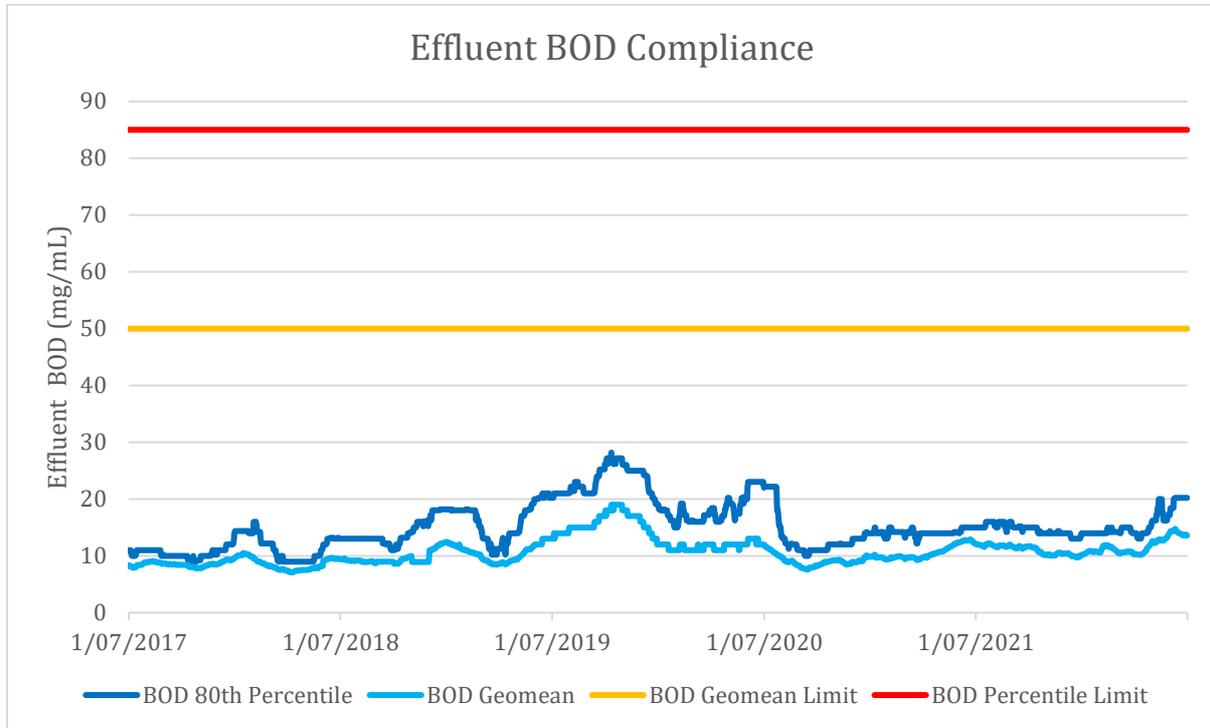


Figure 5: Effluent cBOD₅ Compliance

WWTP Effluent Suspended Solids:

To establish a trend, effluent suspended solids 90-day rolling geometrical mean and 80th percentile in the last five financial years have been used. The plant is well below the compliance limits.

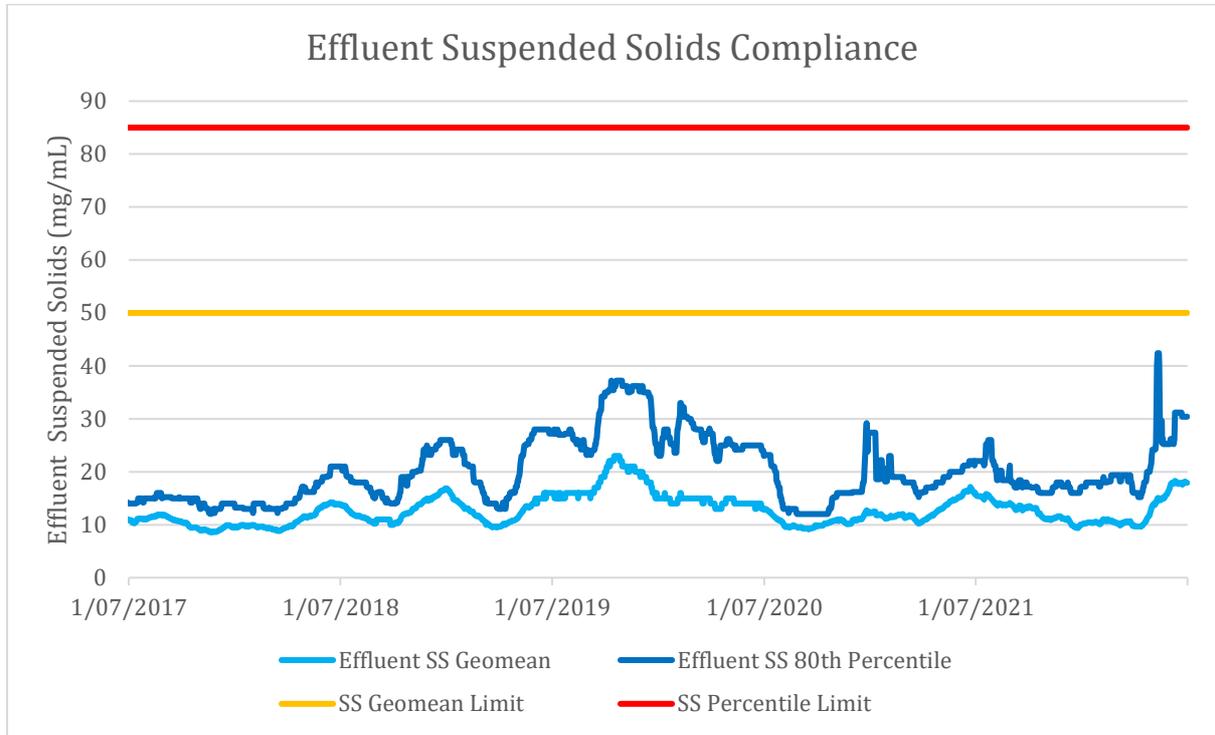


Figure 6: Effluent Suspended Solids Compliance

WWTP Effluent Faecal Coliform:

To establish a trend, effluent faecal coliform 90-day rolling geometrical mean and 80th percentile in the last five financial years have been used. The plant experienced exceedances in the last two summer periods. The exceedances in FY2020/21 were due to inefficiencies in the UV system due to aging UV lamps while the exceedances in FY2021/22 was due to inefficiencies in the UV system due to algae fouling the UV lamps.

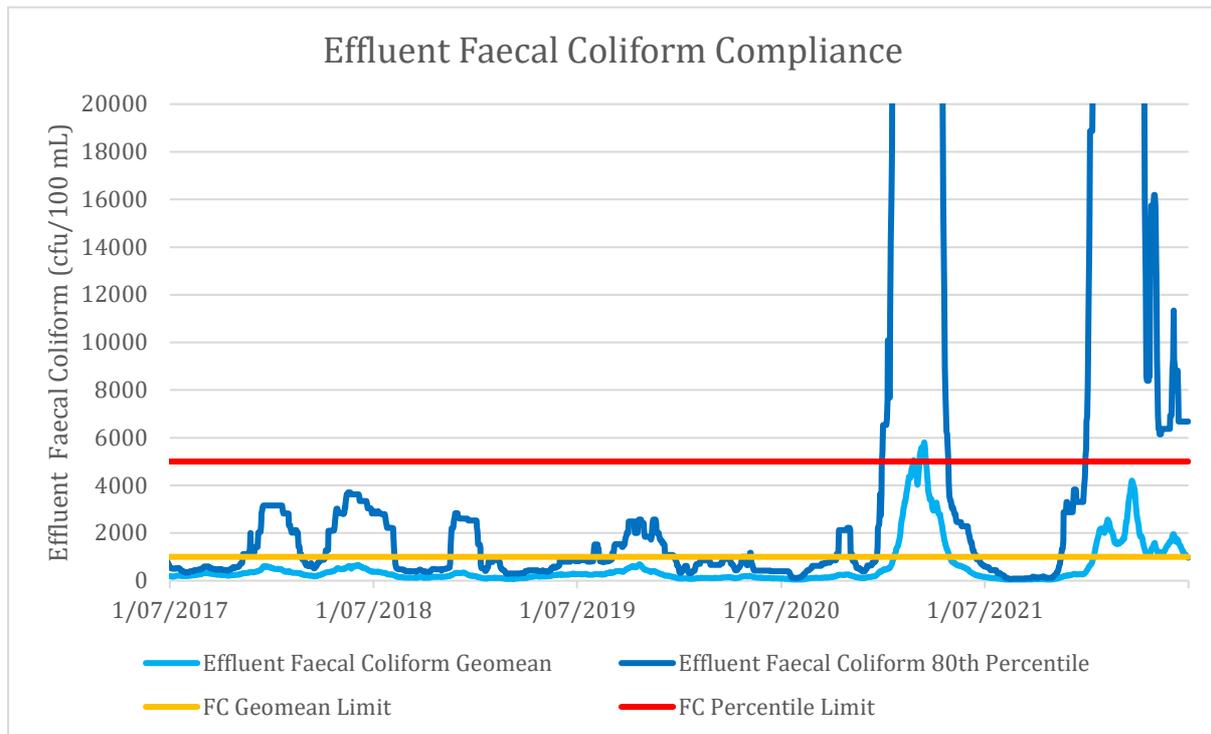


Figure 7: Effluent Faecal Coliform Compliance

Below is the statistical analysis of the analyte monitoring requirements as stated in schedule 11. The values are well below the limits throughout FY2021/2022.

Analyte	Limit	Unit	Min	Average	Max
Oil and Grease	n/a	n/a	5	6.6	10
Cyanide	0.2	mg/L	0.0049	0.0049909	0.005
Dissolved Arsenic	0.115	mg/L	0.0008	0.0019455	0.011
Dissolved Cadmium	0.035	mg/L	0	0.0001611	0.0005
Dissolved Chromium	0.22	mg/L	0.0006	0.00166	0.005
Dissolved Copper	0.065	mg/L	0.0015	0.0025364	0.0036
Dissolved Lead	0.22	mg/L	0.0001	0.0003309	0.0013
Dissolved Mercury	0.005	mg/L	0.00005	0.0001278	0.0005
Dissolved Nickel	0.35	mg/L	0.001	0.0042636	0.014
Dissolved Zinc	0.75	mg/L	0.0001	0.0146182	0.025
Phenol	0.5	mg/L	0.002	0.0109091	0.08
pH	n/a		7.4	7.6454545	8
Conductivity	n/a	mS/m	85	162	293
Nitrate-Nitrogen	n/a	mg/L	1	3.2254545	7.33
Dissolved Reactive Phospho	n/a	mg/L	1.1	1.8581818	2.88
Ammonia Nitrogen	n/a	mg/L	14.6	20.521818	26
Total Phosphorus	n/a	mg/L	1.6	2.1618182	3.03
Formaldehyde	n/a		See quarterly reports		

Table 4: Heavy metals and other monitoring compounds statistical analysis.

Below is the statistical analysis of the analyte monitoring requirements for coastal water sampling. The results are consistent throughout FY2020/2021.

Location	Analyte	Unit	Geomean	Min	Max
Fitzroy Bay 400 m SE of outfall	Faecal Coliform	cfu/100mL	5.089694619	1.8	46
Fitzroy Bay 400 m SE of outfall	Enterococci	cfu/100mL	2.750655844	1.8	15
Fitzroy Bay 100 m SE of outfall	Faecal Coliform	cfu/100mL	5.10219613	1.8	100
Fitzroy Bay 100 m SE of outfall	Enterococci	cfu/100mL	3.143979034	1.8	46
Fitzroy Bay 100 m NW of Outfall	Faecal Coliform	cfu/100mL	31.74168369	1.8	3900
Fitzroy Bay 100 m NW of Outfall	Enterococci	cfu/100mL	14.83493489	1.8	1400
Fitzroy Bay 400 m NW of Outfall	Faecal Coliform	cfu/100mL	9.788054203	1.8	150
Fitzroy Bay 400 m NW of Outfall	Enterococci	cfu/100mL	8.418429987	1.8	29
Pencarrow Head at Lighthouse	Faecal Coliform	cfu/100mL	7.344643856	1.8	44
Pencarrow Head at Lighthouse	Enterococci	cfu/100mL	6.400696717	1.8	40
Inconstant Point	Faecal Coliform	cfu/100mL	21.78295073	1.8	86
Inconstant Point	Enterococci	cfu/100mL	7.815513254	1.8	100
Hinds Point	Faecal Coliform	cfu/100mL	5.296935827	1.8	130
Hinds Point	Enterococci	cfu/100mL	3.624576708	1.8	120

Table 5: Coastal Water Monitoring statistical analysis

Section (c)

The plant was non-compliant for the faecal coliform requirements for this consent period. Regional council requested an explanation on the non-compliant effluent quality on 3rd March 2022. Wellington Water provided a response on 8th April 2022.

In summary the non-compliance was caused by reduction of UV disinfection effectiveness because of algae coating the UV lamps and due to wet weather events on the later part of the financial year.

Section (d)

Veolia expedited the installation of clarifier cleaning systems to control algal growth which eventually foul the UV lamps.

Section (e)

A record of non-compliance notices received for FY2021/22 is recorded below.

Month Issued	Facility	Non-compliance Notice	Description
July 2021	Seaview WWTP	Infringement Notice I814, I816 and Formal Warning	Unauthorized discharge of objectionable and offensive odour beyond the boundary from Seaview WWTP on 16 & 18 March 2021 due to conveyor blockage issue in the dryer operation.
November 2021	Seaview WWTP	Formal Warning	Effluent quality non-compliance to faecal coliform limits between December 2020 and April 2021.
December 2021	Seaview WWTP	Abatement Notice A998	Dry weather discharge of fully treated effluent to the Waiwhetu Stream on 3 December 2020, 19 December 2020, 16 February 2021 and 1 September 2021. The notice requires that the abatement notice be complied with immediately and continue to comply thereafter.

Table 6: List of non-compliance notices

Condition (19)

The permit holder shall take reasonable steps to investigate ways and means of minimizing infiltration and stormwater ingress into the sewerage system and provide the Manager, Environmental Regulation, Wellington Regional Council, with an annual report by 31 July on progress.

A report for inflow and infiltration can be found in Appendix ii: Inflow and Infiltration Report.

Condition (20)

The permit holder shall take reasonable steps to monitor and manage trade waste inflows into the sewerage system so as to minimize the risk of disruption to the wastewater treatment process. The permit holder shall provide the Manager, Environmental Regulation, Wellington Regional Council, with an annual report on trade waste which summarises issues arising and actions taken by 31 July.

A report regarding the trade waste can be found in Appendix iii: Hutt City Council Trade Waste Management July 2021 – June 2022.

Condition (22)

The permit holder shall submit an annual report for the main outfall pipeline, which addresses activities undertaken during the previous year, to the Manager, Environmental Regulation, Wellington Regional Council, by 31 July each year. This report shall include, but not be limited to, the following elements:

- (a) Details of works (including any repairs and replacements) undertaken during the past year; and
- (b) Collation and assessment of the results of any environmental monitoring undertaken during the year.

Section (a)

The record of outfall maintenance and repair can be found in the table below:

Date	Start	End	Location of the Leak Repair
28 Jun 2021	28/06/2021 14:20	2/07/2021 15:19	148 Muritai Road
11 Jan 2022	11/01/2022 10:56	21/01/2022 10:40	Burdan's Gate
09 Mar 2022	9/03/2022 13:37	22/03/2022 13:04	48 Seaview Road

Table 7: Outfall Maintenance

Section (b)

A complete list of all the analytical results can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

WGN120142 [33406]

Condition (4)

The consent holder shall establish a consultation group by 1 March 2013 or within a longer timeframe approved by the Manager, Environmental Regulation, Wellington Regional Council. As a minimum the group shall be made up of those individuals/community groups that submitted on this consent who wish to participate and interested persons put forward by those submitters who wish to participate.

The functions of the consultation group is to provide:

- Comment on the Public Notification Strategy required by condition 5 of this consent
- Comment on the Overflow Contingency Plan required by condition 22 of this consent
- Comment on the option assessment report required by condition 26 of this consent directly to Wellington Regional Council, and
- Be a line of communication between the consent holder, the submitters, and the wider community for the duration of the consent

The consent holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of the establishment of consultation group by 1 March 2013.

Note 1: The consultation group is considered “established” when the consent holder has collated contact details for all submitters/interested persons joining the group, and the group has been provided with a plan of how the consultation process will be facilitated.

Note 2: The consultation group is not a decision making group, but is a forum for the dissemination of information from the consent holder and provides an opportunity for the group to comment on consent compliance and the development of specific plans.

Note 3: The consultation group is expected to provide comments to the consent holder within two weeks of being sent information/plans to review.

Note 4: The need for and the frequency of the meetings shall be determined by the consultation group following the receipt of the reports/plans received in accordance with this condition.

No CLG meetings were held during this period

Condition (9)

The consent holder shall monitor the flow rate, duration and total volume of all overflows discharged from the treatment plant into the Waiwhetu Stream and shall report the results to Wellington Regional Council in accordance with condition 25 of this consent, or upon request.

The flow monitoring devices shall be capable of measuring wastewater flows of magnitudes up to and beyond peak instantaneous flow rates, and calibrated and maintained to ensure that the measurement error is no more than +/- 10%.

The following is a summary of the flow rates, duration, and total volume of overflow discharges from the Seaview WWTP to the Waiwhetu Stream:

Date	Duration	Volume	Mean Flow	Peak Flow	Consented	Comments
	hrs/mins	m ³	L/s	L/s		
17/07/2021	59:43	156,479	757	3001	Y	Wet weather
22/07/2021	18:38	20,853	546	1144	Y	Wet weather
27/07/2021	5:09	699	185	563	Y	Wet weather
8/08/2021	28:49	66,036	648	1158	Y	Wet weather
17/08/2021	33:23	19,629	311	671	Y	Wet weather
28/08/2021	9:32	16,447	526	1495	Y	Wet weather
1/09/2021	0:05	209	580	992	N	An external power fluctuation in the area caused the Seaview WWTP to shutdown. This resulted in an unconsented discharge.
12/10/2021	22:12	6,356	217	483	Y	Wet weather
6/12/2021	56:07	79,454	446	697	Y	Wet weather
12/12/2021	0:27	231	137	268	Y	Wet weather
11/01/2022	239:44	251,426	359	1040	Y	Unplanned maintenance on Seaview WWTP MOP.
23/01/2022	0:30	363	378	1534	N	An external power fluctuation in the area caused the Seaview WWTP to shutdown. This resulted in an unconsented discharge.

5/02/2022	40:35	18,887	180	1557	Y	Wet weather
12/02/2022	69:37	77,188	382	4135	Y	Wet weather
20/02/2022	13:17	9,532	237	811	Y	Wet weather
9/03/2022	311:27	628,057	567	1723	Y	Main outfall pipeline maintenance
22/04/2022	3:35	2,750	454	1127	Y	Wet weather
2/06/2022	17:21	22,979	489	1216	Y	Wet weather
9/06/2022	127:34	188,243	555	2246	Y	Wet weather

Table 8: Discharges to the Waiwhetu Stream

Condition (10)

The consent holder shall install, commission and operate a flow sensor as close as practicable to the discharge point in the Waiwhetu Stream by 1 August 2013 to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council that is capable of continuously monitoring and logging flow in the stream during a discharge event.

Note: It is recommended that the design, specification and operation of the flow sensor are discussed with Greater Wellington Flood Protection and Environmental Monitoring and Investigation Departments prior to installation.

The Waiwhetu River flow rates were submitted to GWRC as trends in the discharge notifications. The average, minimum, and maximum flow rates of the Waiwhetu Stream are included in every discharge report.

Condition (11)

The consent holder shall take a grab sample of treated wastewater as it leaves the treatment plant prior to entering the overflow pipe each day that a discharge occurs for more than one hour. The sample shall be analyzed for parameters specified in condition 14.

A complete list of all the analytical results can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

Condition (12)

Each day a discharge occurs and one day after the cease of a discharge the consent holder shall take representative grab samples of Waiwhetu Stream water at ~~two levels in the water column, namely 0.5 centimetres and 15 centimetres~~ below the surface. The samples shall be collected from the true left bank of the Waiwhetu Stream at locations specified in Table 1.1:

Table 1.1 Water quality monitoring locations

Site	NZTM	
	Easting	Northing
Immediately upstream of the port Road Bridge	1759345	5433136
Adjacent to the Waiwhetu Pa site and downstream of the public walkway	1759539	5433352
Immediately downstream of the Bell Road Bridge	1760431	5433523

The consent holder shall record the date, time (NZ standard time), weather (in particular wind direction and strength) and tidal conditions (low/medium/high and ebb/flood tide) at the stream mouth when the samples are taken. Where practicable, the sampling should be undertaken at least three hours after any ebb tide starts.

Note: This condition does not apply to overflows with a duration of less than one hour.

An assessment was performed on the overflow discharges of treated wastewater from the Seaview main pumping to Waiwhetu Stream during wet weather events. The report contains a map of the sampling sites and all the environmental conditions at the time of sampling. A copy of the report can be found in Appendix iv:

Condition (14)

The samples collected in accordance with conditions 11 and 12 shall be analyzed for:

- Faecal Coliforms (cfu/100mL)
- Carbonaceous Biochemical Oxygen Demand (g/m³)
- Enterococci(no./100mL)
- Escherichia coli (no./100mL)
- Dissolved Reactive Phosphorus (g/m³)
- Ammoniacal Nitrogen (g/m³)
- Nitrate Nitrogen (g/m³)
- Nitrite Nitrogen (g/m³)

In addition, on each sampling occasion at the three locations along the Waiwhetu Stream as described in condition 12 the consent holder shall ensure the following in-situ measurements are recorded:

- Water temperature
- pH
- Salinity, and
- Dissolved oxygen.

An assessment of the above results shall be provided in the annual report required by condition 25. Copies of the water quality monitoring results shall be provided in both electronic and hardcopy format to the Manager, Environmental Regulation, Wellington Regional Council upon request.

A complete list of all the analytical results can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

Condition (15)

- (a) The discharge shall not result in any of the following effects on the water of the Waiwhetu Stream beyond the reasonable mixing zone boundary defined as 100m downstream of the Waiwhetu Stream outfall (i.e. immediately upstream of Port Road Bridge) and 100m upstream the Waiwhetu Stream outfall (i.e. adjacent to Lot 2 DP 421395):
- 1) The product of any conspicuous oil or grease or grease films, scums or foams or floatable or suspended materials, or
 - 2) Any conspicuous change in colour or clarity
 - 3) Any emission of objectionable odour, or
 - 4) Any significant adverse effects on aquatic life
- (b) During each sampling event required by condition 12, the consent holder shall take photographs of the point of discharge and immediate receiving waters around the point of discharge to show the presence of any of effects (1-4) listed in condition 15 (a) and any obvious undesirable biological growths or visible die-offs. The consent holder shall forward to the Manager, Environmental Regulation, Wellington Regional Council a copy of the photographs in the annual report required by condition 25 of this consent or upon request.

All photographs were submitted to GWRC as part of the quarterly resource consent compliance reports. Please refer to the following documents:

Wastewater Project – Resource Consent Compliance Report: July – September 2021/2022

Wastewater Project – Resource Consent Compliance Report: October – December 2021/2022

Wastewater Project – Resource Consent Compliance Report: January – March 2021/2022

Wastewater Project – Resource Consent Compliance Report: April – June 2021/2022

Condition (16)

The consent holder shall keep a record of any complaints received. The record shall contain the following details, where practicable:

- Name and address of complaint (if provided)
- Identification of the nature of the complaint
- Date and time of the complaint and of the alleged event
- Weather conditions at the time of alleged event, and
- Any measures taken to address the cause of the complaint

The consent holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of any complaints relating to the exercise of this consent, within 24 hours of being received by the consent holder or the next working day.

Notification can be sent to the Manager, Environmental Regulation, Wellington Regional Council at notifications@gw.govt.nz. Please include the consent reference WGN120142 [31523] and the name and phone number of a contact person responsible for the discharge. The consent holder shall forward to the Manager, Environmental Regulation, Wellington Regional Council a copy of the complaints record, in the annual report required by condition 25 of this consent.

There were no complaints recorded related to the discharge of Seaview WWTP.

Condition (20)

The results of the monitoring required by the TWVMP, shall be reported to the Manager, Environmental Regulation, Wellington Regional Council, on an annual basis, by 1 August, once the TWVMP has been approved. The assessment of the monitoring results shall be undertaken by a suitably qualified person that is to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

The TWVM report shall include, but not be limited to, the following:

- The results of all monitoring undertaken under the TWVMP
- A discussion of the likely impact the discharges are having/had on the cultural values of the waterbody including cumulative effects, if possible
- A comparison of these results with any previous monitoring undertaken in accordance with the TWVMP
- Any recommendations for changes to the TWVMP (e.g. indicator species, monitoring sites), and why
- Any recommendations for mitigation and minimizing the impact of the discharges on cultural values of the waterbody, if possible
- Copies of any comments on the monitoring results that have been received from the organisations included in condition 18, and
- Any other relevant information

The report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

A copy of the TWVM report shall be provided to the Te Runanganui o Taranaki Whanui ki te Upoko o te Ika Maui, Port Nicholson Block Settlement Trust and the Wellington Regional Council.

Development of the TWVMP has been stalled. GWRC needs to provide further information in order for this to proceed.

Condition (23)

The consent holder shall investigate and implement ways and means of reducing stormwater infiltration and inflow (I&I) into the sewerage system with the aim of minimising overflow discharges. Investigations shall include but not be limited to:

- CCTV and pressure testing monitoring to identify faulty mains requiring replacement, and
- Flow monitoring and system assessment to identify the sources of inflow and infiltration, system performance and options to reduce the infiltration and inflow

The investigations and works undertaken to reduce I&I shall be reported on in the annual report required by condition 25.

An update regarding infiltration and inflow can be found in Appendix ii: Inflow and Infiltration Report.

Condition (25)

The consent holder shall prepare and submit comprehensive annual report to the Manager, Environmental Regulation, Wellington Regional Council, Regional Public Health and members of the consolation group as required by condition 4 of this consent by 1 August each year (covering the year 1 July to 30 June). The annual report shall include as a minimum:

- A summary of overflow events (including dates, volumes discharged, duration and cause)
- A summary of consolation group involvement
- The flow monitoring results (carried out under conditions 9 and 10 of this consent)
- The treated wastewater and water quality monitoring results (carried out under conditions 11 and 12 of this consent)
- A critical evaluation by an appropriately qualified and experienced scientist of the previous years monitoring results, in particular the environmental effects of each overflow discharge event. This evaluation shall utilize the treated wastewater and stream quality and flow monitoring data for each overflow event comparing the data against relevant environmental guidelines
- Photographs from the visual inspections undertaken under condition 15(b) of this consent
- Complaints record as required by condition 16
- Summary of I investigations, and work undertaken to reduce I&I into the sewerage network as required by condition 23
- Summary of investigations undertaken, a list of investigations scheduled for the upcoming year (required by condition 24), and timeframes for implementation of any upgrades and/or consent applications, and
- Any other matters the consent holder considers relevant.

The report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

An assessment was performed on the overflow discharges of treated wastewater from the Seaview main pumping to Waiwhetu Stream. The majority of the reporting requirements are contained within that report. A copy of the report can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

Other reporting requirements not found in the Stantec report can be found under the various conditions of resource consent WGN 120142 [33406].

WGN 120142 [33407]

The permit allows the temporary discharge of treated wastewater to the coastal marine area, and onto land where it may enter streams or the coastal marine area from:

- Planned repairs
- Unplanned repairs
- Leaks associated with temporary repairs and
- Minor leaks

In relation to the main outfall pipeline from Seaview WWTP to Pencarrow Head.

Please see Table 7 for the records of outfall maintenance.

Condition 30

The consent holder shall prepare and submit a comprehensive annual report to the Manager, Environmental Regulation, Wellington Regional Council and Regional Public Health and members of the consultation group as required by condition 10 of this consent by 1 August each year (covering the year 1 July to 30 June). The annual report shall include as a minimum:

- A detailed summary of repairs undertaken on the pipeline in the last twelve months (i.e. planned and unplanned repair work) including detail on the length and location of repairs and any associated monitoring
- Repair work planned for the upcoming year
- The condition of temporary repairs made on the pipeline and programme for permanent repair
- A critical evaluation by an appropriately qualified and experienced scientist of the previous years monitoring results, in particular the environmental effects of each discharge event. This evaluation shall utilise the treated wastewater and water quality data, comparing the data against relevant environmental guidelines
- Summary of consultation group involvement
- Photographs of scour valves (required by condition 17 (b)) accompanied by field observations or comments as appropriate
- The complaints record (required by condition 22)
- Summary of investigations undertaken, a list of investigations scheduled for the upcoming year (required by condition 28), and timeframes for implementation of any upgrades and/or consent applications, and
- Any other matters the consent holder considers relevant

The report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

A copy of assessment of the discharges due to outfall maintenance can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

WGN120142 [33408]

To temporarily discharge treated wastewater from the Seaview WWTP to the Waiwhetu Stream when the main outfall pipeline is being repaired.

Please see table 7 for the records of outfall maintenance for FY2021/2022.

Condition 35

The consent holder shall prepare and submit a comprehensive annual report to the Manager, Environmental Regulation, Wellington Regional Council, Regional Public Health and the consultation group as required by condition 7 of this consent by 1 August each year (covering the year 1 July to 30 June). The annual report shall include as a minimum:

- A summary of overflow events (including dates, volume discharged, tidal conditions during discharges, the discharge duration and cause)
- Flow monitoring results (carried out under conditions 12 and 13 of this consent);
- Treated wastewater and water quality monitoring results (carried out under conditions 14 and 15 of this consent)
- Summary of consultation group involvement
- A critical evaluation by an appropriately qualified and experienced scientist of the previous years monitoring results, in particular the environmental effects of each overflow discharge event. This evaluation shall utilise the treated wastewater and stream water quality and flow monitoring data for each discharge event comparing the data against relevant environmental guidelines
- Photographs from the visual inspections undertaken under condition 18 (b) of this consent

The overflow flow rate, duration, and total volume can be found in Table 8: Seaview WWTP Discharge Events to Waiwhetu Stream under WGN120142 [33406], Condition (9).

A copy of assessment of the discharges due to outfall maintenance can be found in Appendix iv: Seaview Wastewater Treatment Plant Assessment of Effects of Overflow Discharges to Waiwhetu Stream.

WGN950162 (01)

Condition (16)

The consent holder shall keep a record of any complaints received. The complaints shall be forwarded to the Manager, Consents Management within twenty-four hours of being received by the consent holder.

The consent holder shall endeavour to record the complainants name, time of incident that caused the complaint, wind direction and speed and plant operating conditions at the time of the complaint.

Any incident that could have caused or has caused adverse effects on the environment at or beyond the boundary of the site shall be notified to the Wellington Regional Council within twenty-four hour. This includes any incidents that result in complaints.

The Table 9 summarises the odour complaints received by the plant for this reporting period.

Date	Notifier	Details	Actions Taken
3/08/2021	GWRC	GWRC received an odour complaint regarding the Seaview WWTP. Caller stated that it was an intensity of level 10 and that it was similar to when the dryer underwent emergency shutdown and loaded out the dried biosolids.	Detailed the operation of the plant to the GWRC consent officer.
16/09/2021	GWRC	Complaint lodged with GWRC and was forward to Veolia. Complainant noted that the odour was a 10/10.	Responded to GWRC request for more information. No other details were required.
26/09/2021	Wellington Water	Odour complaint was lodged with Wellington Water. Wellington Water contacted Veolia regarding this complaint at 7:20am on 27th September 2021.	Notification submitted to GWRC and Wellington Water regarding the odour.
30/09/2021	GWRC	As the complaint was reported to Veolia on 8/10/2021 nothing could be done to investigate the cause. The only activity that was being performed at the time was the routine shutdown of the sludge dryer for maintenance.	No investigation required as complaint was received 8 days after complaint lodged
05/10/2021	GWRC	GWRC consent officer onsite due to an odour complaint lodged against the Seaview WWTP.	Wellington Water contract manager and Veolia Northern Operations Coordinator escorted the consent officer around the site to conduct an odour survey.
	Wellington Water	Comment from Wellington Water was, "This morning I attended the induction meeting at Seaview WWTP arriving at about 7:15 am. As I turned into Gough	Wellington Water staff member informed the Northern Operations Coordinator and they conducted an investigation. They were not able to detect any odour on site. When the Wellington

03/11/2021		Street there was a distinct, not O&O, sewage odour. My assumption was either the trade waste pump station or milliscreen building. Turning into Waterman Street the Dryer odour became more obvious. As I parked inside the boundary I could smell the odour blaster chemical."	Water staff member left the site there was no distinguishable odour at any location.
03/11/2021	GWRC	Complaint was lodged with GWRC. GWRC contacted Wellington Water who then forwarded the complaint to Veolia. The complaint stated the following, "Caller rung regarding the Seaview wastewater treatment plant. He said the odour was 10/10 from his work place at 9 Gough Street."	<p>There were no abnormal activities occurring at the site. There was a scheduled load out from the silos to the truck in the morning that could have been a potential odour source.</p> <p>Veolia staff conducted an odour assessment of the site but could not detect any odour. The Northern Operations Coordinator walked Gough Street and only detected very minor fleeting dryer odour. The wind was quite blustery but generally blowing towards 9 Gough Street.</p> <p>The Northern Operations Coordinator visited the complainant and they agreed that they could no longer detect odour</p>
22/11/2021	Member of the Community	<p>A member of the community contacted the Duty Manager</p> <p>regarding an odour they detected at the gas station north of the plant</p>	<p>The Seaview WWTP was operating within the specified parameters at the time of the complaint. An odour survey was conducted.</p> <p>There were no abnormal conditions</p>

			on-site. The wind was northerly at 4km/hr. Based on the wind direction and current operation of the plant we do not believe the odour originated from the site.
23/11/2021	Member of the Community	A member of the community contacted Wellington Water and stated the following, "It smells around the Seaview roundabout."	The Seaview WWTP was operating normally at the time of the complaint. An odour survey was conducted (see attached) and there were no abnormal conditions on-site. The wind was south-easterly at 3km/hr.
27/11/2021	Member of the Community	Complainant stated that while driving through the area they detected a continuous smell.	Notification was not submitted to Veolia until 9/12/2021 so an investigation could not be performed. The weather forecast was light rain with a southerly wind at 22km/hr.
14/12/2021	Member of the Community	The following email was received from the community. "Afternoon all, The smell has been terrible this week and is getting progressively worse. It's more than just a masking agent, it's foul. This morning it was around Moera Roundabout and Seaview Roundabout and apparently yesterday around Bell Road was also bad. I'm keeping a diary on my phone but wanted to record this with you as well... It's days like	Veolia staff performed an odour survey and did not detect any objectionable or offensive odour. Staff also inspected the site for any abnormal operations but could not find anything.

		today that remind me of why I started the petition. It's really bad. Thanks for your attention. Warm regards"	
15/12/2021	Member of the Community	The following email was received from the community, "Just wanted to register an odour issue relating to the WWTP, really been stinking bad this morning, here have been continuing odour issues from this site over the past 6 months especially, it seems to be getting worse and not better. [...] We can't continue having this rancid odour all the time. And this is coming from someone who has been working in and around waste treatment their whole career!!!"	Veolia staff performed an odour survey and did not detect any objectionable or offensive odour. Staff also inspected the site for any abnormal operations but could not find anything.
07/01/2022	GWRC	Complainant on Gough Street called GWRC regarding the odour. They rated the odour as a 9/10. GWRC Duty officer attended site and only noted it as a 5/10 and could smell the odour neutralizer.	The Seaview WWTP was operating with normal parameters.
11/01/2022	HCC c/o Wellington Water	Odour complaint lodged with HCC which was transferred to Wellington Water before notifying Veolia.	Southern Operations Coordinator performed an odour survey and did not detect anything objectionable or offensive. The plant was operating normally and the odour suppression system was in operation.
28/01/2022	Community Member	The complainant noted that there was a strong smell coming from the Seaview Roundabout and it seemed to originate from the pump station at the Seaview WWTP. They noted that the odour was intermittent.	Veolia staff performed an odour survey and inspection on the Seaview WWTP. They did not detect any objectionable or offensive odour. Please see attached completed odour survey. There were no abnormal operations at the Seaview WWTP that could have been the source of the odour. All odour suppression systems were in operation at the time.

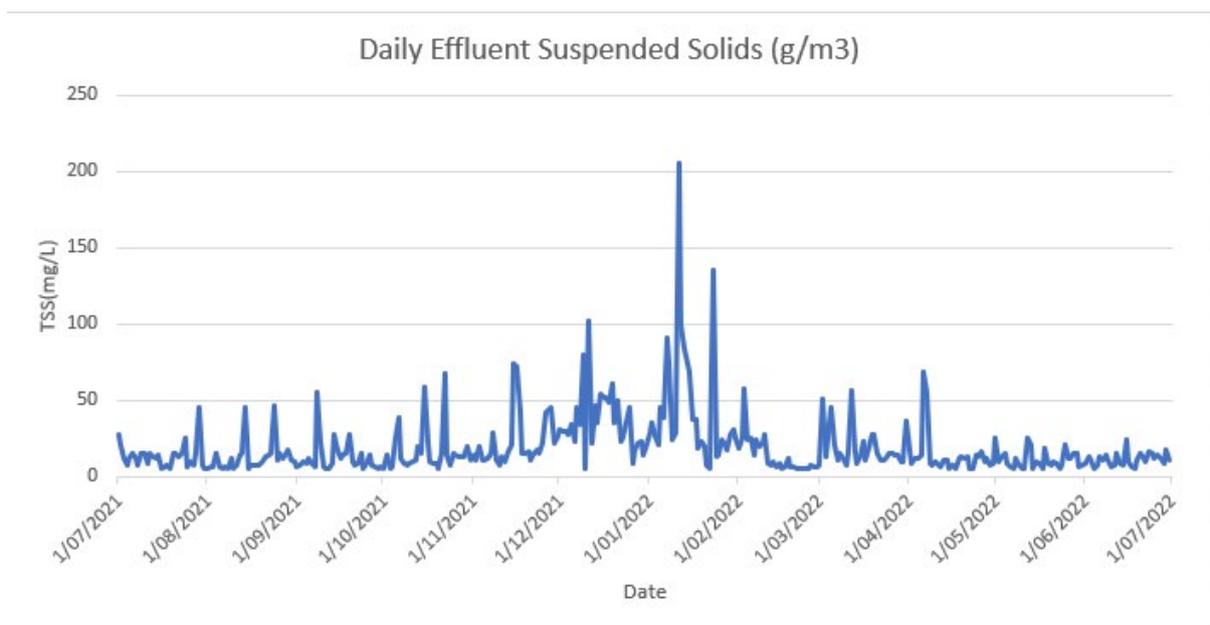
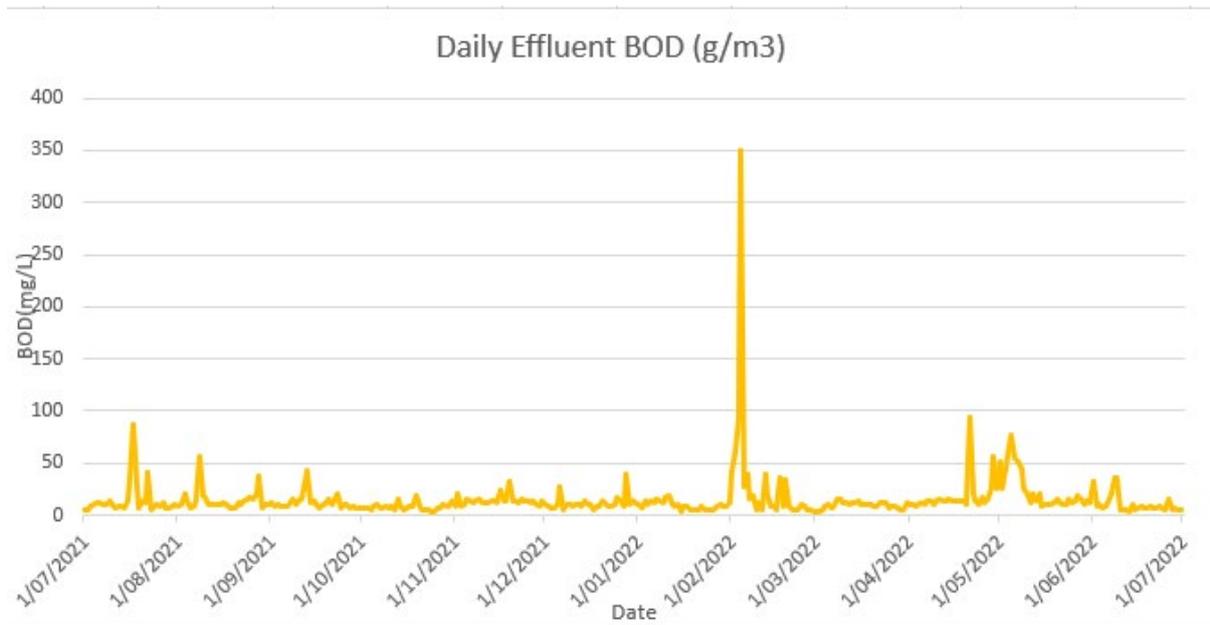
			The wind was a SE at 18km/hr.
02/02/2022	Community Member	The complainant stated that, "[...] there is quite an odorous smell in Meachen Street. On Monday afternoon it was also quite smelly around the Seaview/Parkside Roundabout."	Emergency maintenance being performed on the Seaview WWTP due to equipment failure.
04/02/2022	Community Member	The complainant stated that, "[...] Entering Meachen Street at 7;20am the smell is particularly pungent. It is also in our building."	Emergency maintenance being performed on the Seaview WWTP due to equipment failure.
08/02/2022	DB Automotive	While conducting an odour survey, the Wellington Water Wastewater Process Analyst and the Veolia Northern Operations Coordinator met with a complainant that stated there was odour on Gough St.	Emergency maintenance being performed on the Seaview WWTP due to equipment failure.
11/02/2022	Community Member	Smell around Marina 6/10. Smell is terrible around Seaview roundabout. I can smell the masking odour but is still offensive 6.5/10 smellometer	Veolia staff member did a walk around site. No unusual odour detected. Odour Blasters working
13/02/2022	Community Member	Smell is really bad around Seaview roundabout. Raw sewerage 9.5/10	Veolia staff performed an odour survey and inspection near the Seaview roundabout. They did not detect any objectionable or offensive odour. Please see attached completed odour survey. There were no abnormal operations at the Seaview WWTP that could have been the source of the odour. All odour suppressions systems

			were in operation at the time.
16/02/2022	Community Member	Complainant stated the following, "There is a very strong smell of raw sewage near the Hutt Indoor sports stadium in seaview . It seems to be most strong near the stream and Top 10 Holiday Park . But it can also be smelt in Woburn by Woburn train station. Please can you remedy this, the stench is really unbearable . It was also there last weekend. Many thanks"	Odour survey completed by Veolia staff. No odour detected at time of survey 11:15am. It is considered that this is odour from an offsite source.
23/02/2022	Community Member	Caller complaint about the smell coming from the waste water treatment plant in seaview. He is in the building behind and requesting a fragrance be used.	Odour Blasters in place and working
03/03/2022	Community Member	Nasty smell around Seaview roundabout. Harsh. Nauseating. 7.9/10	Investigation conducted by Veolia staff around area. Odour blasters were working on site. No odour detected at time of walk around.
08/03/2022	Community member	Smell around pump station Seaview roundabout all the way to Moera roundabout. 8/10 pungent, offensive	Investigation conducted by Veolia staff along Seaview Road. No odour detected at time of investigation 15:18
09/03/2022	Community member	Complainant stated: Absolutely stinks at Gough Street, Seaview. Really strong 9/10	Complaint received just as Contract Administrator was leaving site. Could detect a slight odour on corner of Seaview/Gough Street. Odour Blasters on site were on.

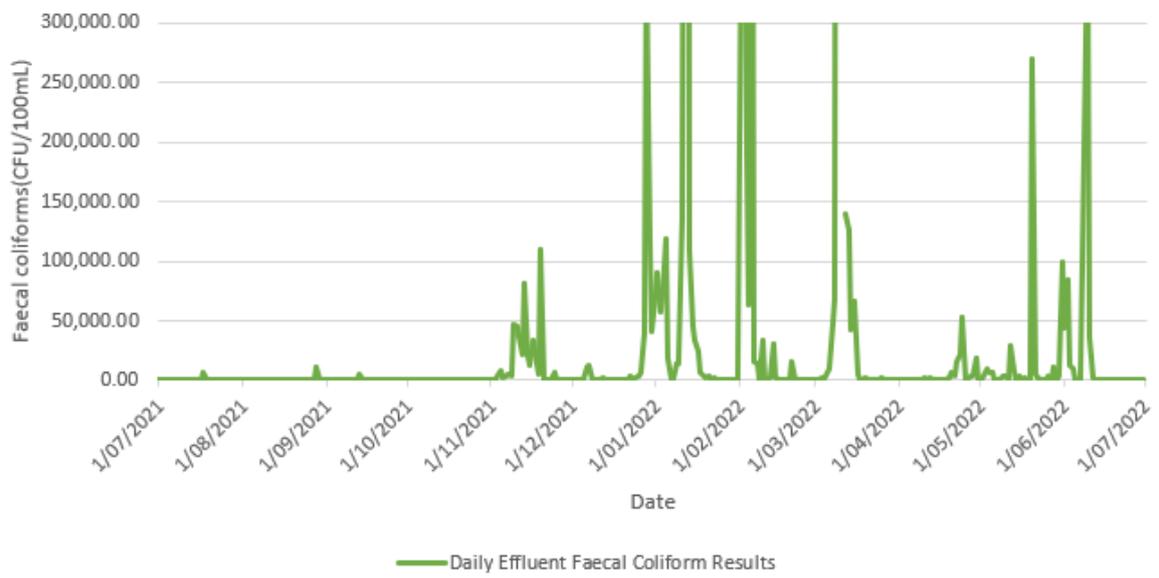
4/05/2022	Wellington Water	Call from WWL stating an odour complaint at Seaview Rd. at the roundabout. Seaview WWTP	Call received by the Northern operations coordinator. An odour investigation was carried out at 15:22hrs. No objectionable odour present. Odour blasters checked and topped up. Notification sent to GWRC and WWL on 6/05/2022 8:12
20/05/2022	HCC	Very unpleasant smell at Meachen st this morning. This has occurred a couple of other times earlier in the week.	Investigation conducted by Veolia staff along Seaview Road. No odour detected at time of investigation

Table 9: Odour Complaints

Appendix i: Daily Effluent Quality Results



Daily Effluent Faecal Coliform Results (cfu/100mL)



Appendix ii: Inflow and Infiltration Report

Condition (19)

The permit holder shall take reasonable steps to investigate ways and means of minimizing infiltration and stormwater ingress into the sewerage system and provide the Manager, Environmental Regulation, Wellington Regional Council, with an annual report by 31 July on progress.

Inflow and Infiltration Report

A variety of mitigation measures have been undertaken to reduce Inflow and Infiltration (I&I) and to contain wastewater within the reticulated wastewater network. This work aims to reduce the demand on the Seaview Wastewater Treatment Plant (WWTP) and to also improve waterway health. The catchment for Seaview WWTP includes both Hutt City Council (HCC) and Upper Hutt City Council (UHCC) areas. Details of works undertaken have been provided below for each council area.

Hutt City Council

Inflow Surveys

Inflow Survey work in HCC area is undertaken by the HCC Drainage Team with various catchments completed over many years. Figure 1 below shows the catchments in progress in blue and the catchment planned for commencement in 2022-2023 in purple.

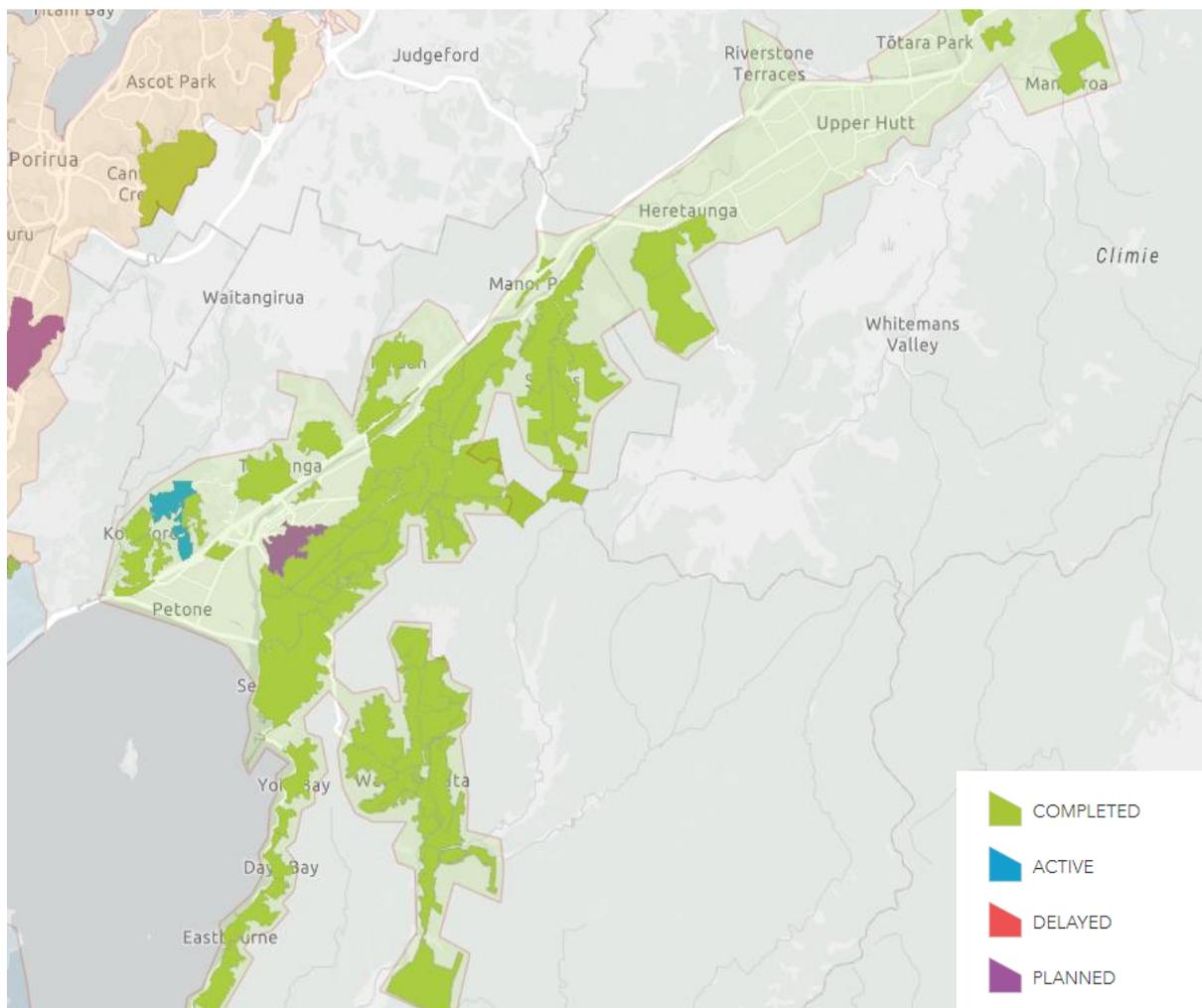


Figure 1 - Inflow Survey Project Locations

The Stokes Valley Inflow Survey (sub-catchment 04.02) commenced in 2020 and was completed in July 2021. This catchment was selected due to a number of wastewater overflows occurring in wet weather conditions. Various drainage faults were identified and resolved through communication with customers. This inflow survey is expected to have reduced the I&I entering the catchment and post rehabilitation monitoring will be undertaken to confirm this (subject to funding).

The Maungaraki catchment (sub-catchment 08.01) commenced in 2021-2022 and is currently in progress. The catchment shown in purple, Hutt Central (sub-catchment 07.09) is planned for commencement of an inflow survey in 2022-2023 financial year. The various catchments shown in green have all previously had an inflow survey completed over the last 20 years by HCC.

In addition to works completed by HCC, the Drainage Investigation Team at Wellington Water also completed smoke/dye testing and CCTV inspections for both wastewater and stormwater assets. The investigations were able to identify private and public faults. The inspections completed for HCC areas were:

- Wainuiomata (smoke/dye: 174 assets, CCTV: 154 assets)
- Harcourt Werry Drive at Percy Cameron Street (smoke/dye: 42 assets, CCTV: 0 assets)
- Waiwhetu stream at Tilbury (smoke/dye: 92 assets, CCTV: 92 assets)

Flow Monitoring and Rain Gauge Monitoring

There are three flow and five overflow monitoring sites and one site which measures both within HCC catchment area. Figure 2 below shows the monitoring sites managed under the long-term monitoring contract. All monitoring sites are located in Wainuiomata except for one site at Rossiter Avenue which monitors flow through a siphon and a constructed overflow point.

There are also four monitoring sites that are part of the SCADA Network which are not shown on the map below. Monitoring data is used to understand network performance and the extent of inflow and infiltration in various catchments where possible. This data also enables investigation of network issues and maintenance of hydraulic models.

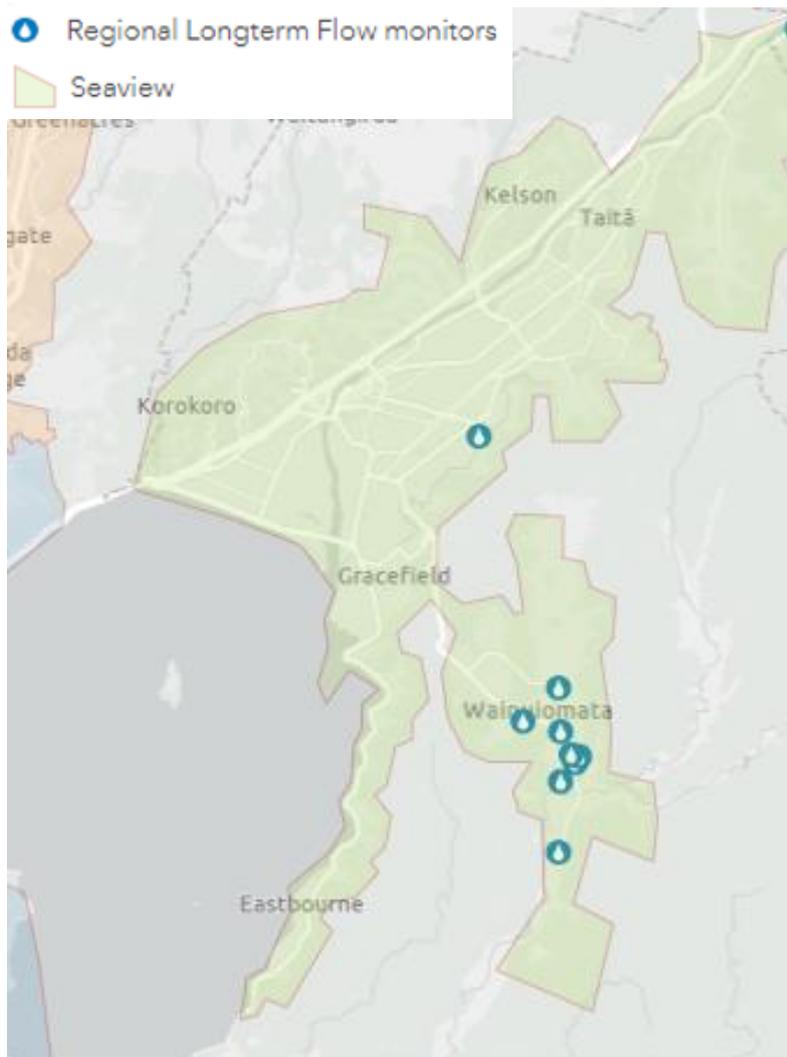


Figure 2 - Map of Wastewater Flow and Overflow Monitoring Sites for Seaview WWTP Catchment within HCC boundary

There are currently six rain gauges installed and operating in the HCC area. This data is used in conjunction with wastewater flow monitoring data to understand the extent of inflow and infiltration. The rain gauge sites are listed below;

- Orongorongo River at Orongo Swamp
- Wainuiomata River at Wainui Reservoir
- Hutt River at Mabey Road Depot
- Hutt River at Birch Lane
- Hutt River at Shandon Golf Club
- Hutt River at Regent Street

Condition Assessments

Condition Assessment involves the use of closed circuit television (CCTV) footage or other inspection techniques of pipe networks to identify faults, determine the condition of assets, and inform repair and renewal programs.

The Very High Critical Assets (VHCA) condition assessments completed as of June 2022 are shown in Figure 3 below. The primary inspection techniques were CCTV and laser profiling for wastewater pipes and CCTV for stormwater pipe assets. For the inspections represented in the below map,

approximately 10% were completed in 2020-2021 financial year and 90% completed in the 2021-2022 year. For Seaview wastewater treatment plant catchment area, see orange shaded area in Figure 1 above. The data from this CCTV will be analysed and can be used to inform the repair and renewal programs for the upcoming financial year.

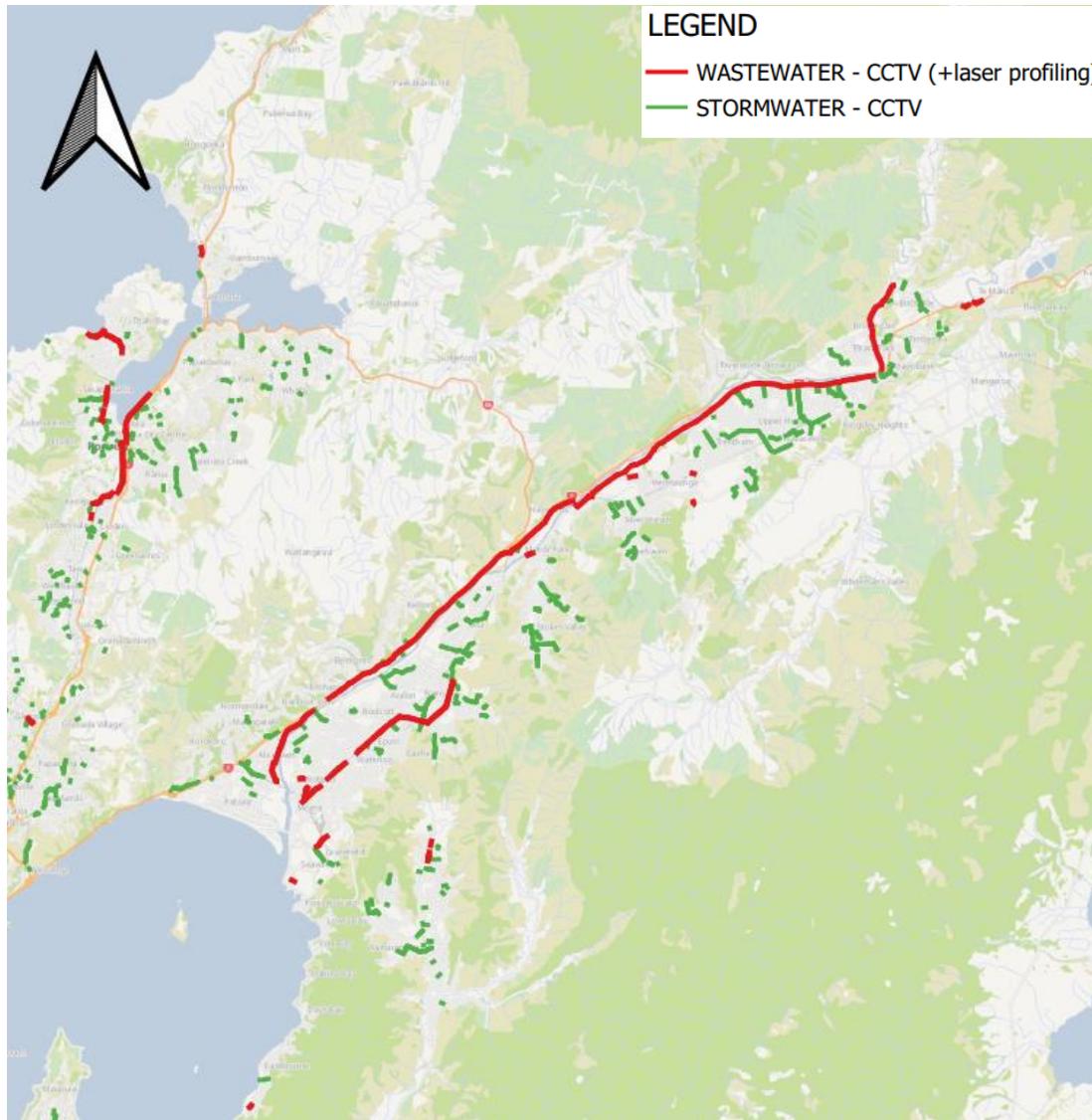


Figure 3 - Map of CCTV of UHCC and HCC Wastewater and Stormwater Mains undertaken as of June 2022

Wastewater Modelling

The Hutt Valley model was recently calibrated and is in the final stages of system performance. The Wainuiomata Catchment Model was also updated in 2020. The integrated trunk model which incorporates both HCC and UHCC Trunk Networks has also recently been updated.

Stormwater and Wastewater Capital Projects

The following table provides a summary of planned capital projects for wastewater and stormwater assets that were undertaken in 2021-2022 or are scheduled for 2022-2023. The projects are proposed and subject to approval by council. Ongoing operational work such as investigations and reactive maintenance and renewals are also carried out in addition to the planned work listed below. Some projects in the table below are noted in both columns as the project is delivered over multiple years or ongoing programmes of work.

Table 1 - HCC Capital Projects for Stormwater and Wastewater

Council / Activity	2021/2022	2022/2023
HCC Stormwater	<ul style="list-style-type: none"> • Victoria / Hume Street SW Upgrade • Knights Road / Colin Grove SW Renewals • Beach SW outlets Improvement • Jackson Street SW Renewals • Muritai Road Rona Street SW Upgrade • Stokes Valley Stormwater Investigation 	<ul style="list-style-type: none"> • Knights Road / Colin Grove SW Renewals • Dowse Dr Stormwater Improvement • HCC-SW-VHCA Pipe Renewal Programme • Wellesley College stream inlet and outlet erosion protection • Jackson Street Stormwater Renewals • Stormwater network renewals • Victoria Street and Hume Street Stormwater Upgrade • Stokes Valley Catchment Flood Mitigation • Te Mome Pump Station Renewal and Optimisation • Muritai Rd (92-96) Rona St, Marine Parade (19) Stormwater Upgrades • HCC Stormwater Pump Stations PLANNED Renewals Beach SW outlets Improvement
HCC Local Wastewater	<ul style="list-style-type: none"> • Wainuiomata Sewer Renewals • Naenae Sewer Renewals • Taita Sewer Renewals • Knights Road / Colin Grove WW Renewals • Stimulus Funding Programme WW Renewals • Bell Road WW Works • Wastewater Renewals - White lines East, Rahui Grove and Laery Street • WW Manhole Cover Safety Improvements Program 	<ul style="list-style-type: none"> • Avalon WW Renewals Programme 21-22 • Knights Road - Colin Grove E Coli - Wastewater • Epuni and Woburn WW Network Upgrades • HCC Sewer Renewals - White lines East, Rahui Grove and Laery Street • Wainuiomata Sewer Renewals - Stage 3 (Wood St, Peel Place, Willow Grove & Herbert St) • Bell Road WW Works • Wainui Road and Richworth Street Sewer Renewals • Riverlink / Hutt CBD Sewer Bypass

Council / Activity	2021/2022	2022/2023
		<ul style="list-style-type: none"> • Gracefield Wastewater Renewals • HCC Wastewater Pump Stations PLANNED Renewals • Naenae Sewer Renewals - Wilkie Swainson & Grierson Seddon St • HCC-WW-VHCA Pipe Renewal Programme • WW Manhole Cover Safety Improvements Program • HCC Wastewater Network Minor Works •

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Inflow Surveys

Inflow Surveys (smoke testing of wastewater catchments) that have previously been completed are shown below in Figure 4, highlighted in green. There were no Inflow Surveys completed in UHCC in the 2021-2022 financial year.

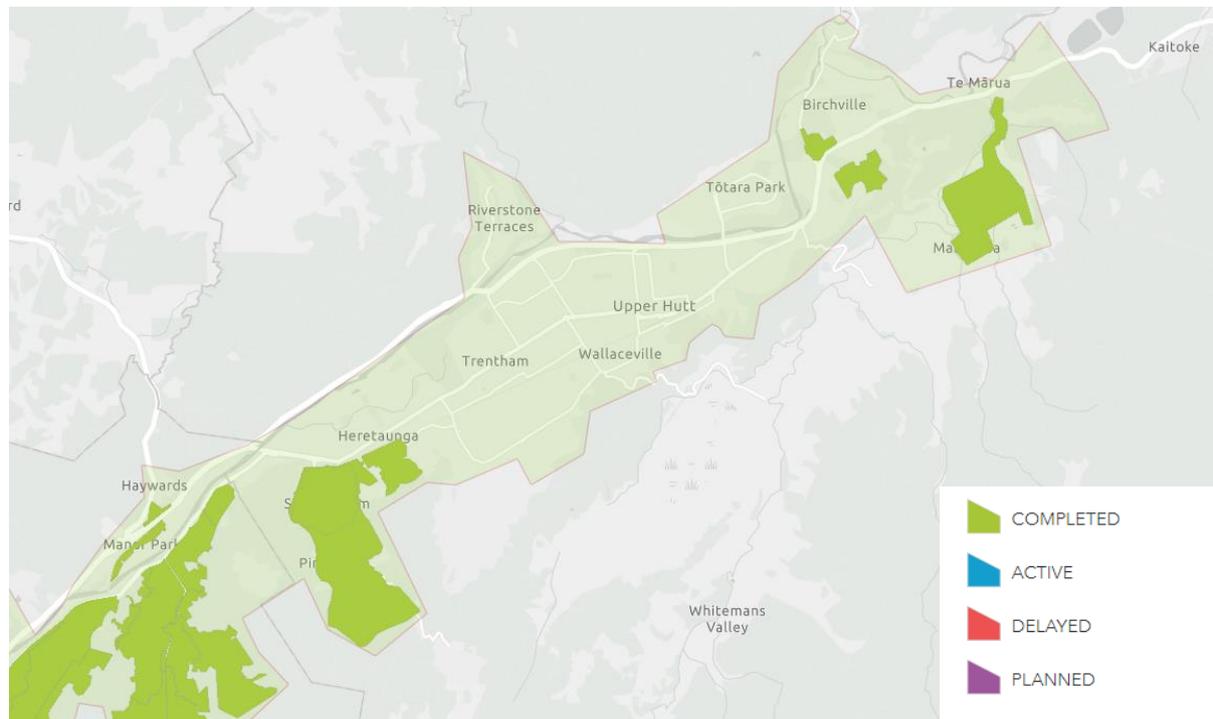


Figure 4 - Inflow Survey Project Locations in UHCC

The majority of faults have now been resolved from the Heretaunga Inflow Survey which concluded in the 2020-2021 financial year. The proposed catchment for inspection in the 2022-2023 financial year will be confirmed following review of monitoring data.

Flow Monitoring and Rain Gauge Monitoring

There are currently three wastewater flow monitoring sites in the UHCC area which are delivered under the long-term monitoring contract. There are also three monitoring sites that are part of the SCADA Network. A short-term flow monitoring project was completed in 2021-2022 financial year in the Silverstream and Pinehaven catchment. This data is used to understand network performance and the extent of inflow and infiltration in various catchments. This data also enables investigation of network issues and maintenance of hydraulic models. Figure 5 below shows the location of the three long-term flow monitoring sites.

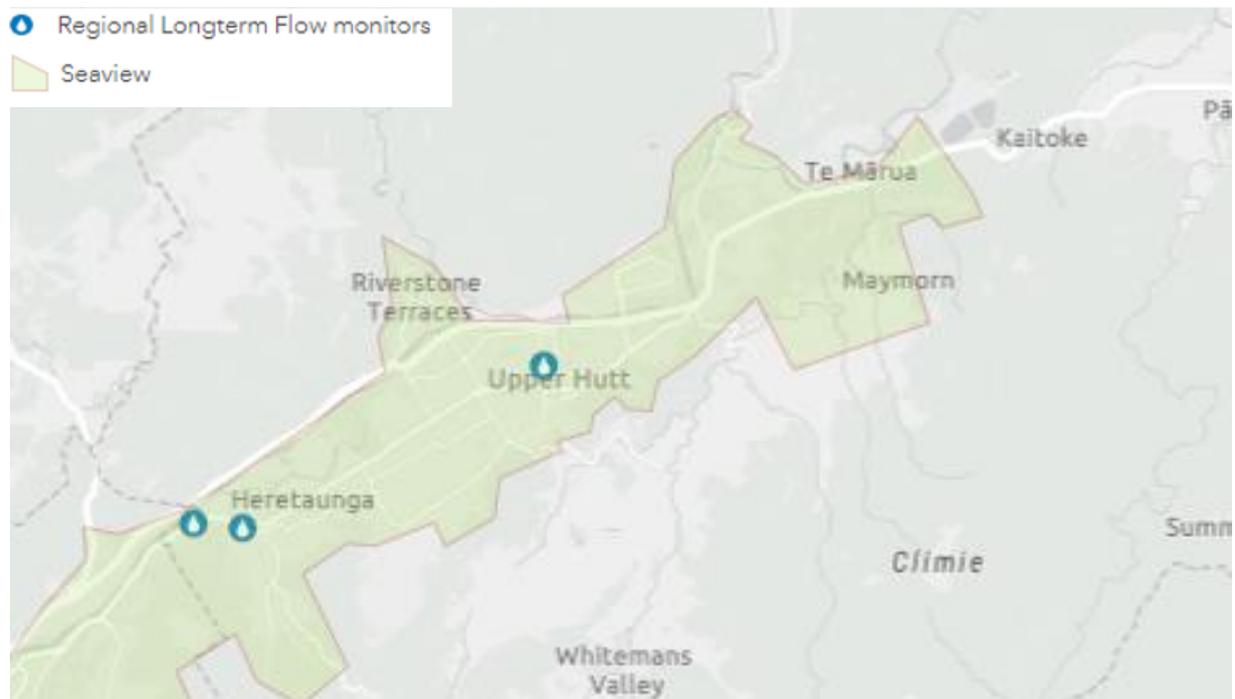


Figure 5 - Map of Wastewater Flow and Overflow Monitoring Sites for Seaview WWTP catchment within UHCC boundary.

There are currently 10 rain gauges installed and operating in the UHCC area. This data is used in conjunction with wastewater flow monitoring data to understand the extent of inflow and infiltration. The rain gauges sites are listed below;

- Mangaroa River at Tasman Vaccine limited
- Pinehaven Stream at Pinehaven Reservoir
- Hutt River at Riverstone Terrace
- Hutt River at Savage Park
- Akatarawa River at Cemetery
- Mangaroa River at Maymorn Pump Station
- Hutt River at Te Marua
- Pakuratahi River at Centre Ridge
- Hutt River at Kaitoke Headworks
- Whakatikei River at Blue Gum Spur

Wastewater Modelling

A wastewater model has been developed for the UHCC wastewater reticulation. As noted above the integrated trunk model which incorporates both HCC and UHCC Trunk Networks has also been updated.

Condition Assessments

Condition Assessment using closed circuit television (CCTV) footage and other inspection techniques of wastewater networks is used to identify faults, determine the condition of assets, and inform repair and renewal programs.

The Very High Critical Assets (VHCA) condition assessments completed as of June 2022 are shown in Figure 6 below. The primary inspection techniques were CCTV and laser profiling for wastewater pipes and CCTV for stormwater pipe assets. For the inspections represented in the below map, approximately 10% were completed in 2020-2021 financial year and 90% completed in the 2021-2022 year.

The data from this CCTV will be analysed and used to inform the future repair and renewal programs.

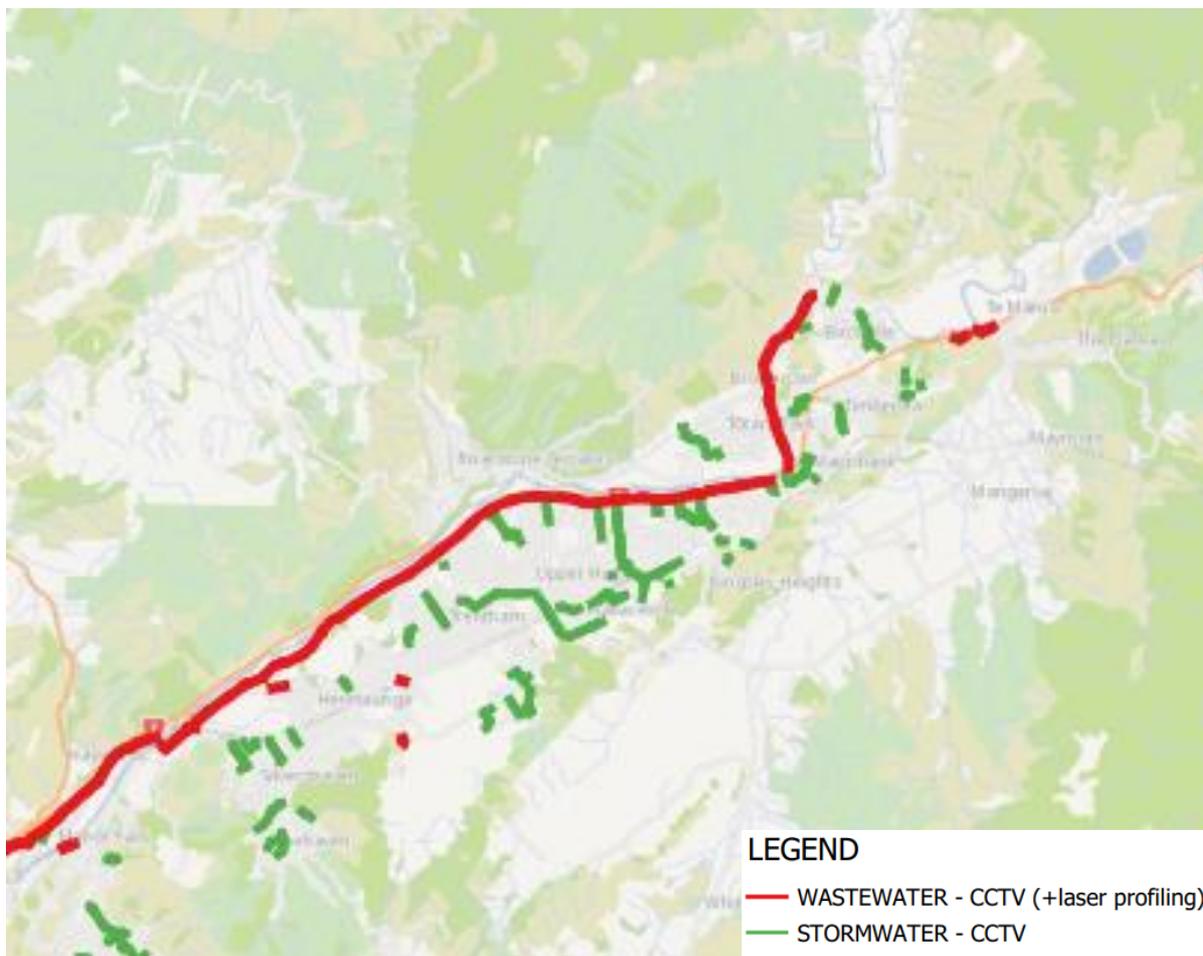


Figure 6 - Map of CCTV of UHCC Wastewater and Stormwater Mains undertaken as of June 2022

Stormwater and Wastewater Capital Projects

The following table provides a summary of planned capital projects for wastewater and stormwater assets that were undertaken in 2021-2022 or are scheduled for 2022-2023. Ongoing operational work such as investigations and reactive maintenance and renewals are also carried out in addition to the planned work listed below. Some projects in the table below are noted in both columns as the project is delivered over multiple years or ongoing programmes of work. The projects are proposed and subject to final approval by council.

Table 2 - UHCC Capital Projects for Stormwater and Wastewater

Council / Activity	2021/2022	2022/2023
UHCC Stormwater	<ul style="list-style-type: none"> • Pinehaven Stream and Stormwater Upgrades • Stormwater Manhole Cover Safety Improvements 	<ul style="list-style-type: none"> • Pinehaven Stream Stormwater Upgrade Work • Stormwater Manhole Cover Safety Improvements
UHCC Local Wastewater	<ul style="list-style-type: none"> • Wastewater Manhole Cover Improvements • Logan St Wastewater Renewal 	<ul style="list-style-type: none"> • Martin Street WW Renewals • Logan St Wastewater Renewal • UHCC-WW-VHCA Pipe Renewal Programme • UHCC Wastewater Pump Stations PLANNED Renewals • Wastewater Manhole Cover Safety Improvements

Hutt Valley Joint Venture (HVJV) Trunk Network

The following table provides a summary of planned capital projects for the HVJV Trunk Assets that were undertaken in 2021-2022 or are scheduled for 2022-2023. The projects are proposed and subject to final approval by council.

Table 3 - Projects for JV Trunk Wastewater Network

Council / Activity	2021/2022	2022/2023
HVJV Wastewater	<ul style="list-style-type: none"> • Barber Grove to WWTP Duplication • JV Network Capital Renewals • Petone Collecting Sewer 	<ul style="list-style-type: none"> • Trunk Type B Network Development - Barber Grove to Wastewater Treatment Plant Duplication • Trunk Type B Network Development - Petone Collecting Wastewater Upgrade • Seaview WWTP Wastewater Storage • Hutt and Upper Hutt WWJV-VHCA Pipe Renewal Programme • Ava Pump Station • Barber Grove Pump Station • Point Arthur Pump Station

Appendix iii. Trade Waste Report

Appendix iv: Assessment of effects of Discharge to Waiwhetu Stream