Surface Water Results
July 2024

City of Newcastle - Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Environment Protection License 5897 - Condition M2 – Special Frequency 1 (Daily during discharge)
Monthly rainfall = 83.3mm

Purpose of Sampling		SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	1/07/2024	2/07/2024	3/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7.31	7.30	7.69
SW57	**57**	7.33	7.32	7.56
SW58a	**61**	7.39	7.35	7.60
SW59	**66**	7.32	7.96*	7.50
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	637	614	664
SW57	**57**	352	358	238
SW58a	**61**	601	383	551
SW59	**66**	627	112	449
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	333	176	360
SW57	**57**	35	21	36
SW58a	**61**	326	325	276
SW59	**66**	684	3120	185
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	0.60	0.18	4.52
SW57	**57**	0.025	0.025	0.025
SW58a	**61**	0.080	0.025	2.59
SW59	**66**	0.22	0.025	0.10
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	12	11	21
SW57	**57**	4	4	4
SW58a	**61**	8	7	17
SW59	**66**	6	4	5

* Field value (lab result considered an anomaly)

Surface Water Results
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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		4/07/2024	5/07/2024	6/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.57	7.55	7.50
SW56	**56**	7.54	7.51	7.44
SW57	**57**	7.31	7.36	7.32
SW58a	**61**	7.35	7.40	7.44
SW59	**66**	7.43	7.18	7.18
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	388	414	435
SW56	**56**	642	636	633
SW57	**57**	296	344	351
SW58a	**61**	528	456	463
SW59	**66**	462	375	399
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	168	189	205
SW56	**56**	649	719	680
SW57	**57**	46	23	41
SW58a	**61**	448	187	301
SW59	**66**	284	1170	904
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.10	0.03	0.06
SW56	**56**	3.98	3.63	2.96
SW57	**57**	0.025	0.09	0.1
SW58a	**61**	1.57	0.26	0.12
SW59	**66**	0.025	0.06	0.05
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	5	9	4
SW56	**56**	15	20	13
SW57	**57**	3	5	2
SW58a	**61**	9	9	5
SW59	**66**	5	7	4

Surface Water Results
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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID		7/07/2024	8/07/2024	9/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.38	N/A	N/A
SW56	**56**	7.38	7.25	7.14
SW57	**57**	7.32	7.26	7.17
SW58a	**61**	7.50	7.31	7.20
SW59	**66**	7.21	7.16	7.12
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	482	N/A	N/A
SW56	**56**	628	627	628
SW57	**57**	360	365	362
SW58a	**61**	493	561	471
SW59	**66**	424	447	478
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	168	N/A	N/A
SW56	**56**	557	631	657
SW57	**57**	39	38	35
SW58a	**61**	299	431	283
SW59	**66**	639	527	473
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.03	N/A	N/A
SW56	**56**	2.46	1.90	1.31
SW57	**57**	0.16	0.06	0.08
SW58a	**61**	0.10	0.38	0.09
SW59	**66**	0.06	0.06	0.06
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	6	N/A	N/A
SW56	**56**	16	14	7
SW57	**57**	2	4	1
SW58a	**61**	6	6	3
SW59	**66**	4	4	3

Surface Water Results
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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW56, SW57 & SW58A	SW56, SW57 & SW58A
CN ID		10/07/2024	11/07/2024	12/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7.16	7.13	7.20
SW57	**57**	7.12	7.09	7.25
SW58a	**61**	7.15	7.15	7.10
SW59	**66**	7.23	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	624	626	700
SW57	**57**	373	387	388
SW58a	**61**	577	605	721
SW59	**66**	500	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	658	608	697
SW57	**57**	37	34	20
SW58a	**61**	370	326	84
SW59	**66**	381	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	0.80	0.08	<0.05
SW57	**57**	0.16	0.19	0.14
SW58a	**61**	<0.05	<0.05	<0.05
SW59	**66**	<0.05	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	8	6	6
SW57	**57**	<2	2	<2
SW58a	**61**	4	5	4
SW59	**66**	3	N/A	N/A

Surface Water Results
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Purpose of Sampling		SW57	SW57	SW57 & SW58A
CN ID		13/07/2024	14/07/2024	15/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.51	7.46	7.69
SW58a	**61**	N/A	N/A	7.26
SW59	**66**	N/A	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	407	408	411
SW58a	**61**	N/A	N/A	949
SW59	**66**	N/A	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	14	31	28
SW58a	**61**	N/A	N/A	111
SW59	**66**	N/A	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.14	0.08	0.08
SW58a	**61**	N/A	N/A	<0.05
SW59	**66**	N/A	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	<2	<2	<2
SW58a	**61**	N/A	N/A	<2
SW59	**66**	N/A	N/A	N/A

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Purpose of Sampling		SW57	SW57	SW58A & SW59
CN ID	**EPL ID**	16/07/2024	17/07/2024	18/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.05	7.26	7.24
SW58a	**61**	N/A	N/A	7.08
SW59	**66**	N/A	N/A	7.31
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	404	408	401
SW58a	**61**	N/A	N/A	1080
SW59	**66**	N/A	N/A	595
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	24	13	53
SW58a	**61**	N/A	N/A	35
SW59	**66**	N/A	N/A	75
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.11	<0.05	0.06
SW58a	**61**	N/A	N/A	0.19
SW59	**66**	N/A	N/A	0.07
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	2	2	3
SW58a	**61**	N/A	N/A	<2
SW59	**66**	N/A	N/A	3

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Purpose of Sampling		SW57, SW58A & SW59	SW57, SW58A & SW59	SW57, SW58A & SW59
CN ID	**EPL ID**	19/07/2024	20/07/2024	21/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.05	7.39	7.35
SW58a	**61**	6.85	6.89	6.94
SW59	**66**	7.05	7.26	7.62
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	406	413	410
SW58a	**61**	1110	1220	1300
SW59	**66**	605	616	610
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	28	46	39
SW58a	**61**	39	96	305
SW59	**66**	84	209	192
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.06	<0.05	<0.05
SW58a	**61**	0.06	0.11	0.08
SW59	**66**	<0.05	<0.05	<0.05
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	3	6	3
SW58a	**61**	3	4	6
SW59	**66**	4	8	8

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Purpose of Sampling		SW57, SW58A & SW59	SW58A & SW59	SW58A & SW59
CN ID	**EPL ID**	22/07/2024	23/07/2024	24/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.53	N/A	N/A
SW58a	**61**	7.05	6.98	6.98
SW59	**66**	7.31	7.49	7.60
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	409	N/A	N/A
SW58a	**61**	1350	1170	1190
SW59	**66**	622	613	625
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	38	N/A	N/A
SW58a	**61**	65	31	51
SW59	**66**	224	184	58
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	<0.05	N/A	N/A
SW58a	**61**	0.10	0.11	0.09
SW59	**66**	0.09	0.06	<0.05
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	4	N/A	N/A
SW58a	**61**	4	4	3
SW59	**66**	8	7	6

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Purpose of Sampling		SW58A & SW59	SW58A & SW59	SW57, SW58A & SW59
CN ID	**EPL ID**	25/07/2024	26/07/2024	27/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	N/A	7.32	7.21
SW58a	**61**	7.06	7.32	7.16
SW59	**66**	7.24	7.39	7.35
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	N/A	403	380
SW58a	**61**	1130	476	604
SW59	**66**	632	613	410
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	N/A	27	23
SW58a	**61**	76	56	54
SW59	**66**	205	228	149
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	N/A	<0.05	<0.05
SW58a	**61**	0.09	<0.05	<0.05
SW59	**66**	0.06	0.08	<0.05
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	N/A	5	4
SW58a	**61**	4	7	2
SW59	**66**	5	7	6

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Purpose of Sampling		SW57, SW58A & SW59	SW57, SW58A & SW59	SW57, SW58A & SW59
CN ID	**EPL ID**	28/07/2024	29/07/2024	30/07/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.22	7.22	7.34
SW58a	**61**	7.20	7.20	7.26
SW59	**66**	7.62	7.28	7.29
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	371	399	394
SW58a	**61**	707	754	760
SW59	**66**	629	647	639
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	13	17	10
SW58a	**61**	56	153	40
SW59	**66**	73	216	58
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	<0.05	<0.05	<0.05
SW58a	**61**	<0.05	<0.05	<0.05
SW59	**66**	<0.05	<0.05	<0.05
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	N/A	N/A	N/A
SW57	**57**	2	<2	2
SW58a	**61**	4	3	4
SW59	**66**	5	5	5

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Purpose of Sampling		SW56, SW57, SW58A & SW59		
CN ID	**EPL ID**	31/07/2024		
Parameter:		**pH (pH unit)**		
SW55	**55**	N/A	-	-
SW56	**56**	7.38	-	-
SW57	**57**	7.49	-	-
SW58a	**61**	7.22	-	-
SW59	**66**	7.28	-	-
Parameter:		**Electrical Conductivity (µS/cm)**		
SW55	**55**	N/A	-	-
SW56	**56**	764	-	-
SW57	**57**	404	-	-
SW58a	**61**	796	-	-
SW59	**66**	651	-	-
Parameter:		**Suspended Solids (mg/L)**		
SW55	**55**	N/A	-	-
SW56	**56**	80	-	-
SW57	**57**	12	-	-
SW58a	**61**	41	-	-
SW59	**66**	52	-	-
Parameter:		**Ammonia (mg/L)**		
SW55	**55**	N/A	-	-
SW56	**56**	0.06	-	-
SW57	**57**	<0.05	-	-
SW58a	**61**	<0.05	-	-
SW59	**66**	<0.05	-	-
Parameter:		**Biological Oxygen Demand (mg/L)**		
SW55	**55**	N/A	-	-
SW56	**56**	5	-	-
SW57	**57**	2	-	-
SW58a	**61**	3	-	-
SW59	**66**	5	-	-

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Environment Protection Licence 5897 - Condition M2 – SF1 and SF2 Sampling

	CN ID		SW56
	EPL ID		56
DATE			31/07/2024
Parameter	**Units**	**LOR**	
Alkalinity (as calcium carbonate)	mg/L	1	109
Aluminium	mg/L	0.01	4.52
Ammonia	mg/L	0.05	0.06
Copper	mg/L	0.001	0.016
Biological Oxygen Demand	mg/L	2	5
Electrical Conductivity	uS/cm	10	764
Iron	mg/L	0.05	5.68
Lead	mg/L	0.001	0.014
Nitrate as N	mg/L	0.05	6.93
Organochlorine Pesticides	mg/L	0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005
pH	pH Units	0.01	7.38
Total Suspended Solids	mg/L	5	80
Zinc	mg/L	0.005	0.086

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Environment Protection Licence 5897 - Condition M2 – SF1, SF2 and SF3 Sampling

	CN ID		SW55	SW57	SW58a	SW59
	EPL ID		55	57	58a	59
DATE			4/07/2024	26/07/2024	18/07/2024	18/07/2024
Parameter	**Units**	**LOR**				
Alkalinity (as calcium carbonate)	mg/L	1	<1	<1	<1	<1
Aluminium	mg/L	0.01	4.45	0.98	1.87	8.36
Ammonia	mg/L	0.05	0.10	<0.05	0.19	0.07
Arsenic	mg/L	0.001	0.004	0.002	0.002	0.006
Barium	mg/L	0.001	0.064	0.054	0.094	0.081
Benzene	mg/L	0.001	<0.001	<0.001	<0.001	<0.001
BOD	mg/L	2	7	5	<2	3
Cadmium	mg/L	0.0001	0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L	1	25	21	34	10
Chloride	mg/L	1	32	40	248	66
Chromium (Hex)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Chromium (Total)	mg/L	0.001	0.004	<0.001	0.002	0.007
Cobalt	mg/L	0.001	0.002	<0.001	0.003	0.004
Copper	mg/L	0.001	0.011	0.001	0.006	0.012
Electrical Conductivity	uS/cm	10	398	403	1080	595
Ethyl benzene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Fluoride	mg/L	0.1	0.3	0.2	0.2	0.4
Iron	mg/L	0.05	4.31	1.33	3.49	8.58
Lead	mg/L	0.001	0.017	0.001	0.004	0.012
Magnesium	mg/L	1	12	10	28	14
Manganese	mg/L	0.001	0.122	0.080	0.481	0.168
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nitrate as N	mg/L	0.01	0.06	0.02	0.90	0.09
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
pH	pH Units	0.01	7.74	7.32	7.08	7.31
Polycyclic Aromatic Hydrocarbons	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium	mg/L	1	12	5	9	6
Sodium	mg/L	1	43	51	136	99

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	CN ID		SW55	SW57	SW58a	SW59
	EPL ID		55	57	58a	59
DATE			4/07/2024	26/07/2024	18/07/2024	18/07/2024
Parameter	Units	LOR				
Sulfate	mg/L	1	32	42	70	113
Total Suspended Solids	mg/L	5	114	27	35	75
Toluene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Total Dissolved Solids	mg/L	10	352	238	579	599
Total Organic Carbon	mg/L	1	18	18	14	16
Total Petroleum Hydrocarbons	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
Total Phenolics	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
Zinc	mg/L	0.005	0.073	0.007	0.023	0.061

Surface Water Results
July 2024

Summerhill Waste Management Centre
141 Minmi Road, Wallsend, NSW

Final data obtained: 8/08/24
Date published: 15/08/24

Notes:
CN = City of Newcastle
EPL = Environment Protection Licence
NR = no result (non-compliant sample, water body dry etc)
NA = Not applicable, sample not required
SW58a located in Wentworth Creek and impacted by other catchment activities.

A copy of the Environmental Protection Licence can be viewed at:
http://app.epa.nsw.gov.au/prpoeoapp/

A map showing the location of monitoring points can be viewed at:
https://www.newcastle.nsw.gov.au/Living/Waste-and-recycling/Summerhill-Waste-management-Centre/Environmental-Monitoring