

Report Period 

28/03/2024

1/05/2024

**Monthly Monitoring Summary
for Hodgson Quarries and Plant Pty Ltd
Roberts Road Sand Quarry, Maroota,
NSW**

Site Monitoring Locations



Groundwater Levels

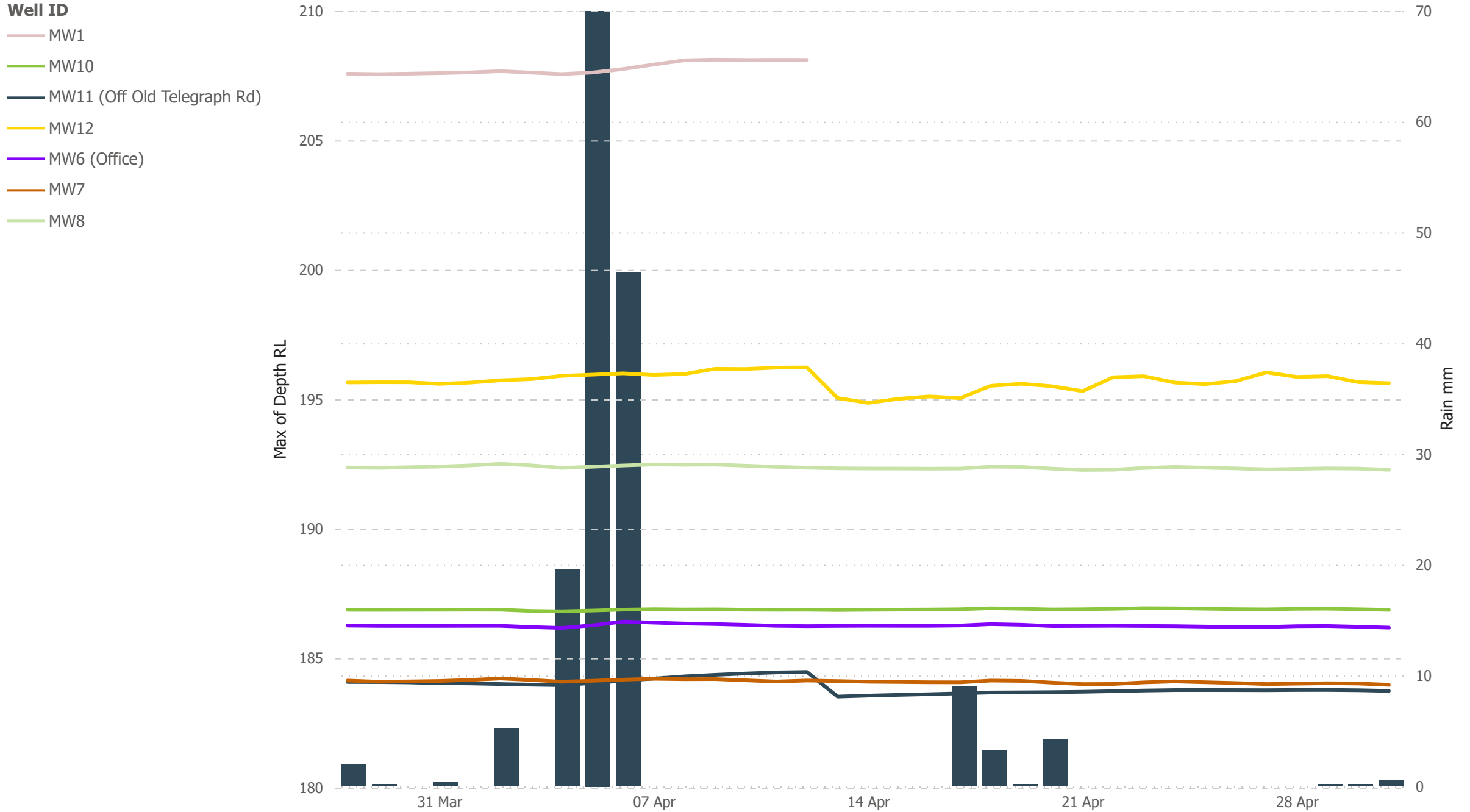
Groundwater levels are currently monitored in nine boreholes located on the site. Groundwater levels are manually measured for depth each month using a groundwater dipper. Data is downloaded from groundwater loggers where present. MW1 logger was installed prior to 2015; the remaining loggers were installed in 2017.

Graph 1 displays the depths as of January 2017. Graph 2 shows depths in the past month. Following anomalous readings from the MW5 logger, the bore was investigated and discovered to have collapsed. The logger was relocated to a functioning bore and the bore abandoned and replaced by nearby MW8.

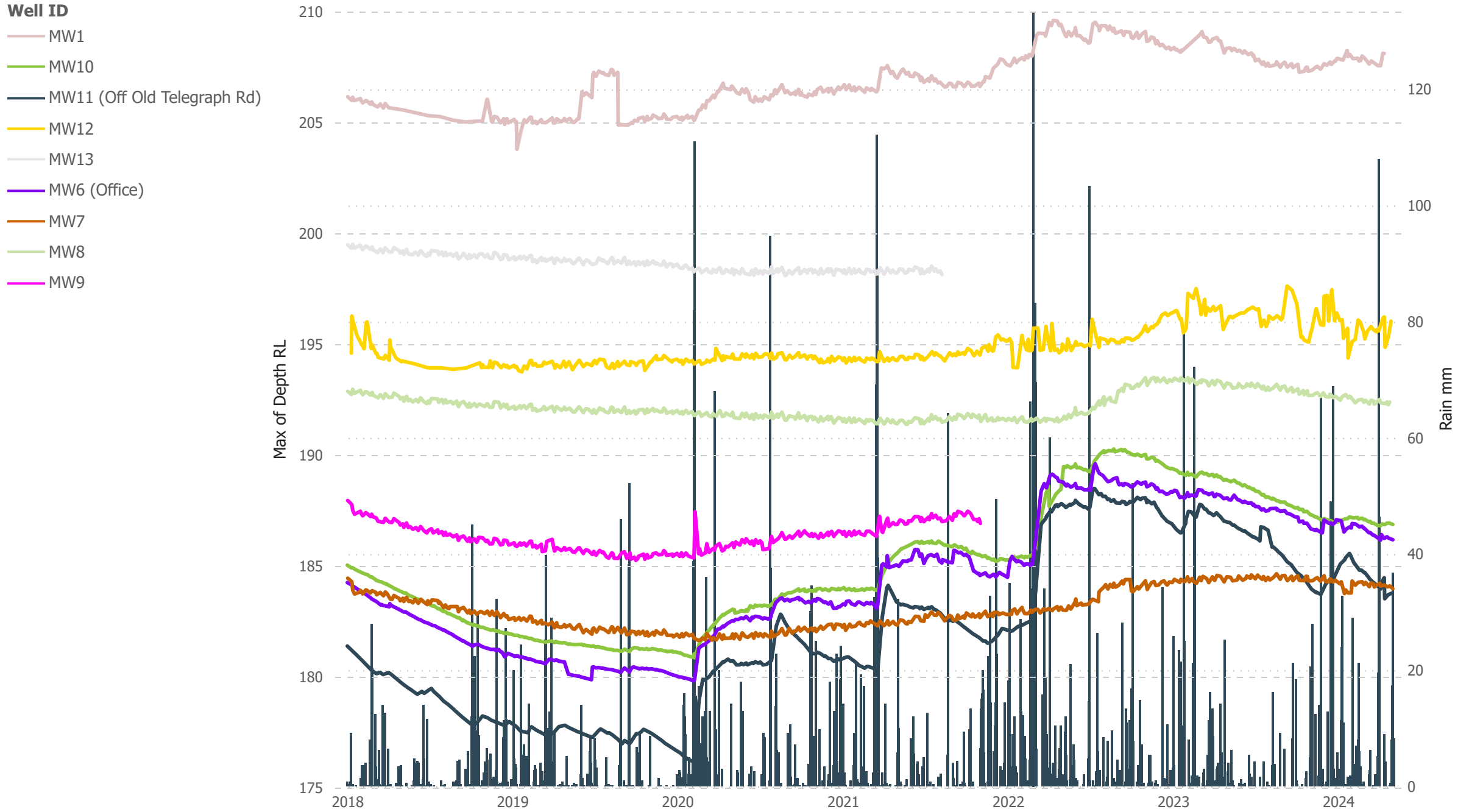
MW1 and MW12 were taken away for repairs during April 2018 and returned in October 2018, hence the gap in reporting on the following graphs.

Due to rain gauge malfunctions, rainfall was not recorded in 2020 until a new weather station was installed onsite 29th May 2020. Where available, daily rainfall received in the interim has been sourced from the Bureau of Meteorology.

Graph 2: All Groundwater Depths with Rainfall this month

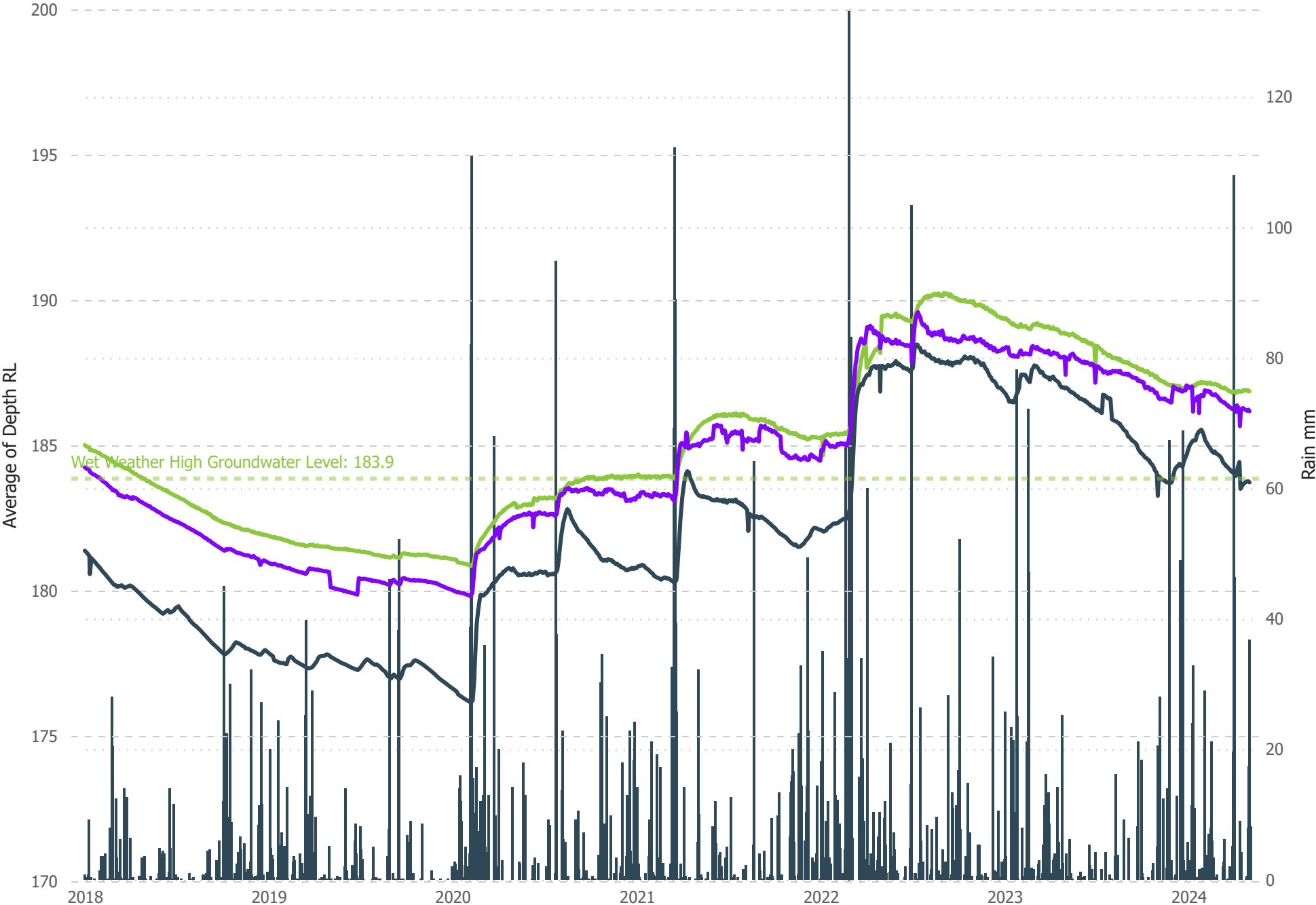


Graph 1: All Groundwater Depths with Rainfall from 1/1/2017

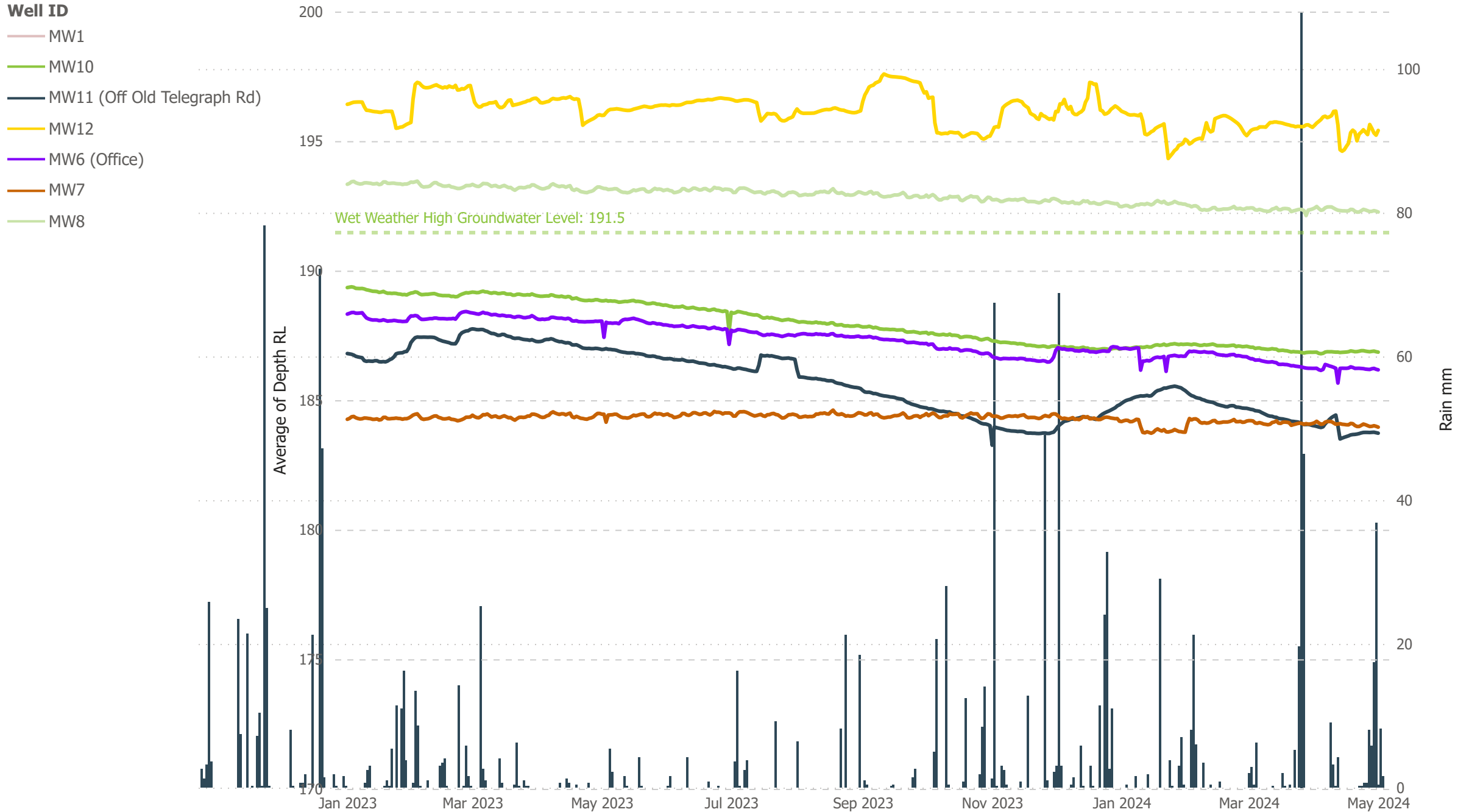


Graph 3: All Groundwater Depths with Rainfall in Maroota Sand

- Well ID**
- MW10
 - MW11 (Off Old Telegraph Rd)
 - MW6 (Office)

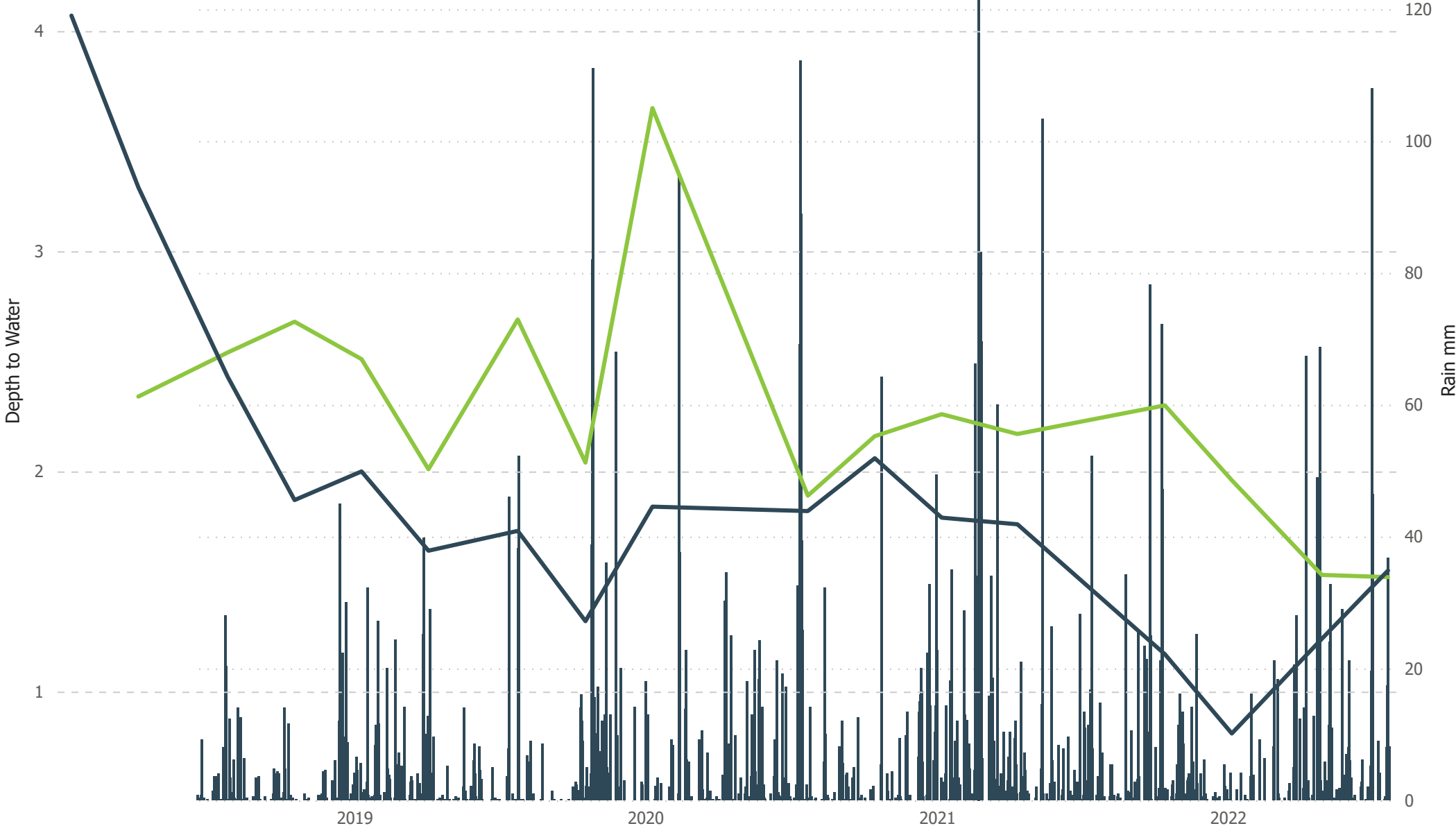


Graph 4: All Groundwater Depths with Rainfall in Hawkesbury Sandstone



Graph 5: Surface Water Depths with Rainfall

Sample
— Dam 1 - Process
— Dam 2 - Tailings



Weather Station Monitoring

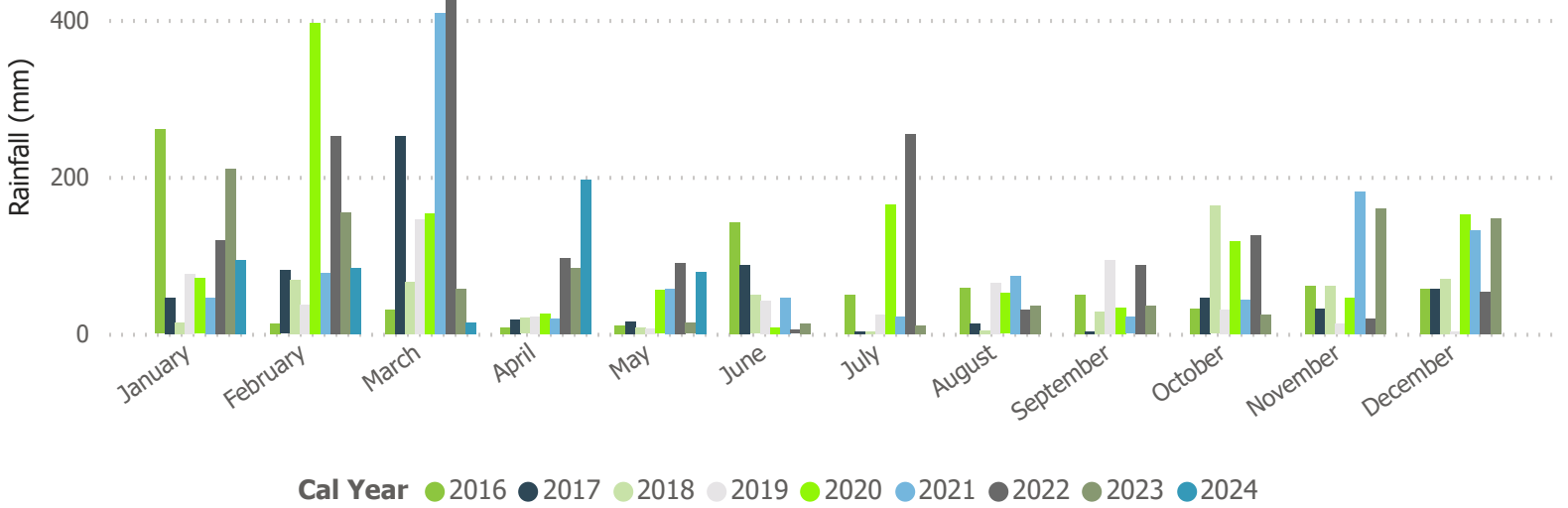
Due to gauge malfunctions, rainfall was not recorded in 2020 until a new weather station was installed onsite 29th May 2020. Where available, daily rainfall received in the interim was been sourced from the Bureau of Meteorology. Temperature monitoring during that period also shows gaps in the data. For modelling and reporting, Bureau of Meteorology averages were used

Weather Trends

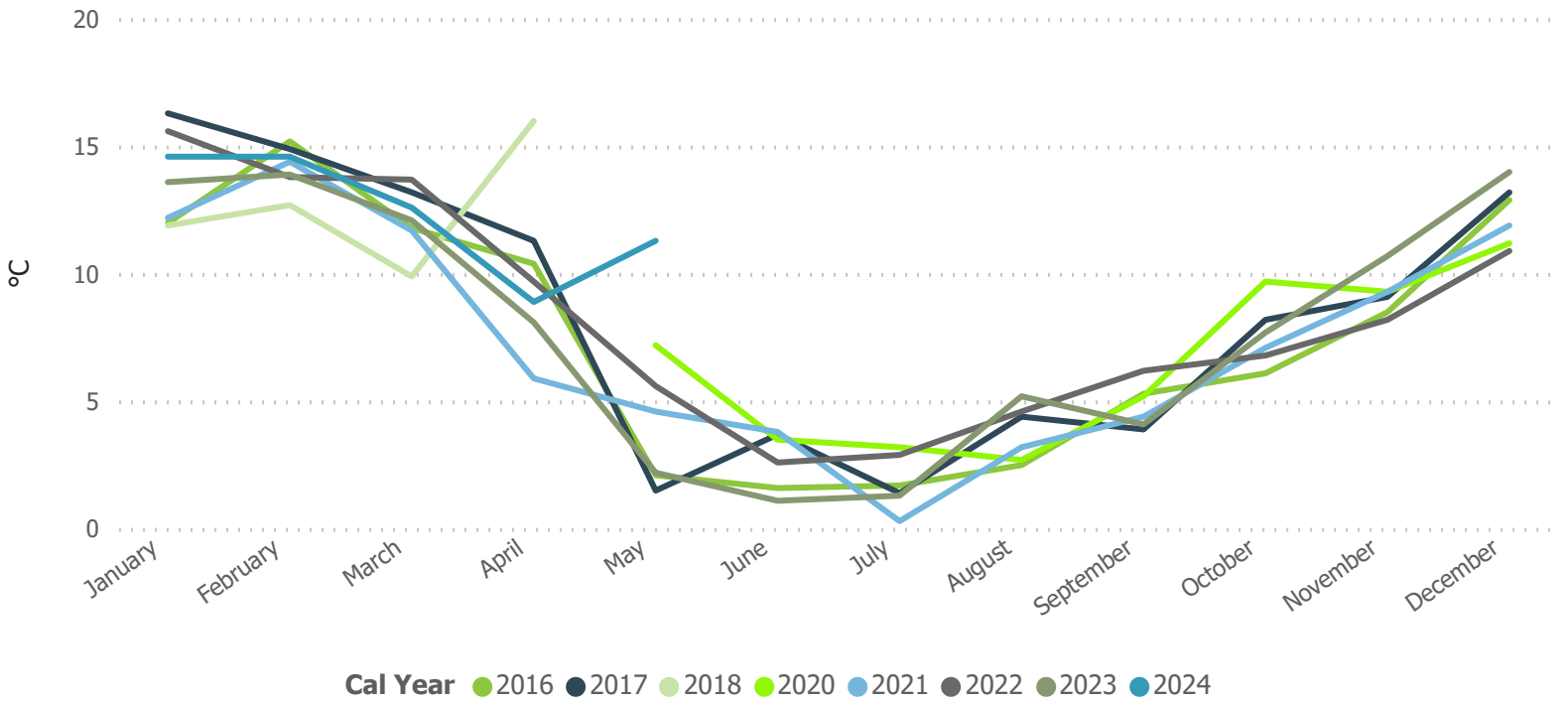
1/01/2016

31/05/2024

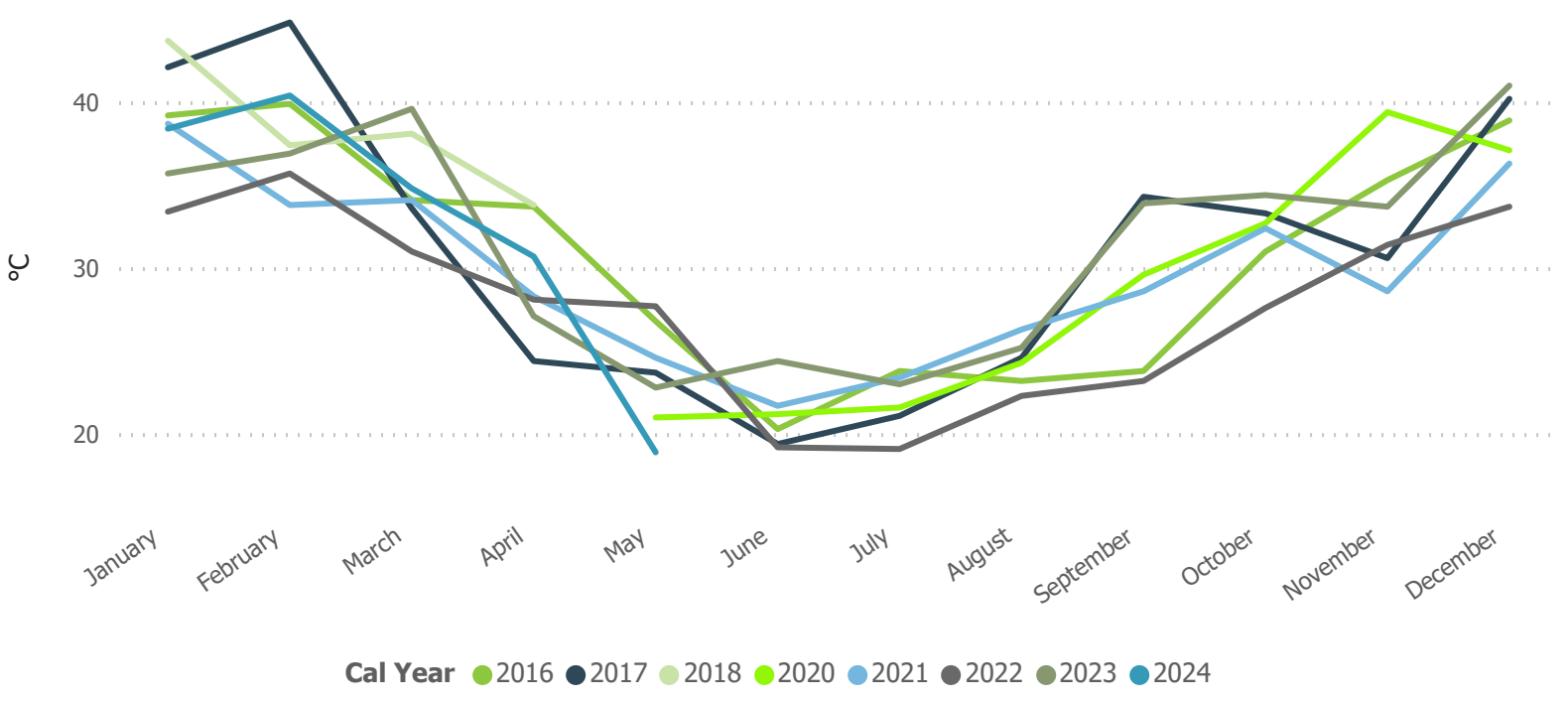
Precipitation



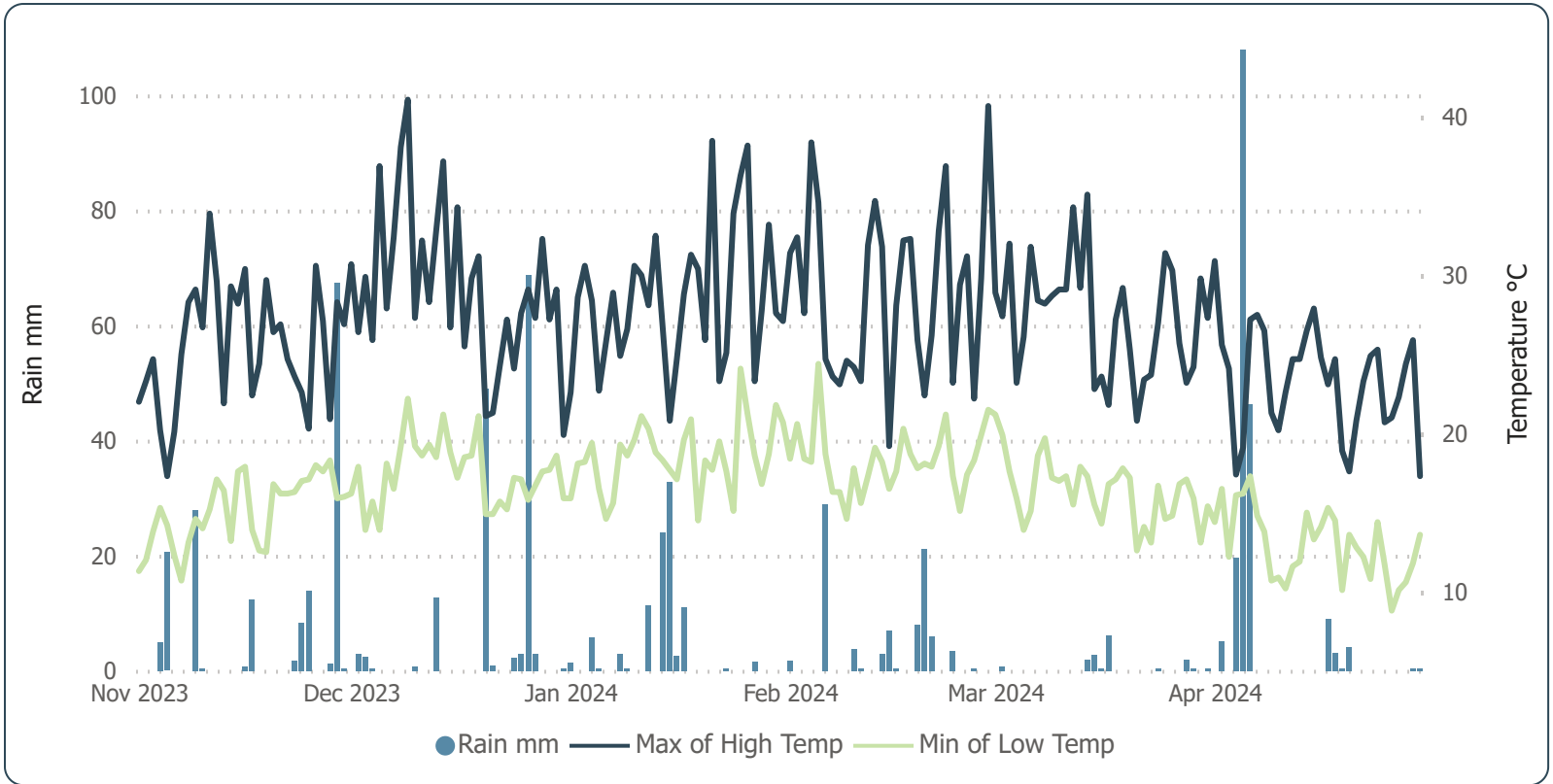
Minimum Temperature



Maximum Temperature



Weather Detail for last 6 months



Precipitation mm

Cal Year	January	February	March	April	November	December	Total
2023					160.2	146.8	307.0
2024	94.4	84.2	15.0	196.2			389.8
Total	94.4	84.2	15.0	196.2	160.2	146.8	696.8

Minimum Temperature °C

Cal Year	January	February	March	April	November	December	Total
2023					10.7	14.0	10.7
2024	14.6	14.6	12.6	8.9			8.9
Total	14.6	14.6	12.6	8.9	10.7	14.0	8.9

Average Temperature °C

Cal Year	January	February	March	April	November	December	Total
2023					19.4	22.4	20.9
2024	22.8	22.4	20.9	17.3			20.9
Total	22.8	22.4	20.9	17.3	19.4	22.4	20.9

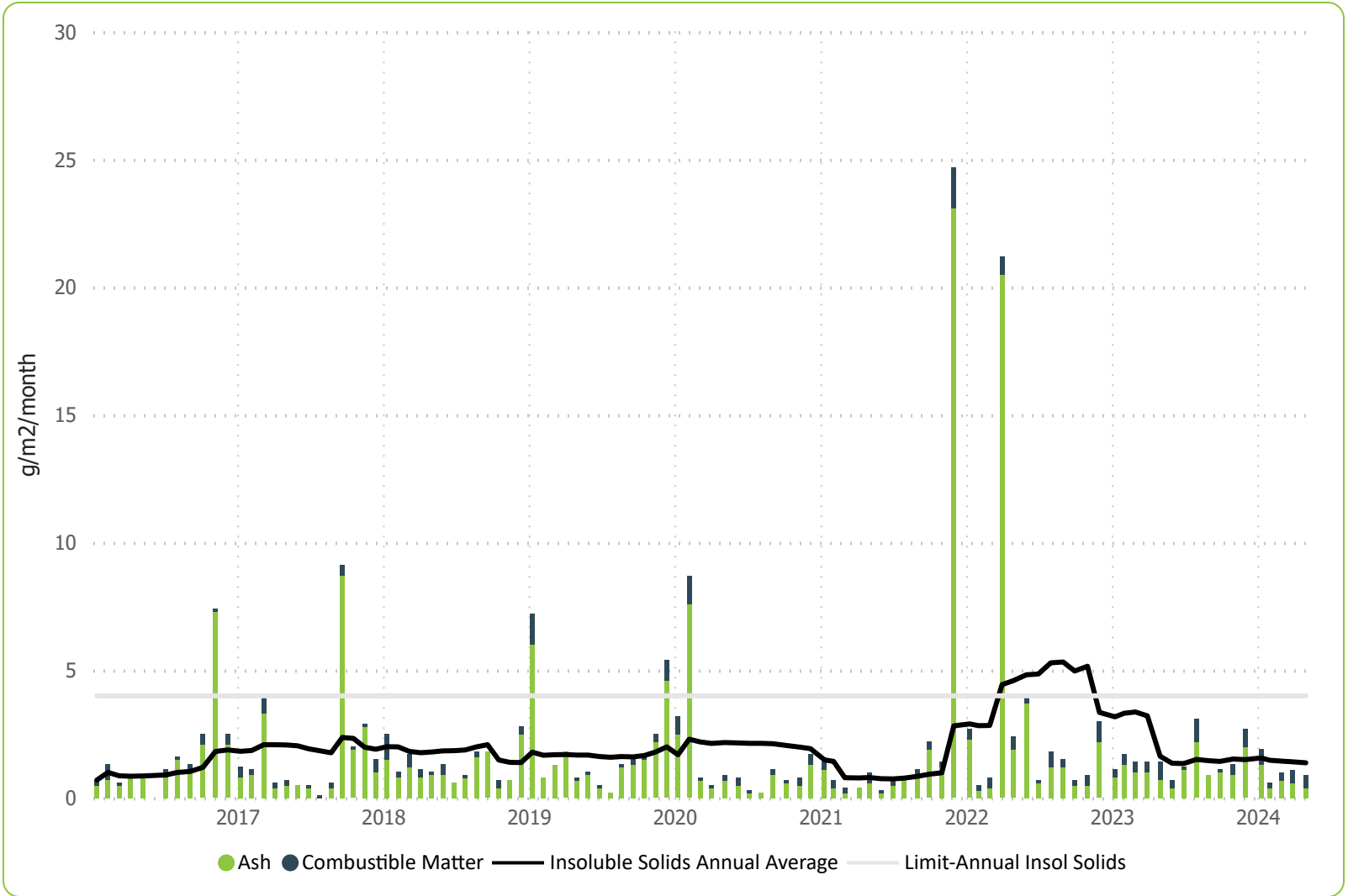
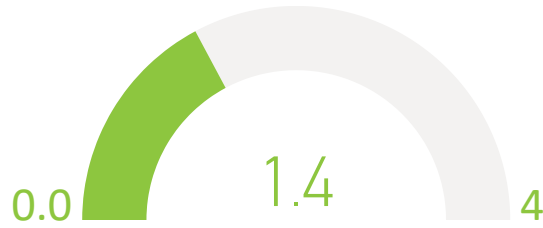
Maximum Temperature °C

Cal Year	January	February	March	April	November	December	Total
2023					33.7	41.0	41.0
2024	38.4	40.4	34.8	30.7			40.4
Total	38.4	40.4	34.8	30.7	33.7	41.0	41.0

Depositional Dust and Particulate Matter Monitoring

Depositional Dusts last 12 months

**Insoluble Solids
Annual Average
g/m²/month**

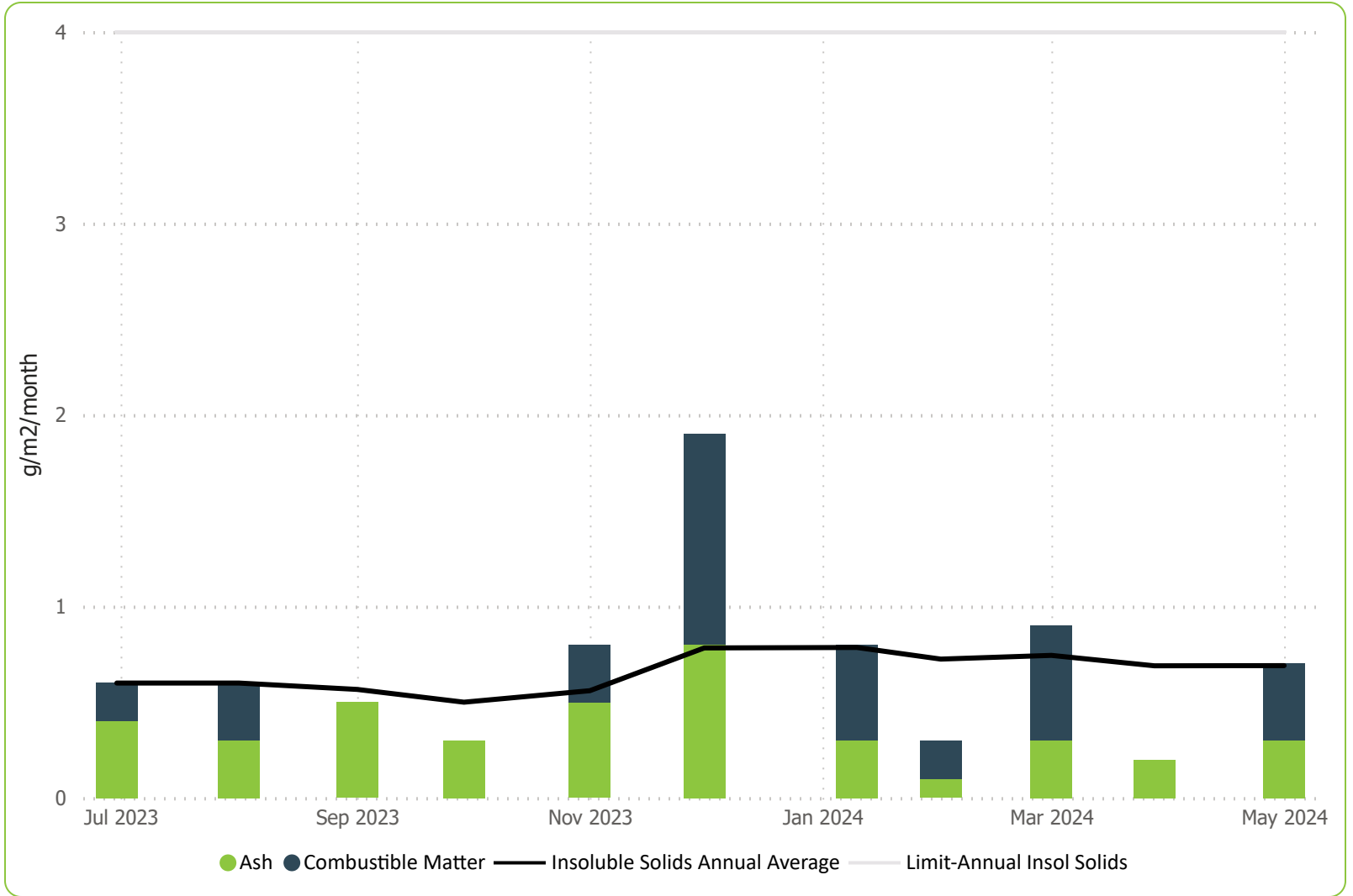


Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
2/05/23	Sampled by M.Mass.	1/6/23	30	0.7	0.4	0.3	18
1/06/23	Sampled by M.Mass.	30/6/23	29	1.2	1.1	0.1	16
30/06/23		1/8/23	32	3.1	2.2	0.9	14
1/08/23		1/9/23	31	0.9	0.9	0.0	41
1/09/23		29/9/23	28	1.1	1.0	0.1	31
29/09/23		1/11/23	33	1.3	0.9	0.4	28
1/11/23		1/12/23	30	2.7	2.0	0.7	114
1/12/23		10/1/24	43	1.9	1.3	0.6	115
10/01/24		1/2/24	22	0.6	0.4	0.2	85
1/02/24		1/3/24	30	1.0	0.7	0.3	82
1/03/24		28/3/24	29	1.1	0.6	0.5	18
28/03/24		1/5/24	34	0.9	0.4	0.5	115

Depositional Dusts last 12 months

D2a North East Corner ▼

Insoluble Solids Annual Average g/m²/month



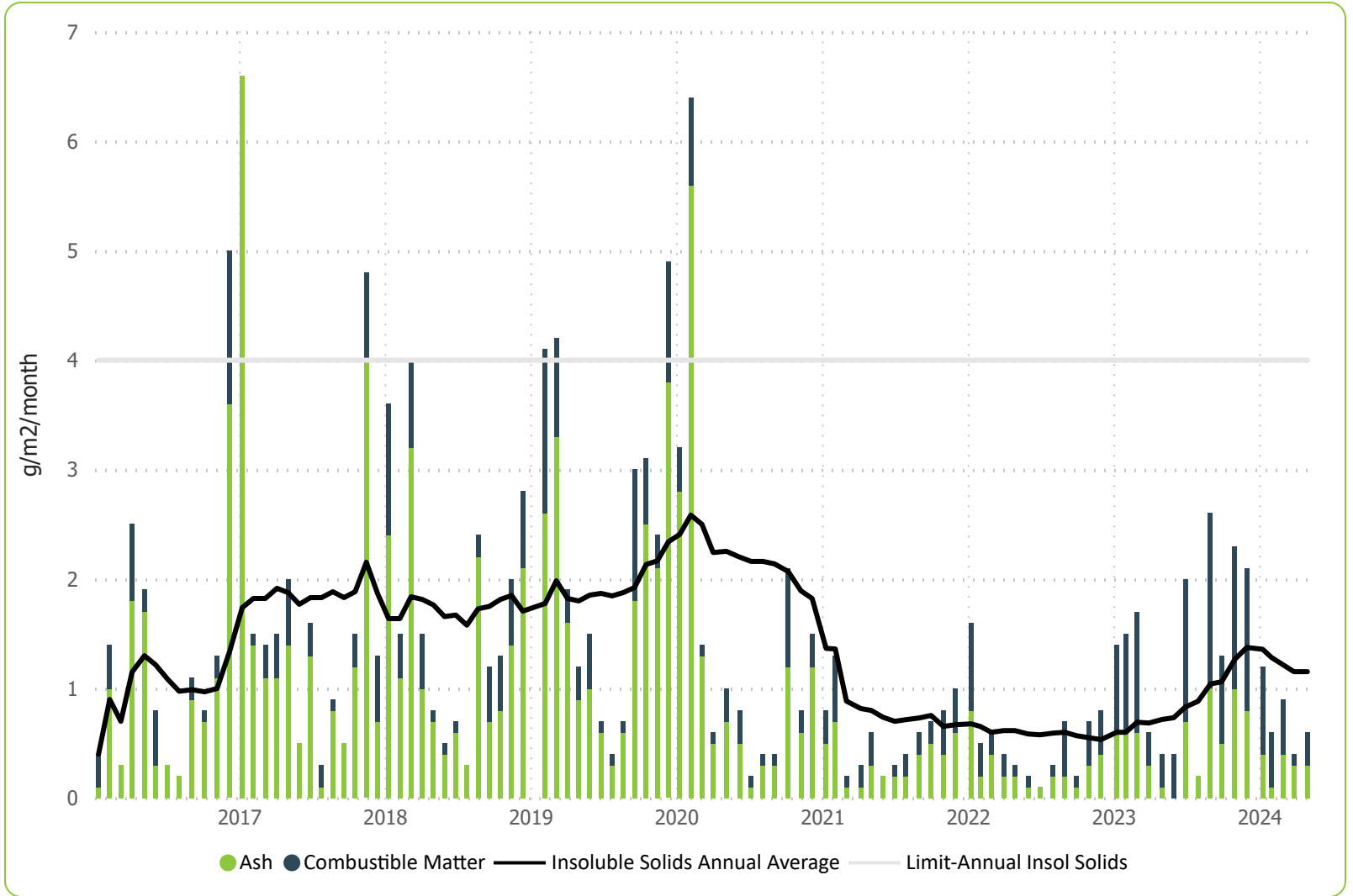
Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
1/06/23	Sampled by M.Mass.	30/6/23	29	0.6	0.4	0.2	9
30/06/23		1/8/23	32	0.6	0.3	0.3	3
1/08/23		1/9/23	31	0.5	0.5	0.0	32
1/09/23		29/9/23	28	0.3	0.3	0.0	28
29/09/23		1/11/23	33	0.8	0.5	0.3	8
1/11/23		1/12/23	30	1.9	0.8	1.1	115
1/12/23		10/1/24	43	0.8	0.3	0.5	114
10/01/24		1/2/24	22	0.3	0.1	0.2	72
1/02/24		1/3/24	30	0.9	0.3	0.6	69
1/03/24		28/3/24	29	0.2	0.2	0.0	9
28/03/24		1/5/24	34	0.7	0.3	0.4	114

Depositional Dusts last 12 months

D3A Bundwall



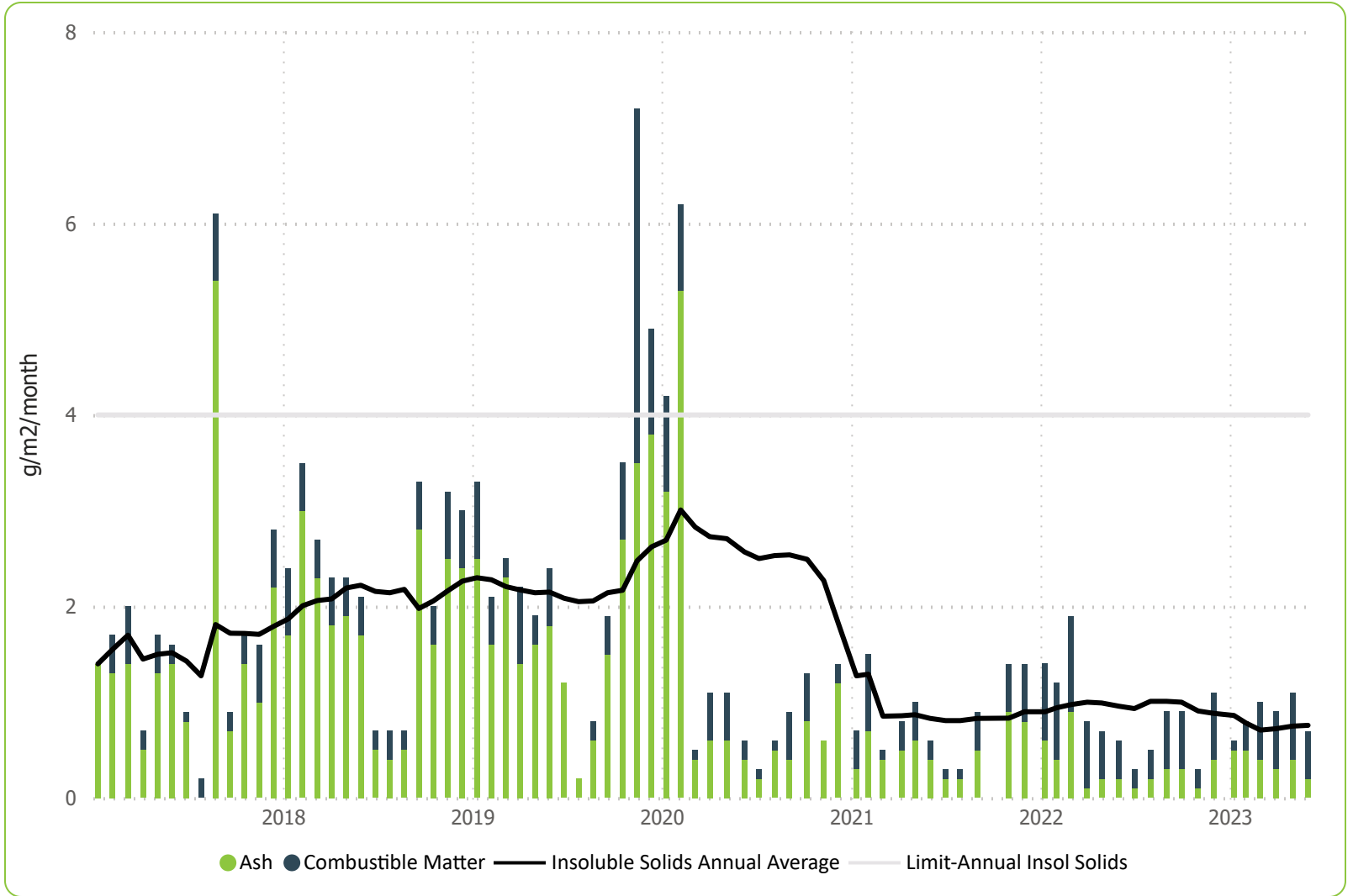
**Insoluble Solids
Annual Average
g/m2/month**



Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
2/05/23	Sampled by M.Mass.	1/6/23	30	0.4	0.0	0.4	19
1/06/23	Sampled by M.Mass.	30/6/23	29	2.0	0.7	1.3	16
30/06/23		1/8/23	32	0.2	0.2	0.0	13
1/08/23		1/9/23	31	2.6	1.0	1.6	40
1/09/23		29/9/23	28	1.3	0.5	0.8	35
29/09/23		1/11/23	33	2.3	1.0	1.3	26
1/11/23		1/12/23	30	2.1	0.8	1.3	115
1/12/23	Funnel broken from large hail.	10/1/24	43	1.2	0.4	0.8	115
10/01/24		1/2/24	22	0.6	0.1	0.5	58
1/02/24	Vegetable farm adjacent recently ploughed	1/3/24	30	0.9	0.4	0.5	79
1/03/24		28/3/24	29	0.4	0.3	0.1	16
28/03/24		1/5/24	34	0.6	0.3	0.3	110



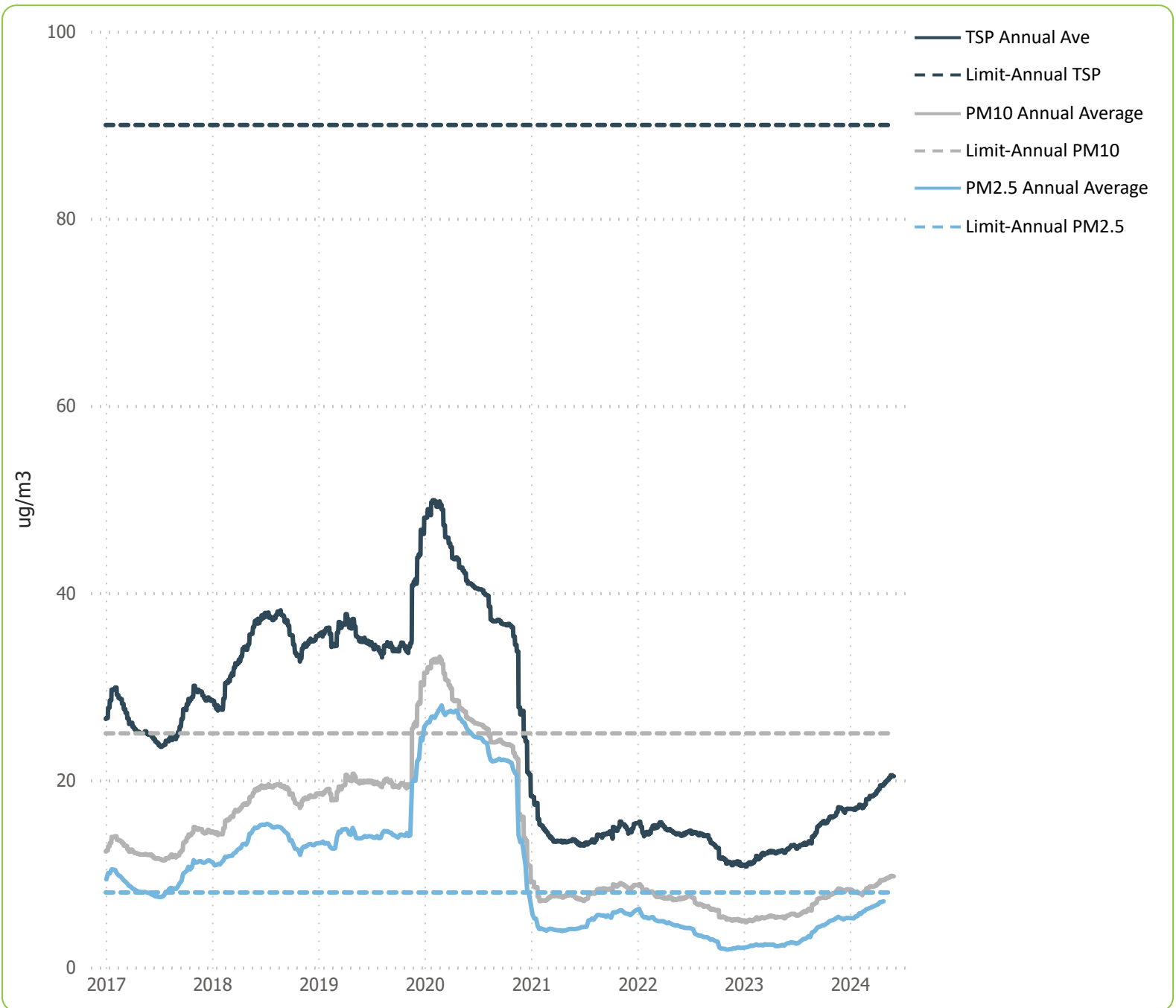
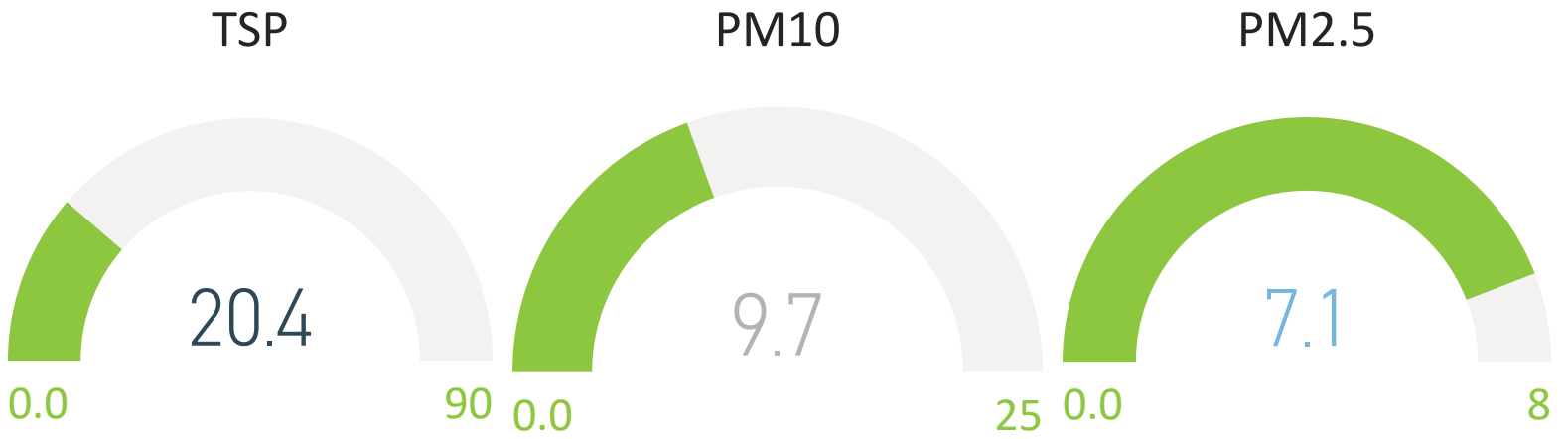
**Insoluble Solids
Annual Average
g/m2/month**



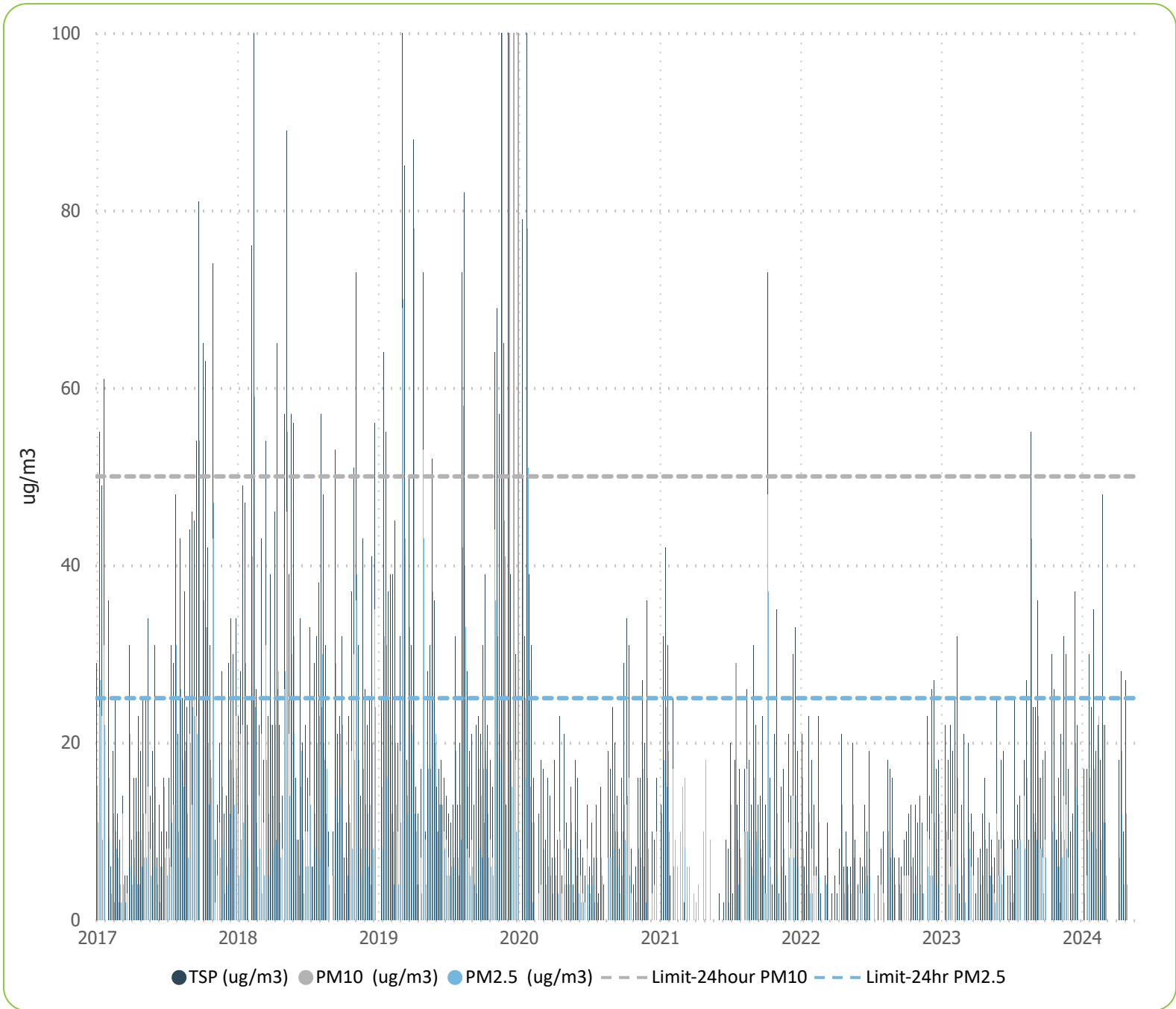
Date On	Comments
1/06/22	Sampled by Melissa Mass
1/07/22	Sampled by Melissa Mass. Flooding rainfall event during July.
1/08/22	Sampled by Melissa Mass.
1/09/22	Sampled by Melissa Mass.
30/09/22	Sampled by Melissa Mass.
1/11/22	Sampled by Melissa Mass.
1/12/22	Sampled by Melissa Mass.
9/01/23	
1/02/23	Sampled by M.Mass
1/03/23	Sampled by M.Mass. Not compliant - Clear sky/ 10m from obstacle
31/03/23	Sampled by M.Mass.
2/05/23	Sampled by M.Mass.

Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
1/7/22	30	0.3	0.1	0.2	4
1/8/22	31	0.5	0.2	0.3	115
1/9/22	31	0.9	0.3	0.6	26
30/9/22	29	0.9	0.3	0.6	72
1/11/22	32	0.3	0.1	0.2	114
1/12/22	30	1.1	0.4	0.7	20
9/1/23	39	0.6	0.5	0.1	68
1/2/23	23	0.8	0.5	0.3	114
1/3/23	28	1.0	0.4	0.6	114
31/3/23	30	0.9	0.3	0.6	47
2/5/23	32	1.1	0.4	0.7	67
1/6/23	30	0.7	0.2	0.5	12

Particulate Matter Annual Averages ($\mu\text{g}/\text{m}^3$)



Particulate Matter 24 Hour Averages ($\mu\text{g}/\text{m}^3$)



PM10 24 hour exceedances ($>50 \mu\text{g}/\text{m}^3$)

Date PM10 (ug/m3) Sampling Comments

PM2.5 24 hour exceedances ($>25 \mu\text{g}/\text{m}^3$)

Date PM2.5 (ug/m3) Sampling Comments

Sample

Dam 1 - Process

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0
Dam 1 - Process	12/4/24	7.4	131	82	16	17	6.2	1.0	8	3.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0
Dam 1 - Process	12/4/24	7.4	131	82	16	17	6.2	1.0	8	3.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0
Dam 1 - Process	12/4/24	7.4	131	82	16	17	6.2	1.0	8	3.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0
Dam 1 - Process	12/4/24	7.4	131	82	16	17	6.2	1.0	8	3.0

Sample



Dam 2 - Tailings



Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
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Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
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Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
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Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
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Sample

Dam 3 - Nursery

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2
Dam 3 - Nursery	12/4/24	7.1	155	97	28	6	3.0	2.0	12	5.7

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2
Dam 3 - Nursery	12/4/24	7.1	155	97	28	6	3.0	2.0	12	5.7

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2
Dam 3 - Nursery	12/4/24	7.1	155	97	28	6	3.0	2.0	12	5.7

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2
Dam 3 - Nursery	12/4/24	7.1	155	97	28	6	3.0	2.0	12	5.7

Sample

Dam 4 - Farm

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0
Dam 4 - Farm	12/4/24	7.3	74	0	14	2	0.7	0.9	6	3.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0
Dam 4 - Farm	12/4/24	7.3	74	0	14	2	0.7	0.9	6	3.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0
Dam 4 - Farm	12/4/24	7.3	74	0	14	2	0.7	0.9	6	3.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0
Dam 4 - Farm	12/4/24	7.3	74	0	14	2	0.7	0.9	6	3.0

Sample

MW1

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0
MW1	12/4/24	4.3	292	180	41	29	5.0	12.0	19	5.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0
MW1	12/4/24	4.3	292	180	41	29	5.0	12.0	19	5.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0
MW1	12/4/24	4.3	292	180	41	29	5.0	12.0	19	5.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0
MW1	12/4/24	4.3	292	180	41	29	5.0	12.0	19	5.0

Sample

MW10

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0
MW10	12/4/24	4.4	261	160	61	6	0.7	5.0	30	1.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0
MW10	12/4/24	4.4	261	160	61	6	0.7	5.0	30	1.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0
MW10	12/4/24	4.4	261	160	61	6	0.7	5.0	30	1.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0
MW10	12/4/24	4.4	261	160	61	6	0.7	5.0	30	1.0

Sample

MW11 (Off Old Telegraph Rd)

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0
MW11 (Off Old Telegraph Rd)	12/4/24	5.8	160	100	30	11	4.0	2.0	13	6.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0
MW11 (Off Old Telegraph Rd)	12/4/24	5.8	160	100	30	11	4.0	2.0	13	6.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0
MW11 (Off Old Telegraph Rd)	12/4/24	5.8	160	100	30	11	4.0	2.0	13	6.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0
MW11 (Off Old Telegraph Rd)	12/4/24	5.8	160	100	30	11	4.0	2.0	13	6.0

Sample

MW12

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9
MW12	12/4/24	5.0	126	79	22	9	2.0	1.0	13	2.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9
MW12	12/4/24	5.0	126	79	22	9	2.0	1.0	13	2.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9
MW12	12/4/24	5.0	126	79	22	9	2.0	1.0	13	2.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9
MW12	12/4/24	5.0	126	79	22	9	2.0	1.0	13	2.0

Sample

MW6 (Office)

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0
MW6 (Office)	12/4/24	7.4	342	210	77	1	2.0	2.0	45	2.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0
MW6 (Office)	12/4/24	7.4	342	210	77	1	2.0	2.0	45	2.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0
MW6 (Office)	12/4/24	7.4	342	210	77	1	2.0	2.0	45	2.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0
MW6 (Office)	12/4/24	7.4	342	210	77	1	2.0	2.0	45	2.0

Sample

MW7

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5
MW7	12/4/24	5.6	181	110	29	8	0.0	0.0	26	0.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5
MW7	12/4/24	5.6	181	110	29	8	0.0	0.0	26	0.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5
MW7	12/4/24	5.6	181	110	29	8	0.0	0.0	26	0.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5
MW7	12/4/24	5.6	181	110	29	8	0.0	0.0	26	0.0

Sample

MW8

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0
MW8	12/4/24	4.4	195	120	45	1	0.7	3.0	20	0.0

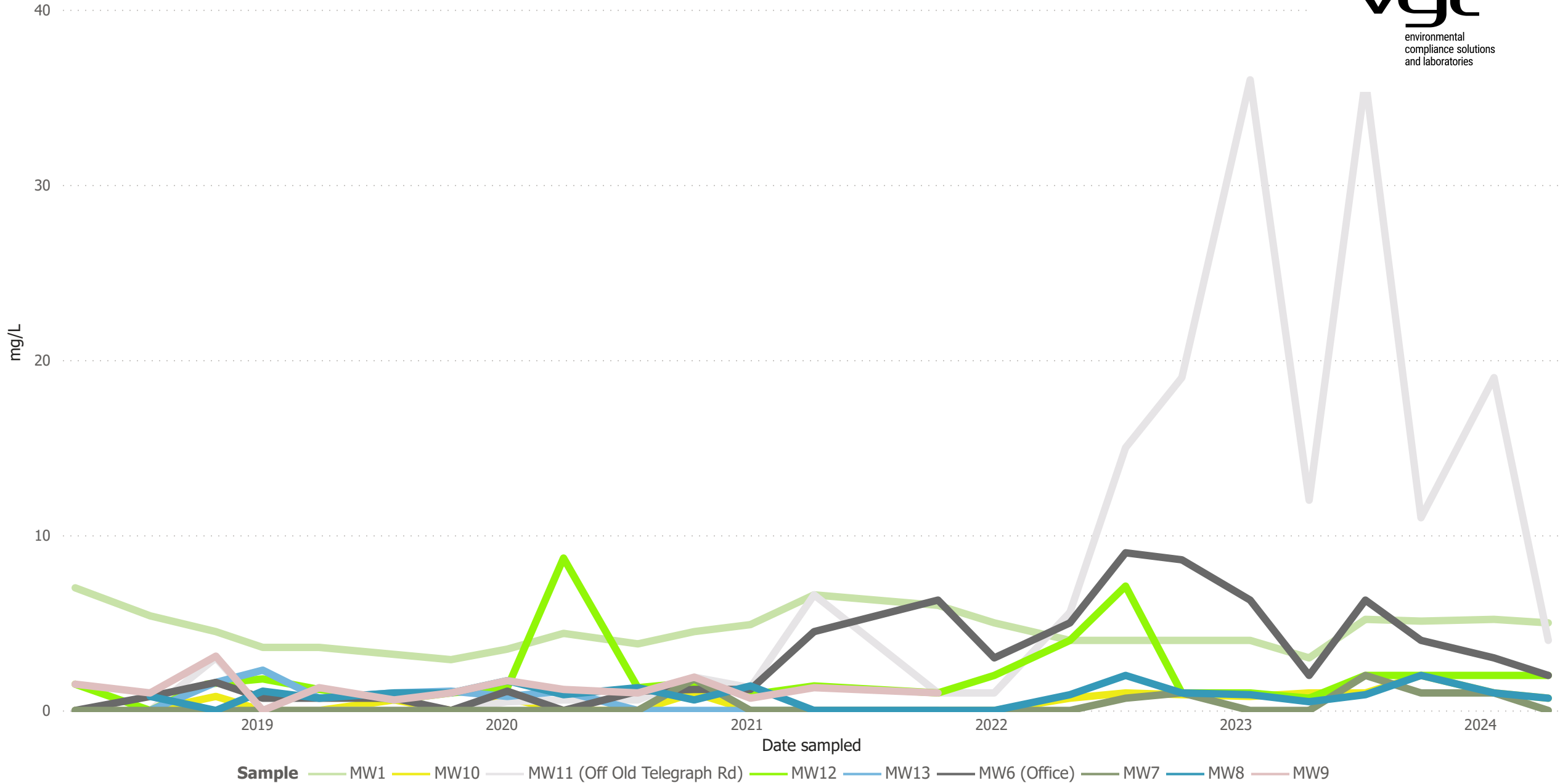
Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0
MW8	12/4/24	4.4	195	120	45	1	0.7	3.0	20	0.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0
MW8	12/4/24	4.4	195	120	45	1	0.7	3.0	20	0.0

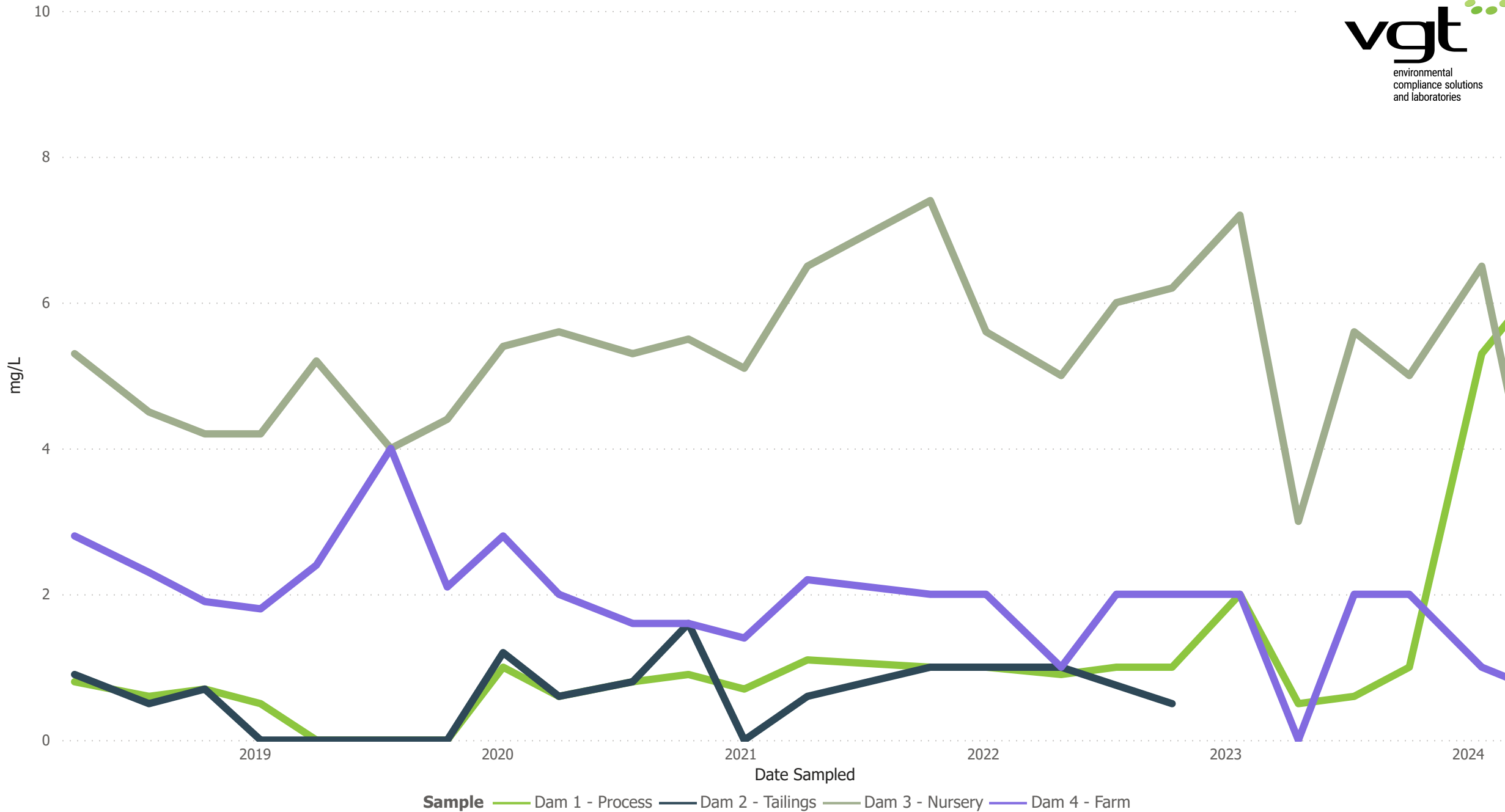
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MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0
MW8	12/4/24	4.4	195	120	45	1	0.7	3.0	20	0.0

Water Quality Trends

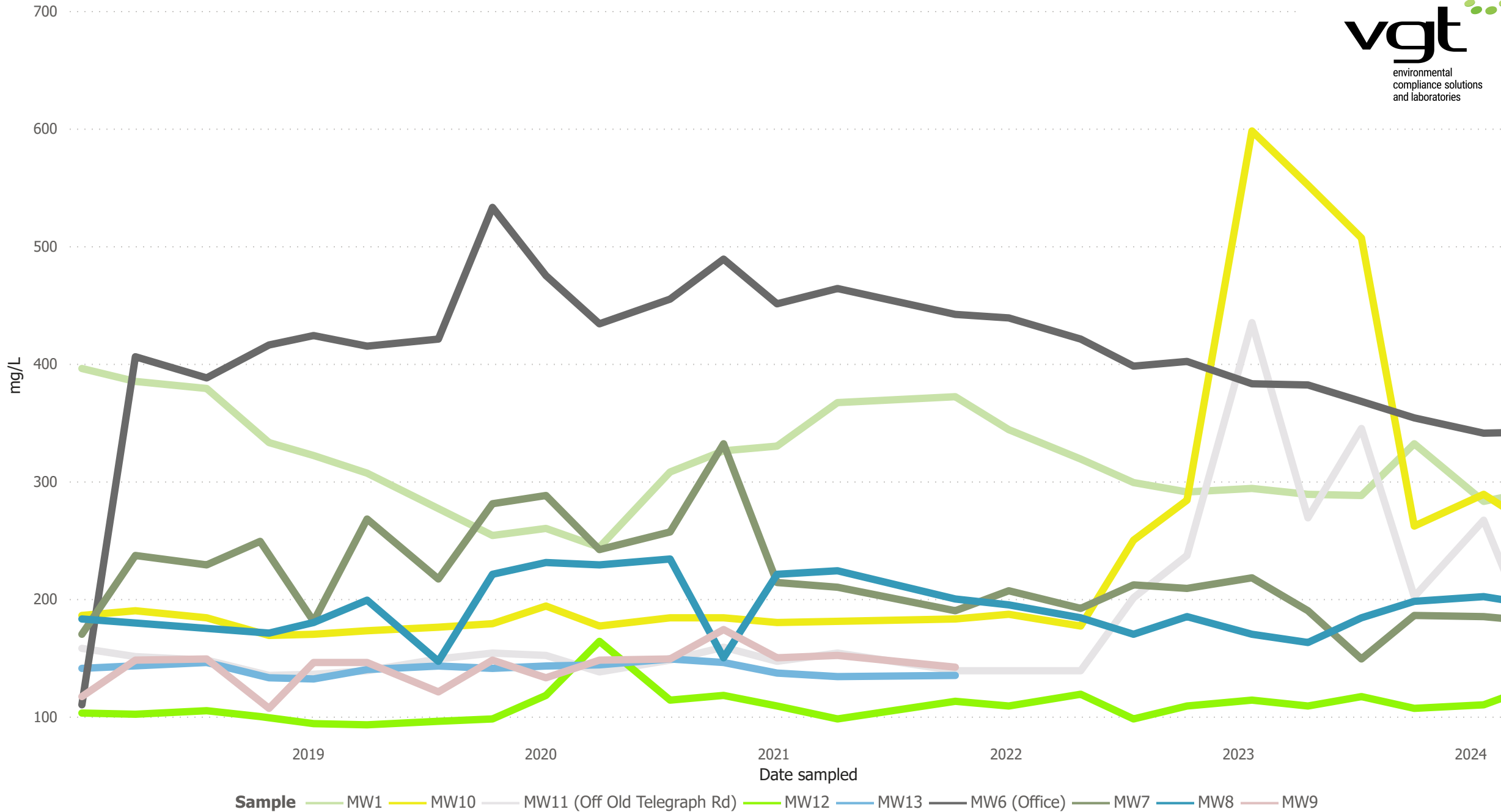
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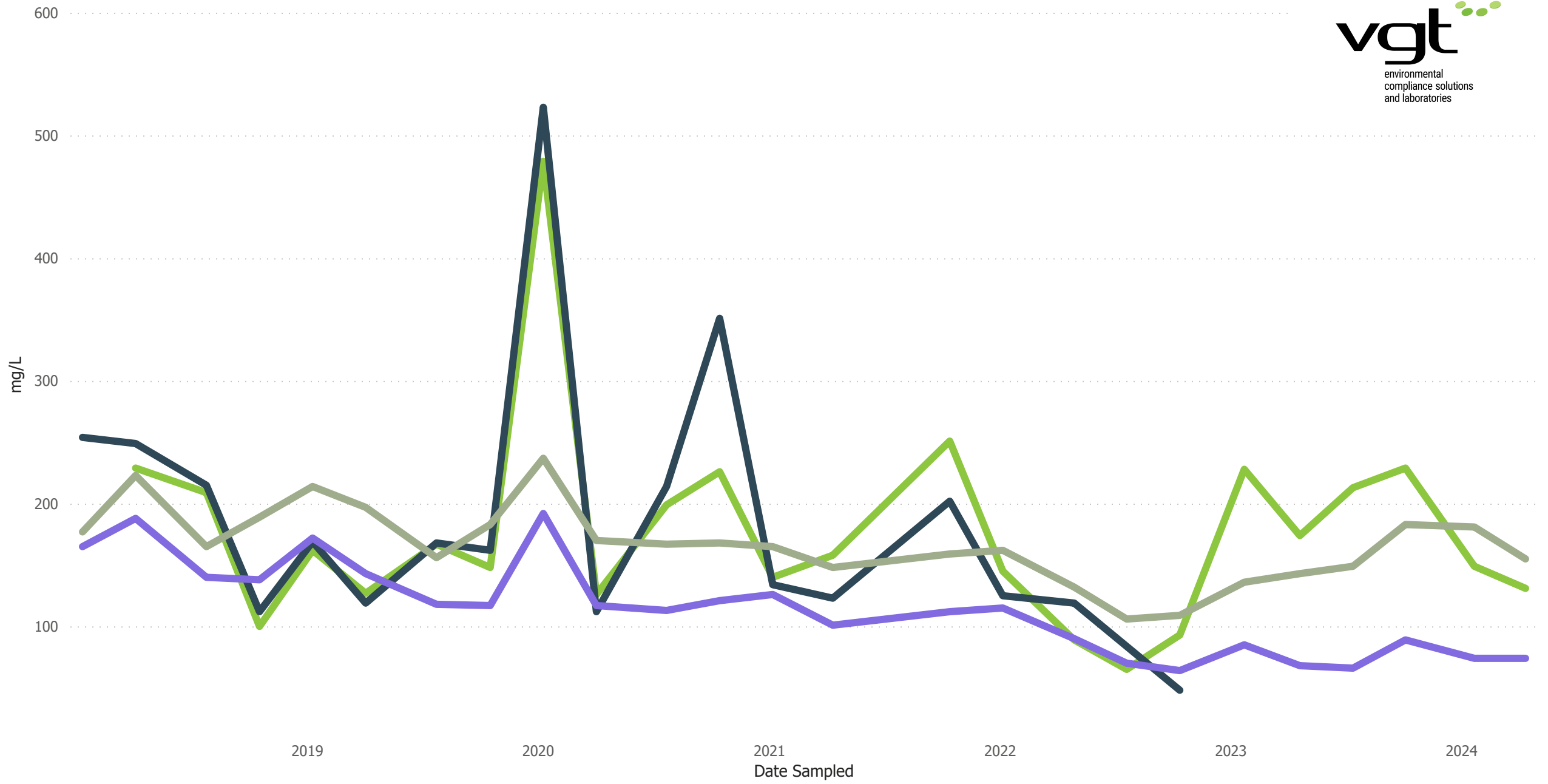
Calcium



Electrical Conductivity

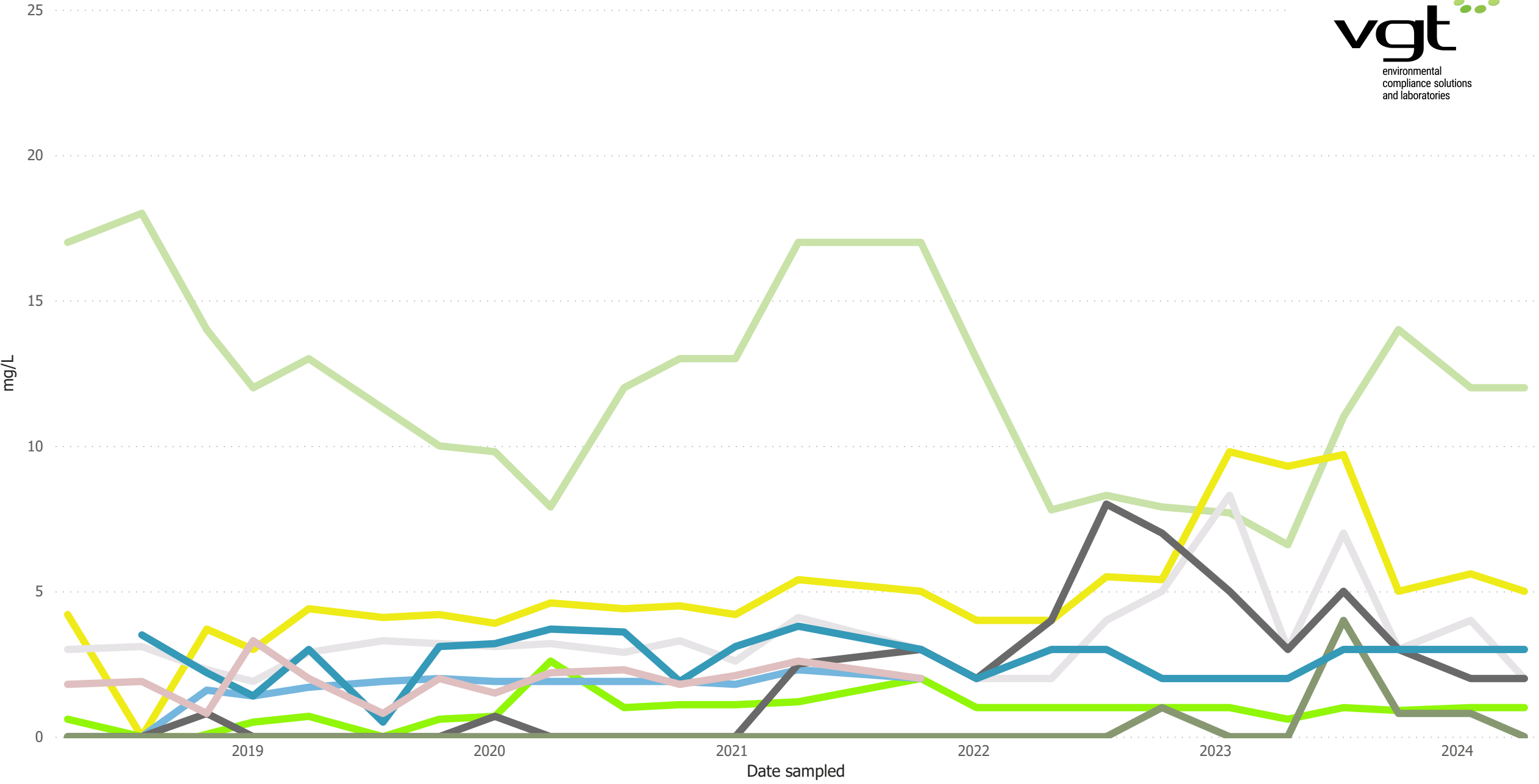


Electrical Conductivity



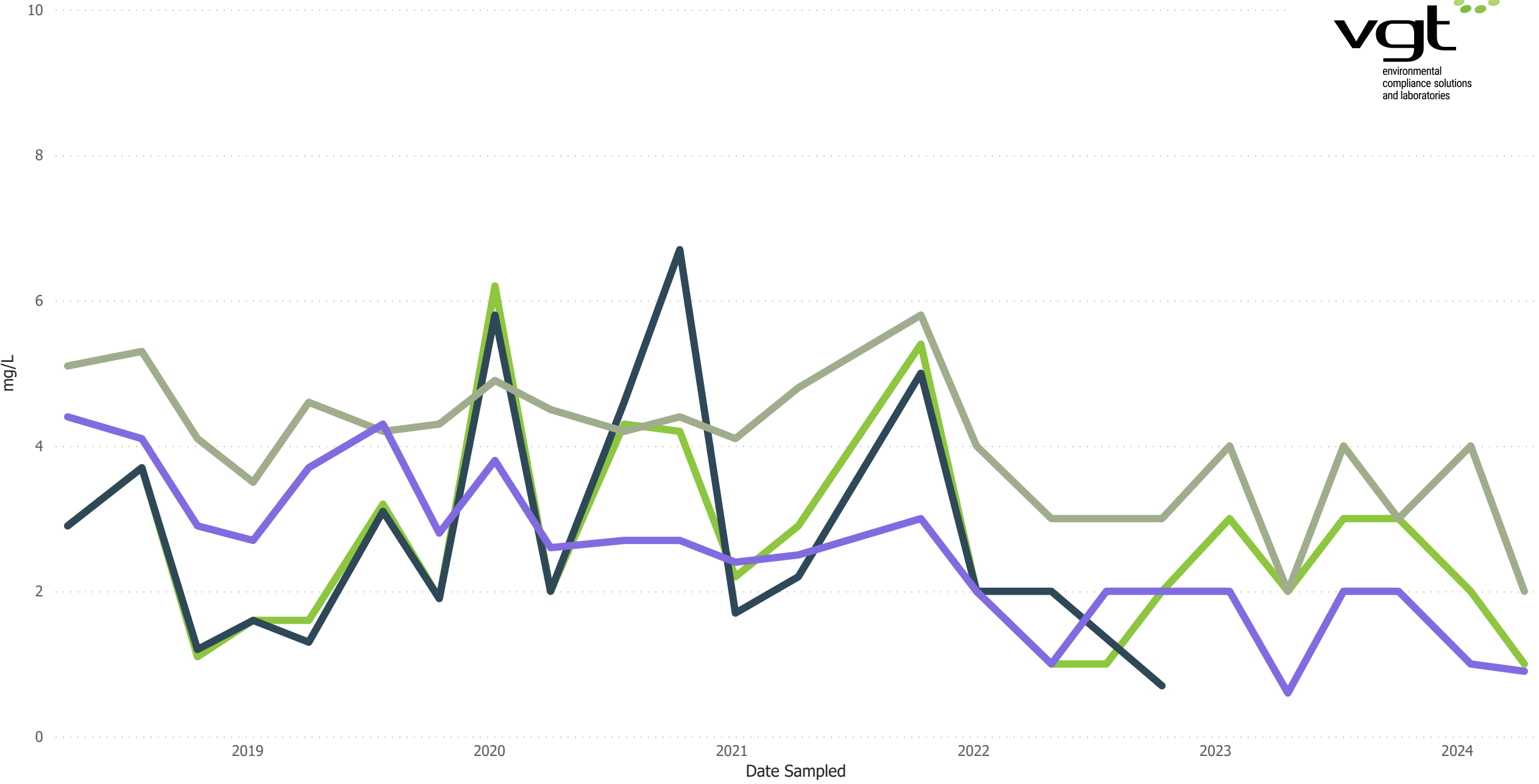
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Magnesium



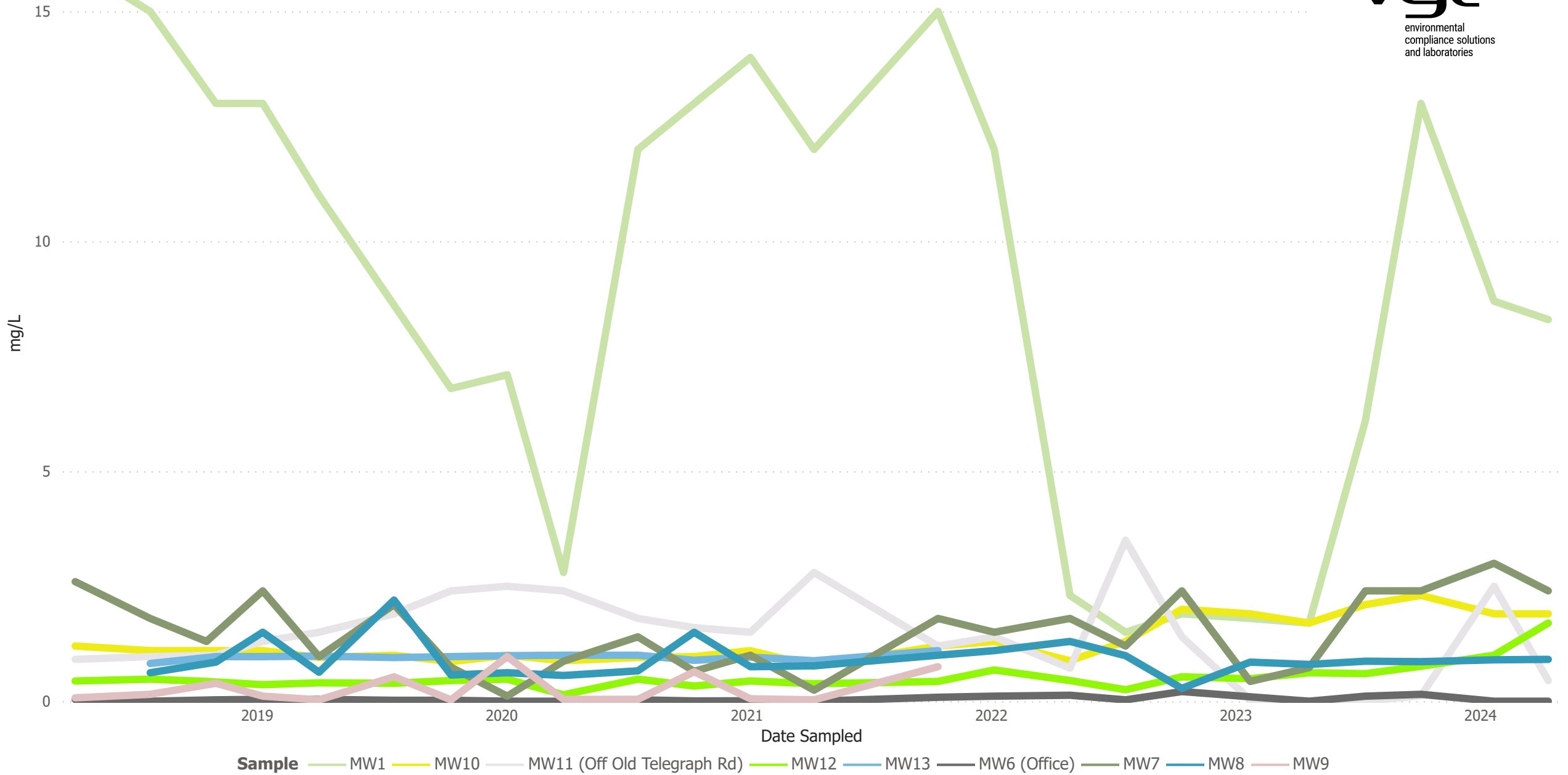
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Magnesium

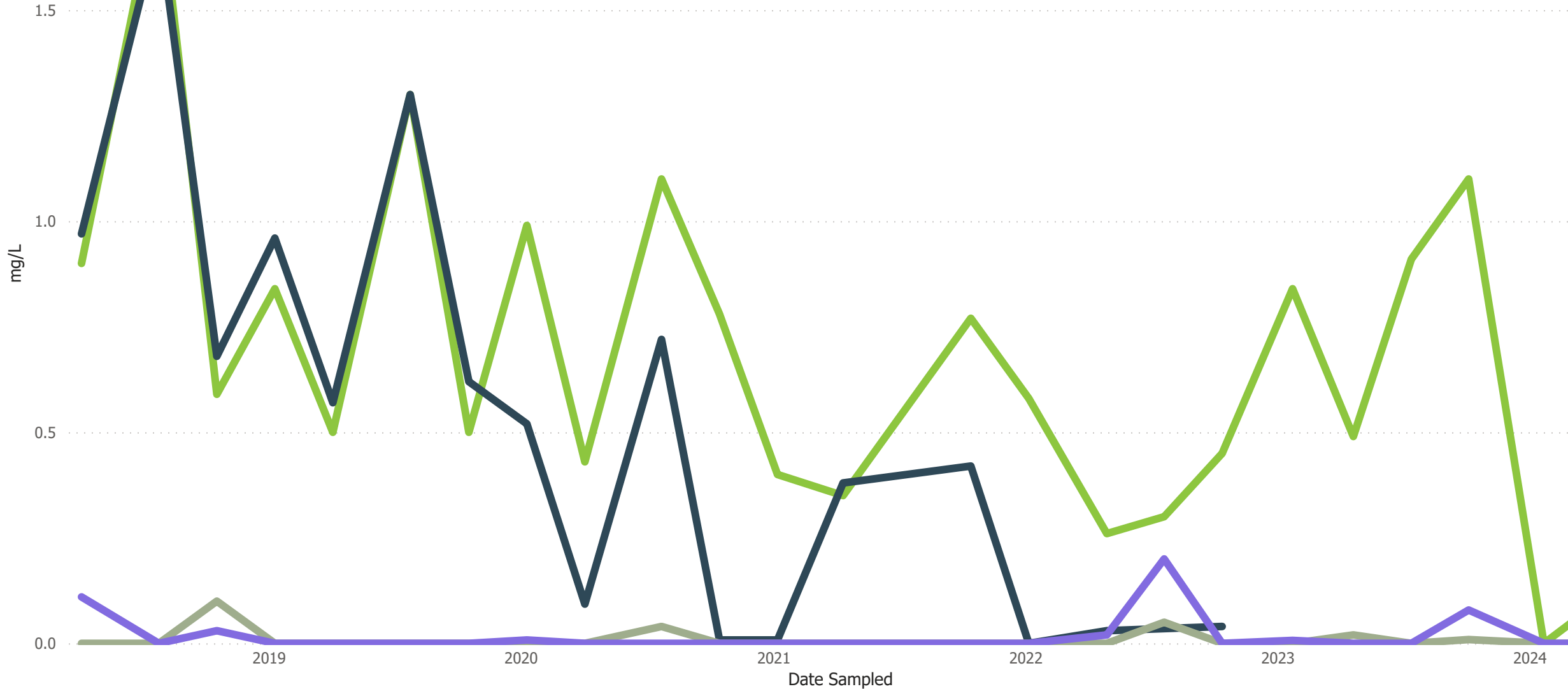


Sample — Dam 1 - Process — Dam 2 - Tailings — Dam 3 - Nursery — Dam 4 - Farm

Nitrate as N

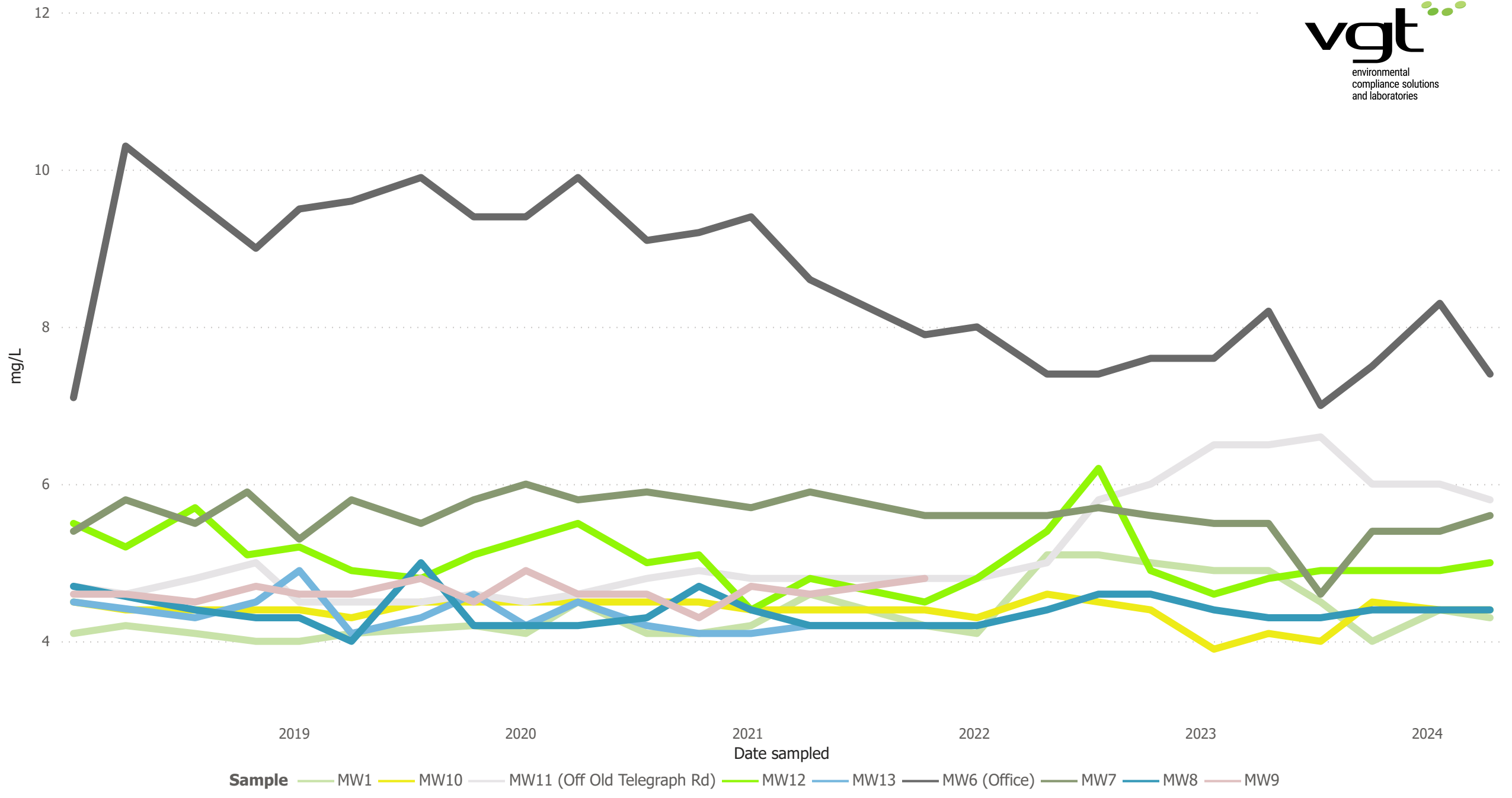


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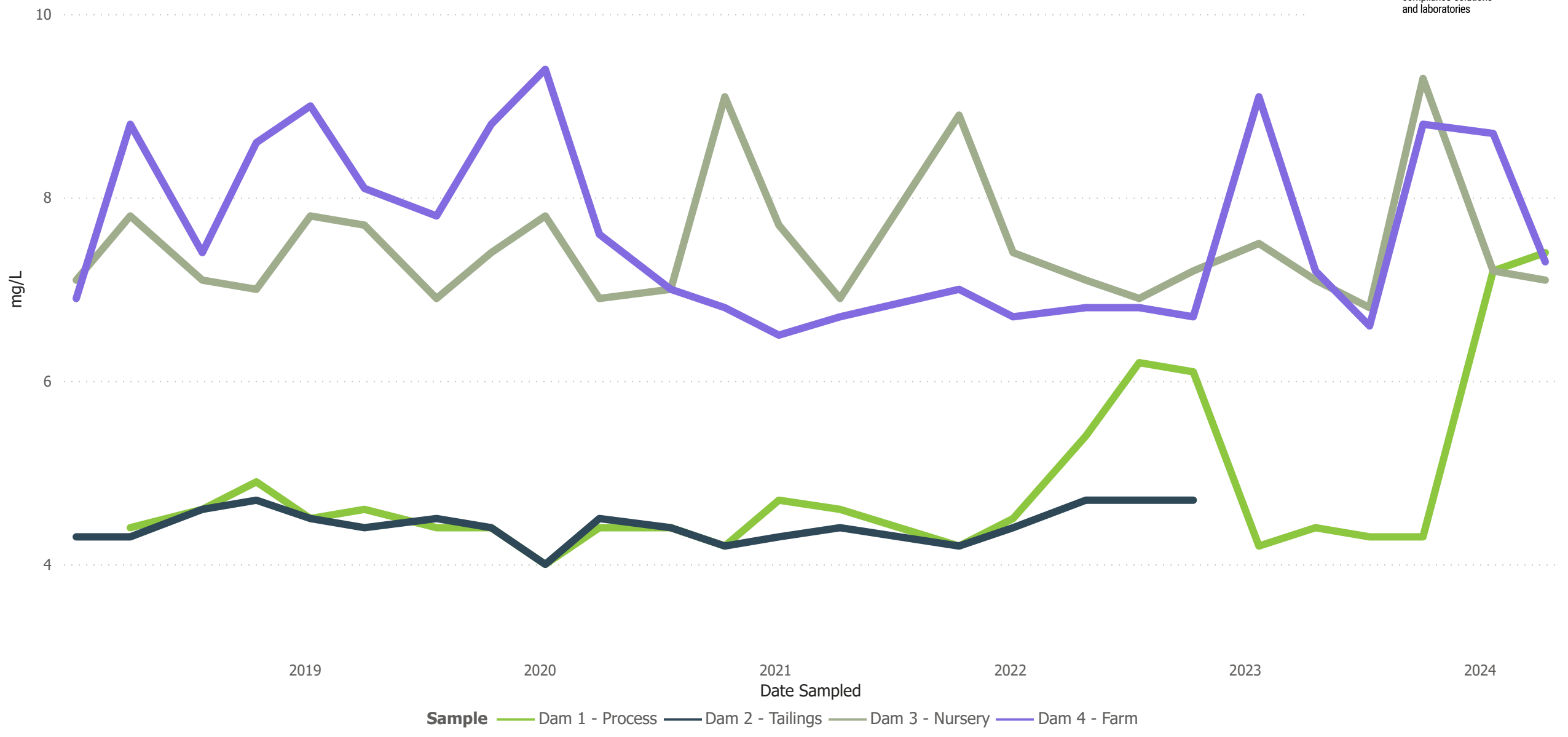


Sample — Dam 1 - Process — Dam 2 - Tailings — Dam 3 - Nursery — Dam 4 - Farm

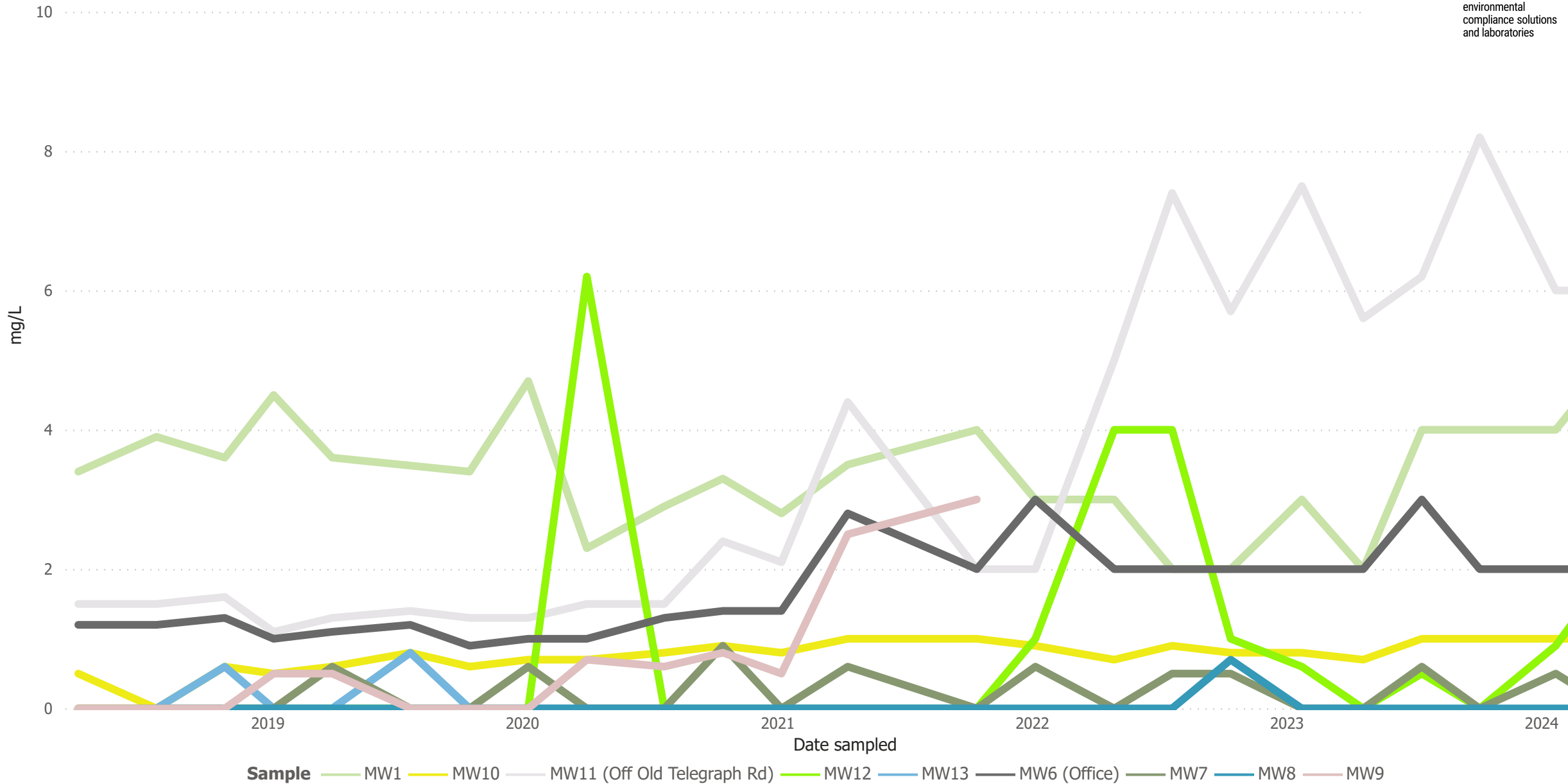
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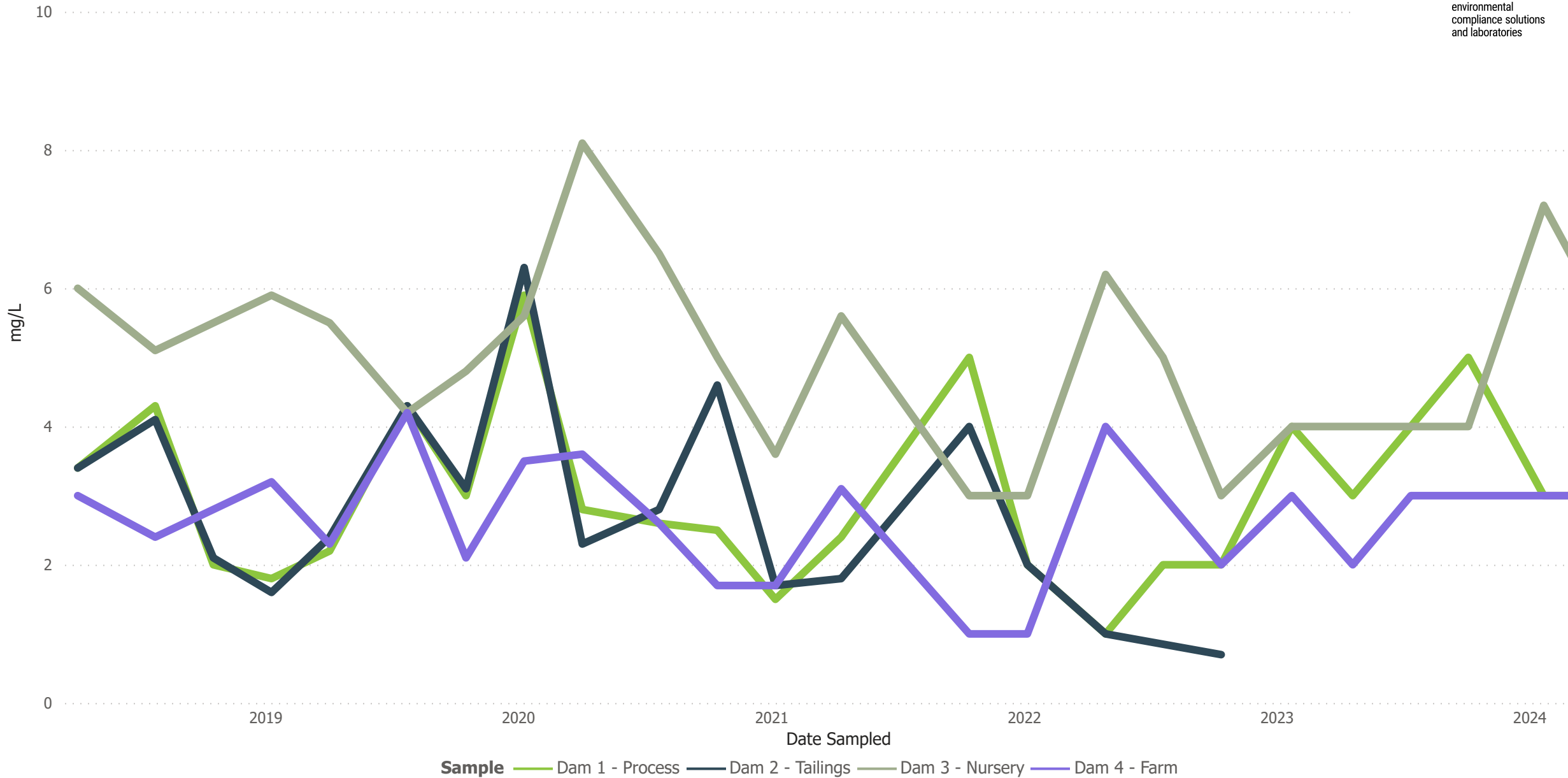
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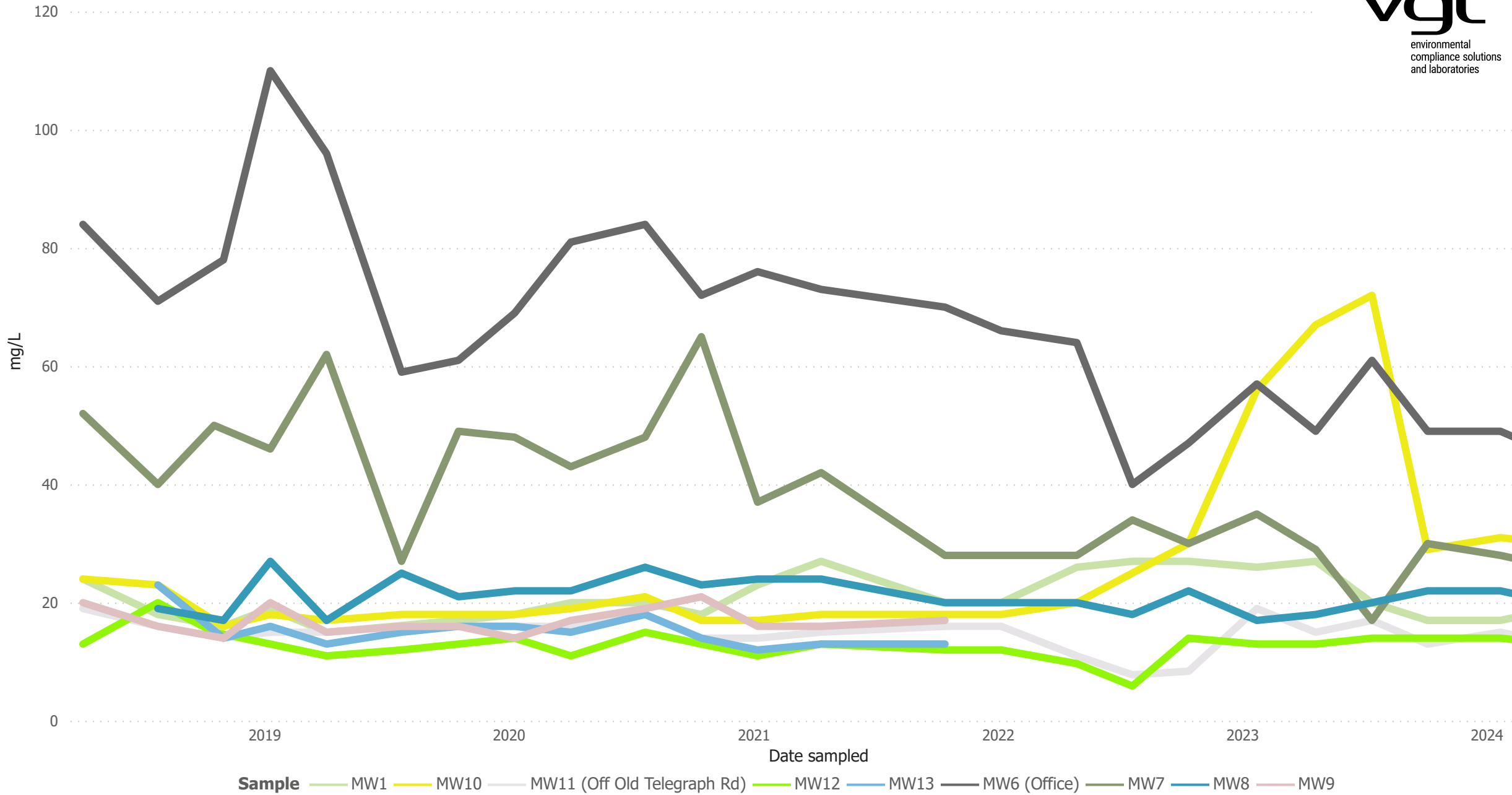
Potassium



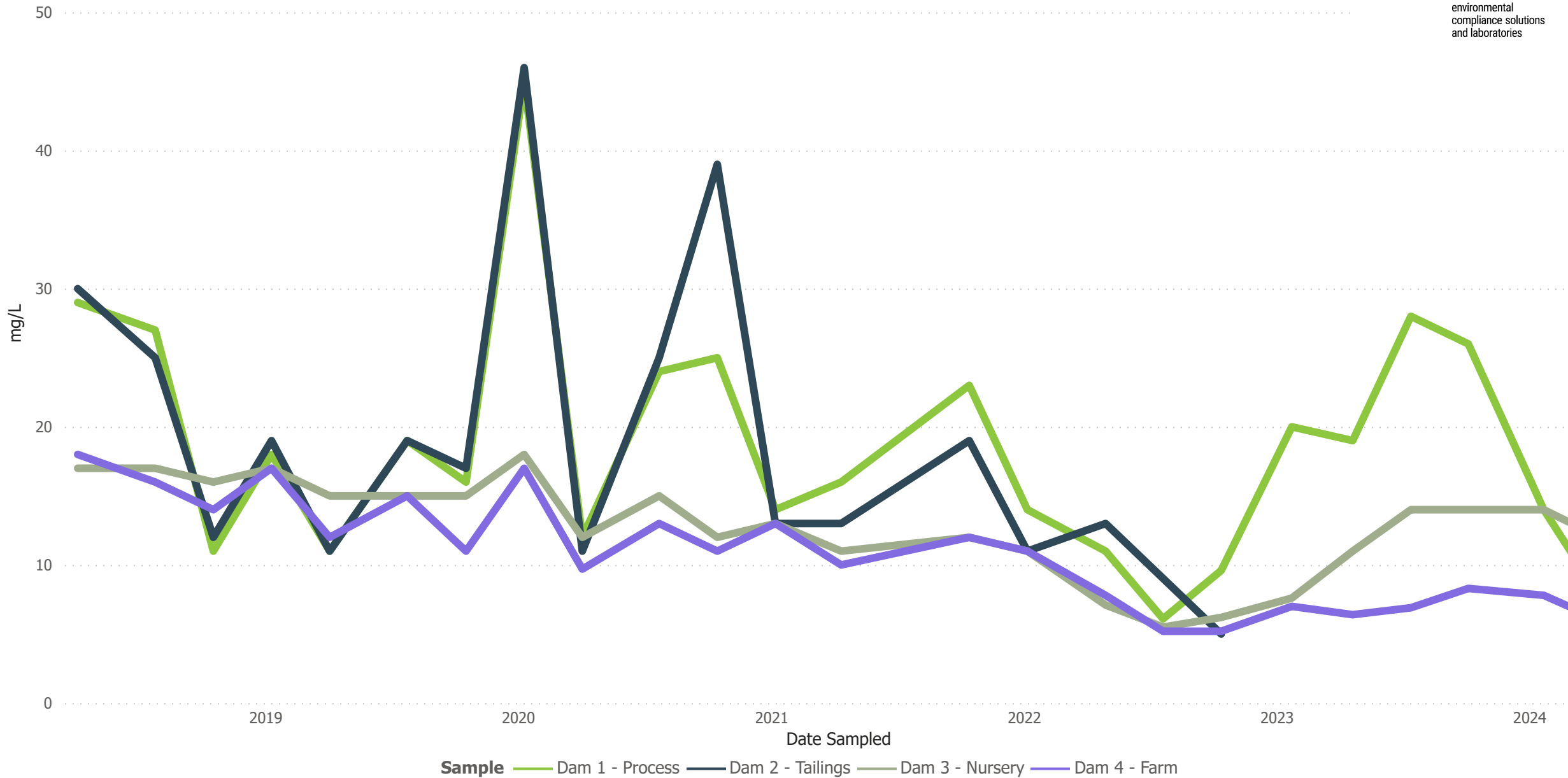
Potassium



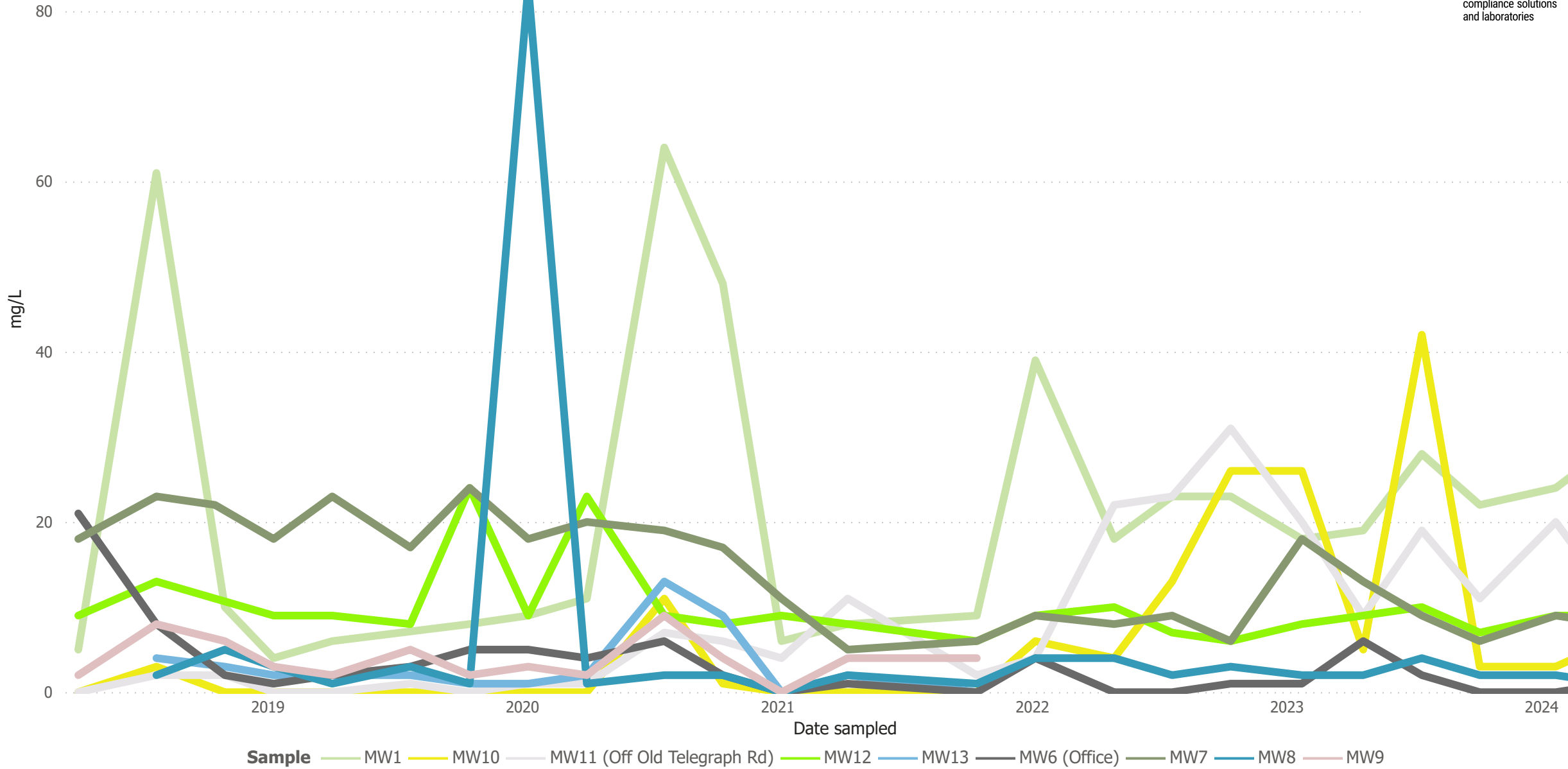
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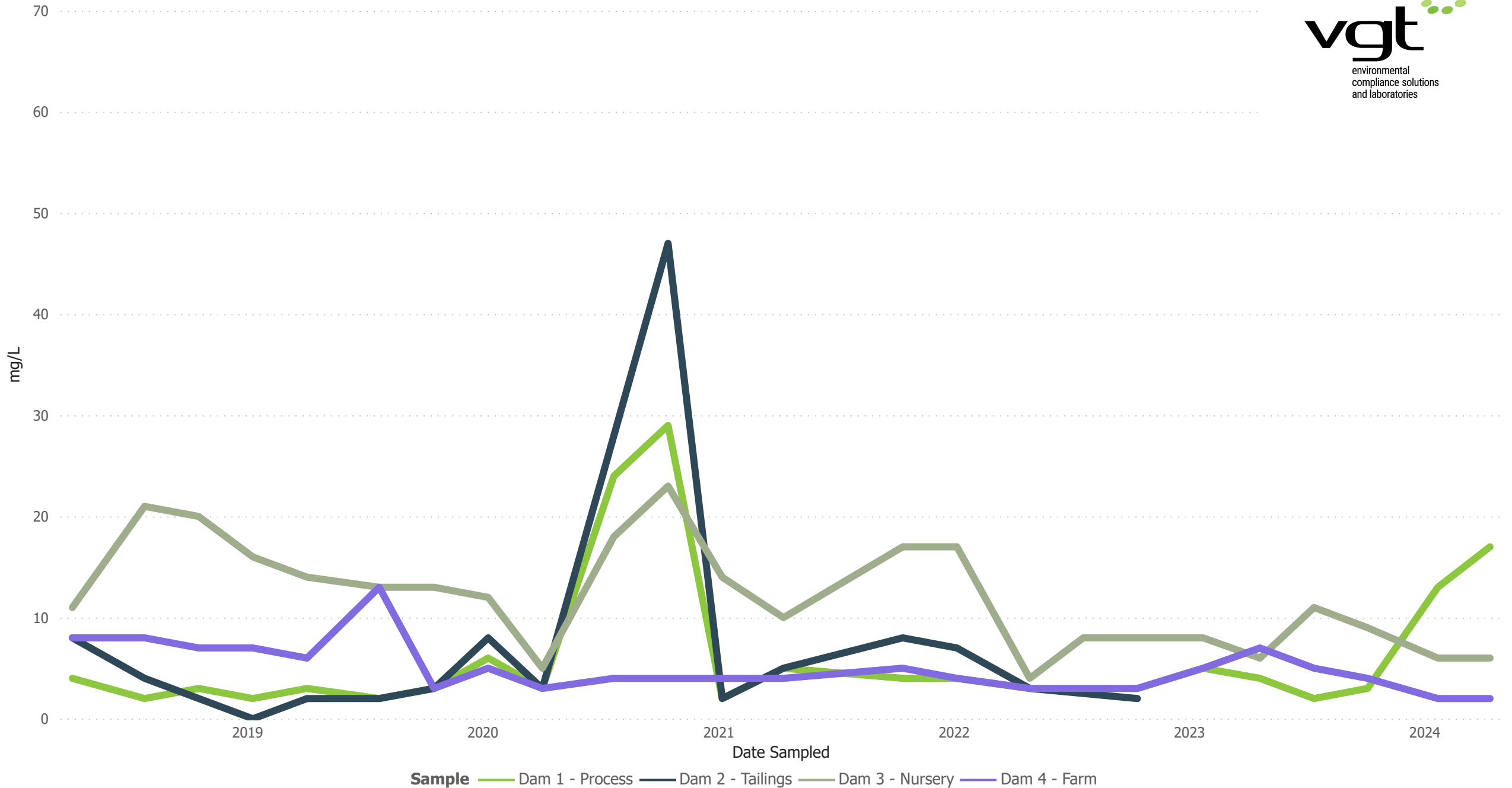
Sodium



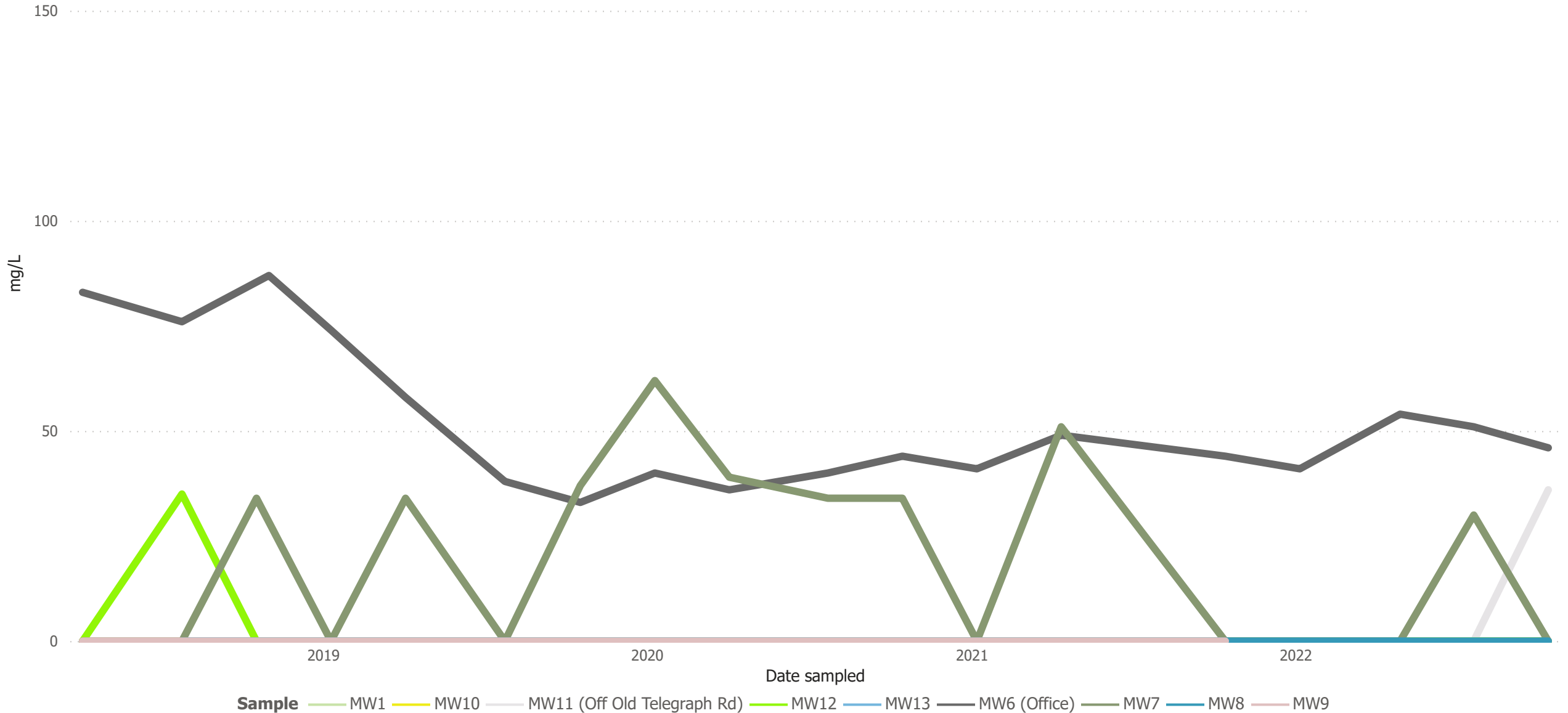
Sulphate



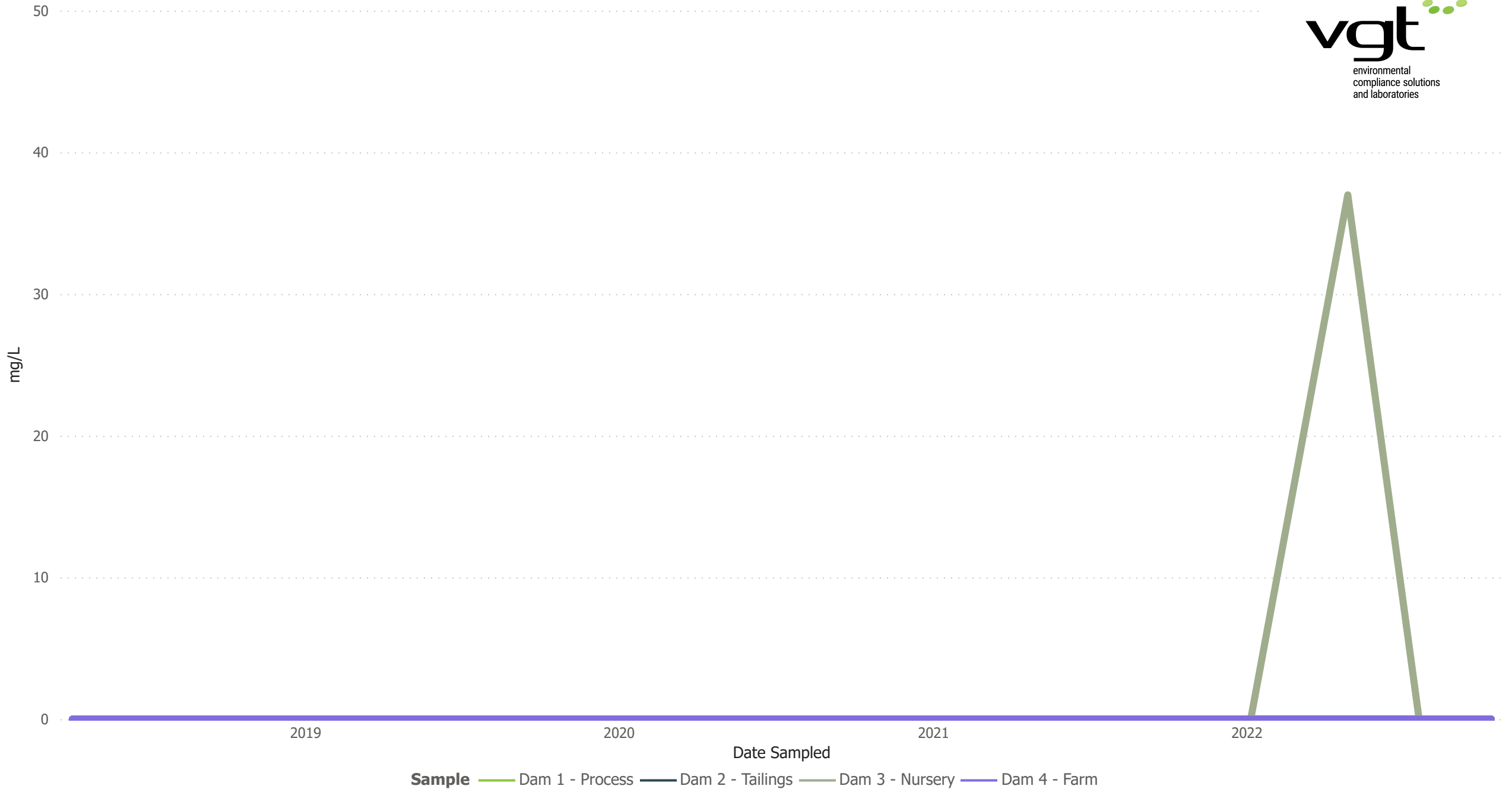
Sulphate



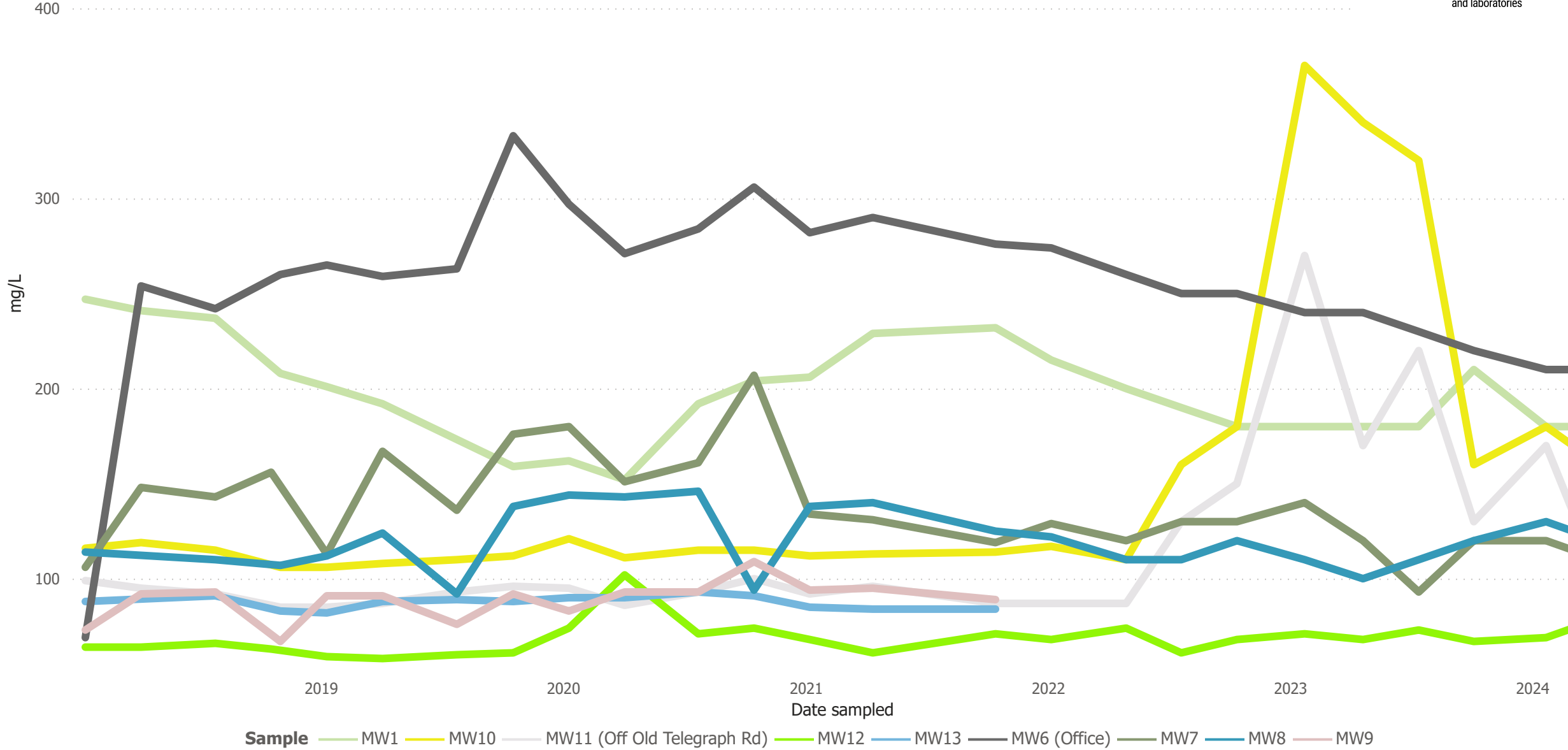
Total Alkalinity



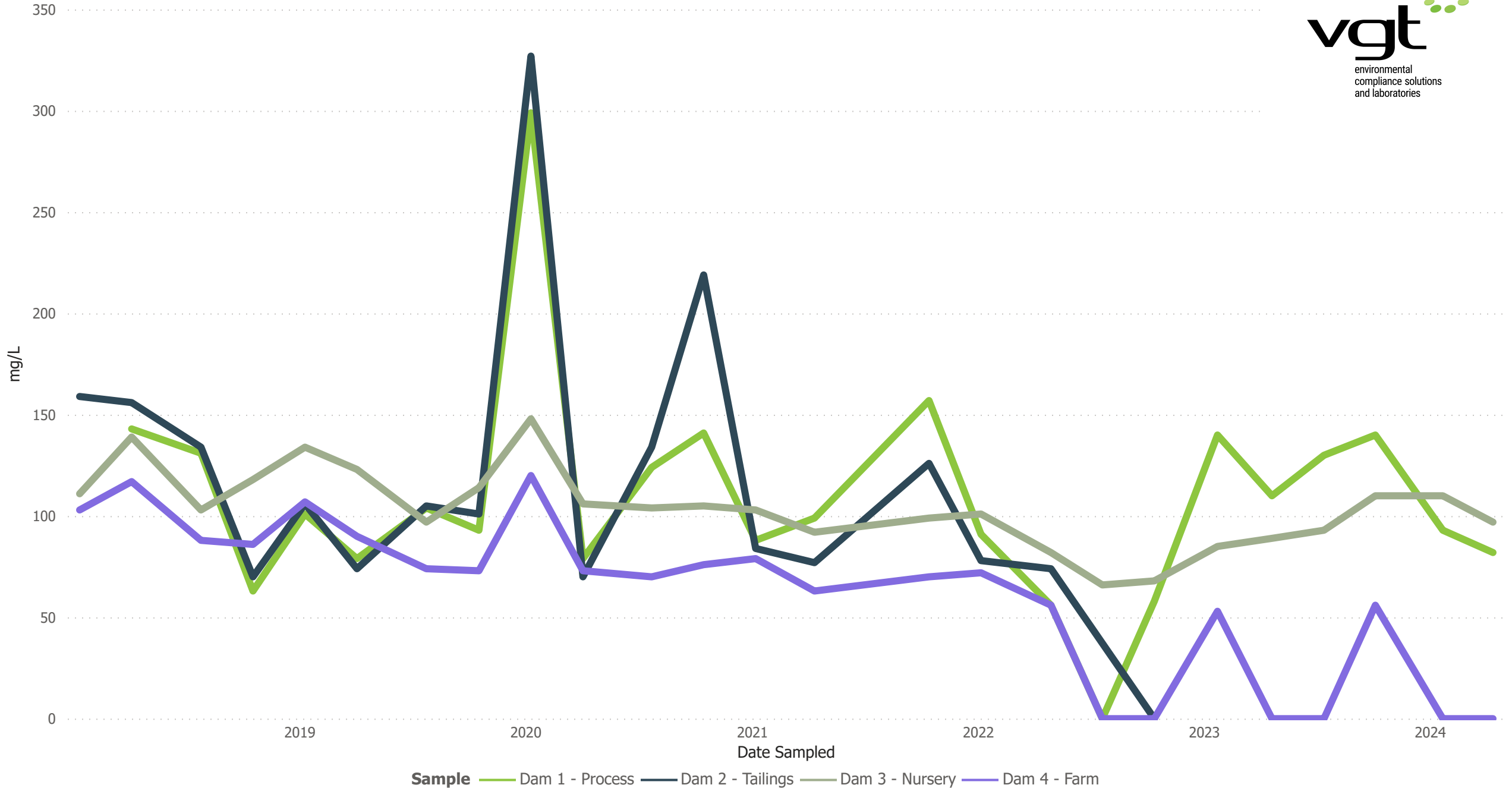
Total Alkalinity



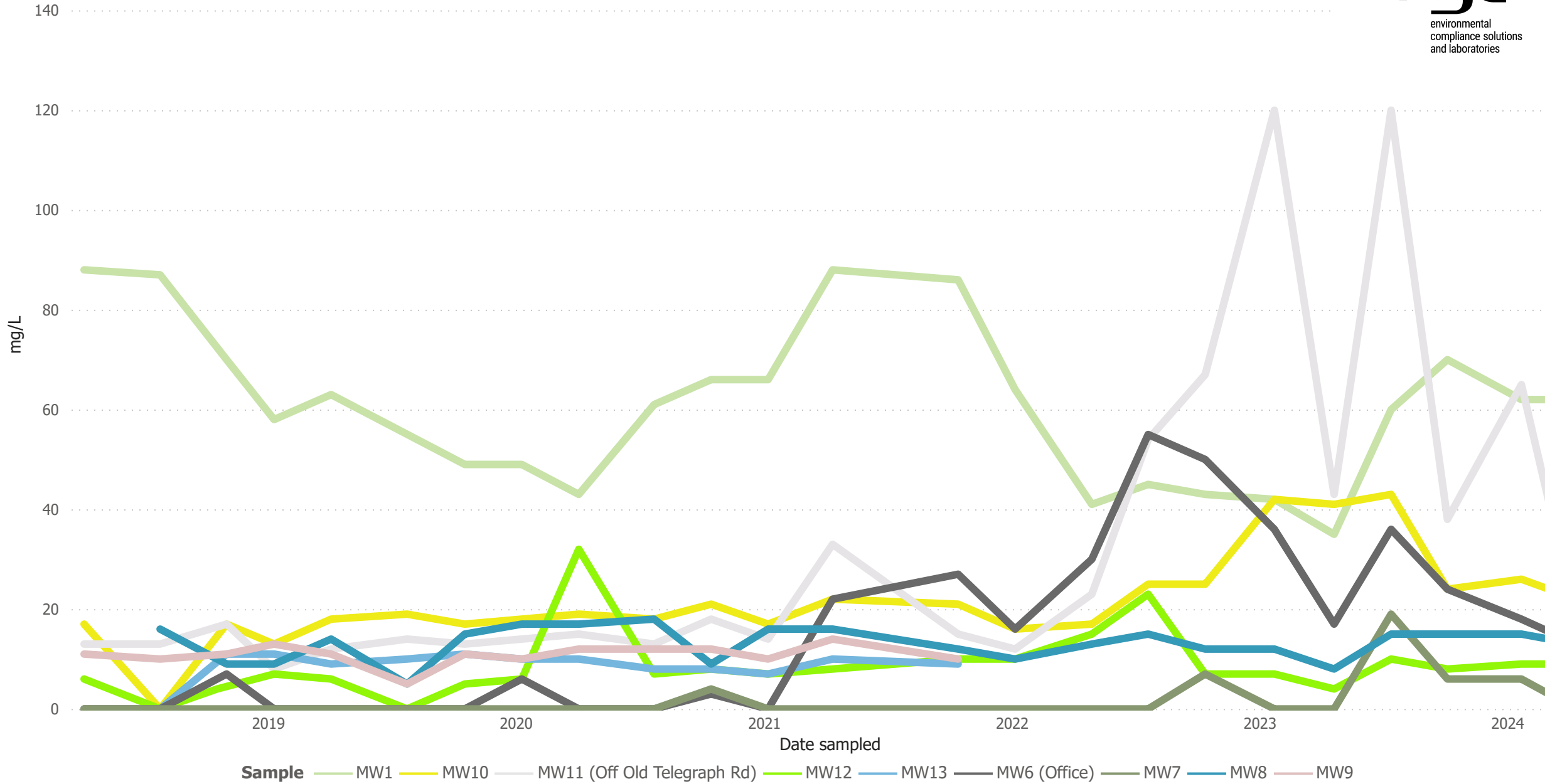
Total Dissolved Solids



Total Dissolved Solids



Total Hardness



Total Hardnes

