vgt environmental compliance solutions and laboratories

Report Period

1/08/2026	1/10/2026

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

Report Date: 21/10/2026

Site Monitoring Locations



Groundwater Levels

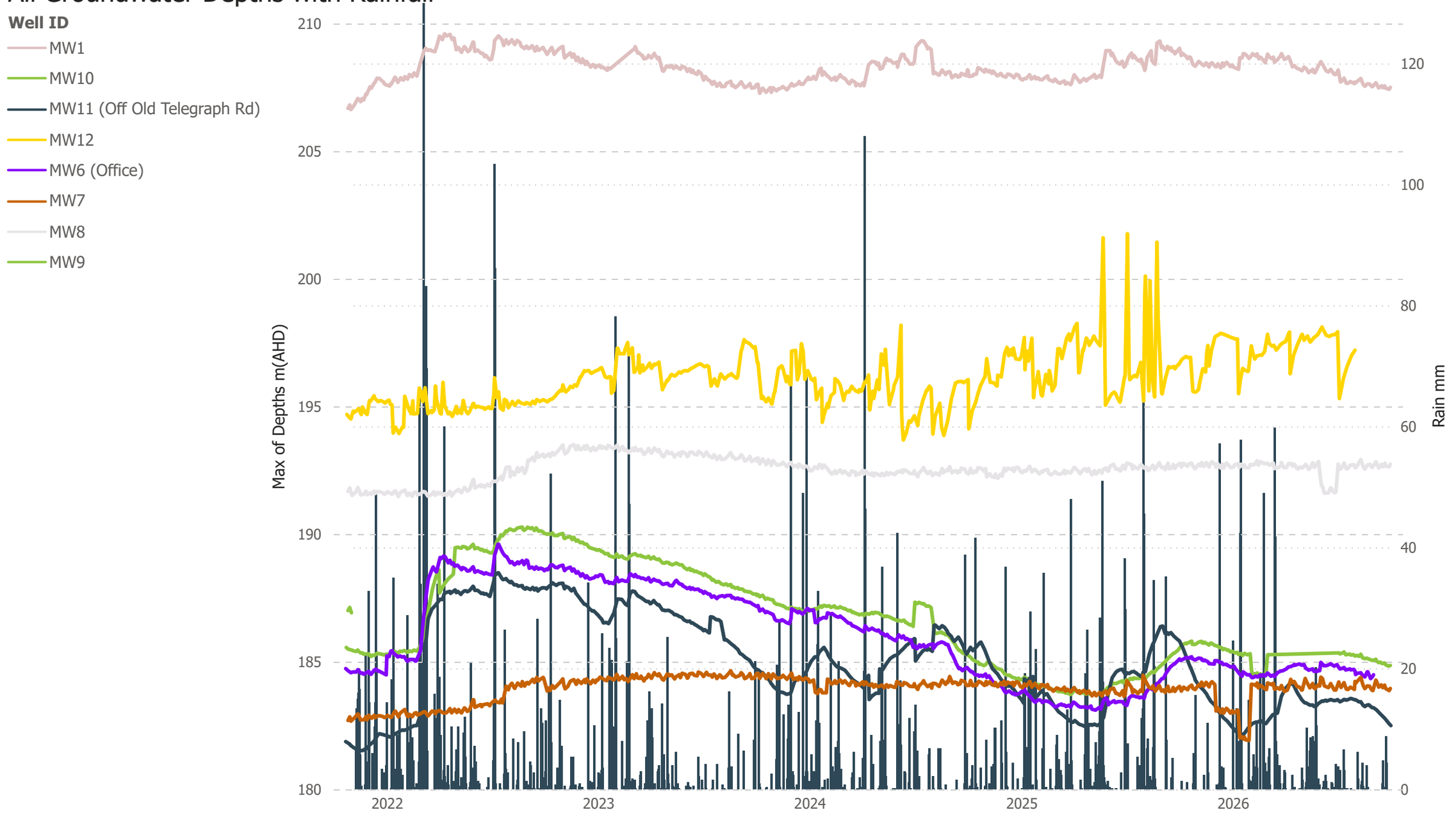
Groundwater levels are currently monitored in nine boreholes located on the site. Groundwater levels are manually measured for depth each month using a groundwater dipper. Data is downloaded from groundwater loggers where present. MW1 logger was installed prior to 2015; the remaining loggers were installed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

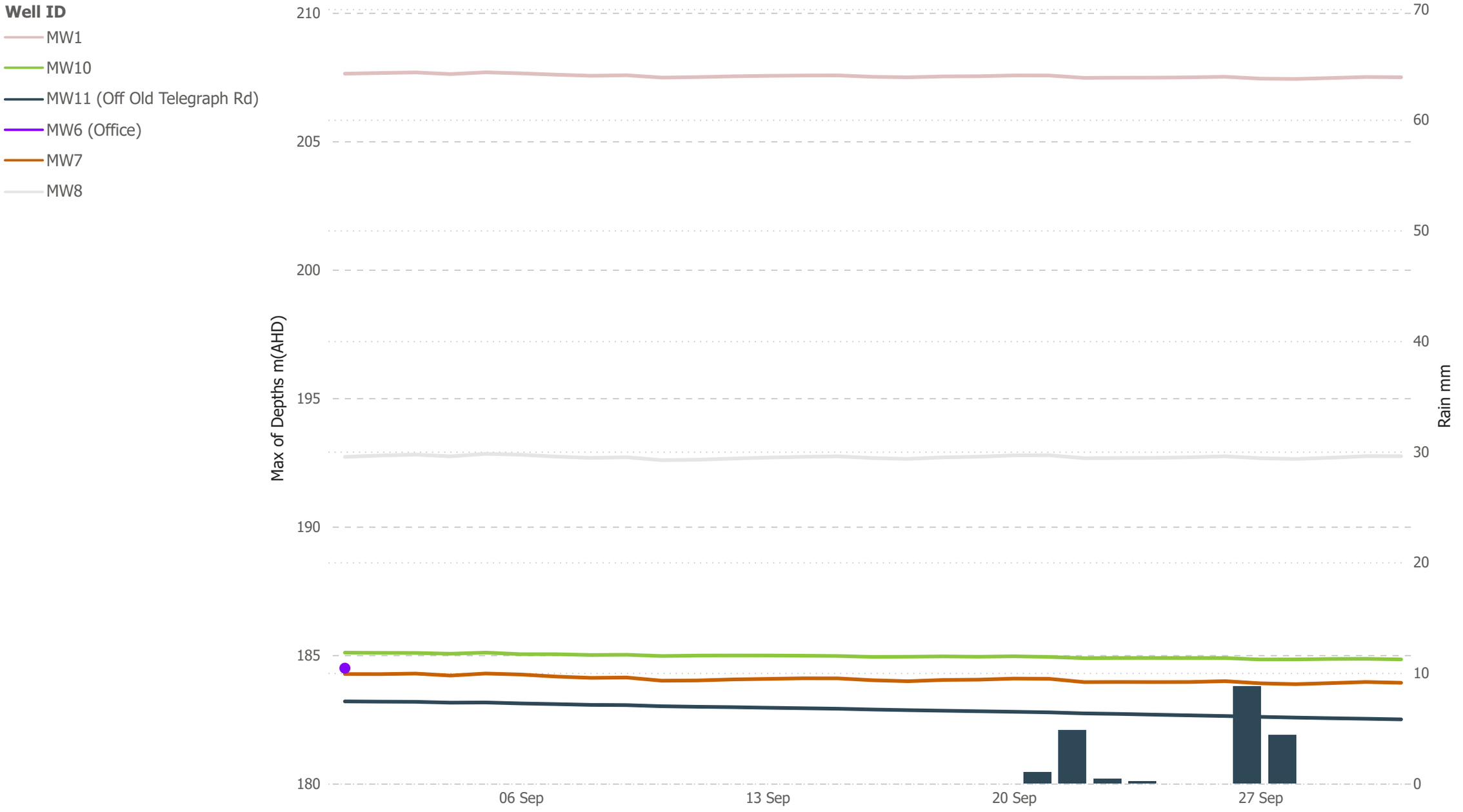
MW1 and MW12 were taken away for repairs during April 2018 and returned in October 2018, hence the gap in reporting on the following graphs.

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 was been sourced from the Bureau of Meteorology.

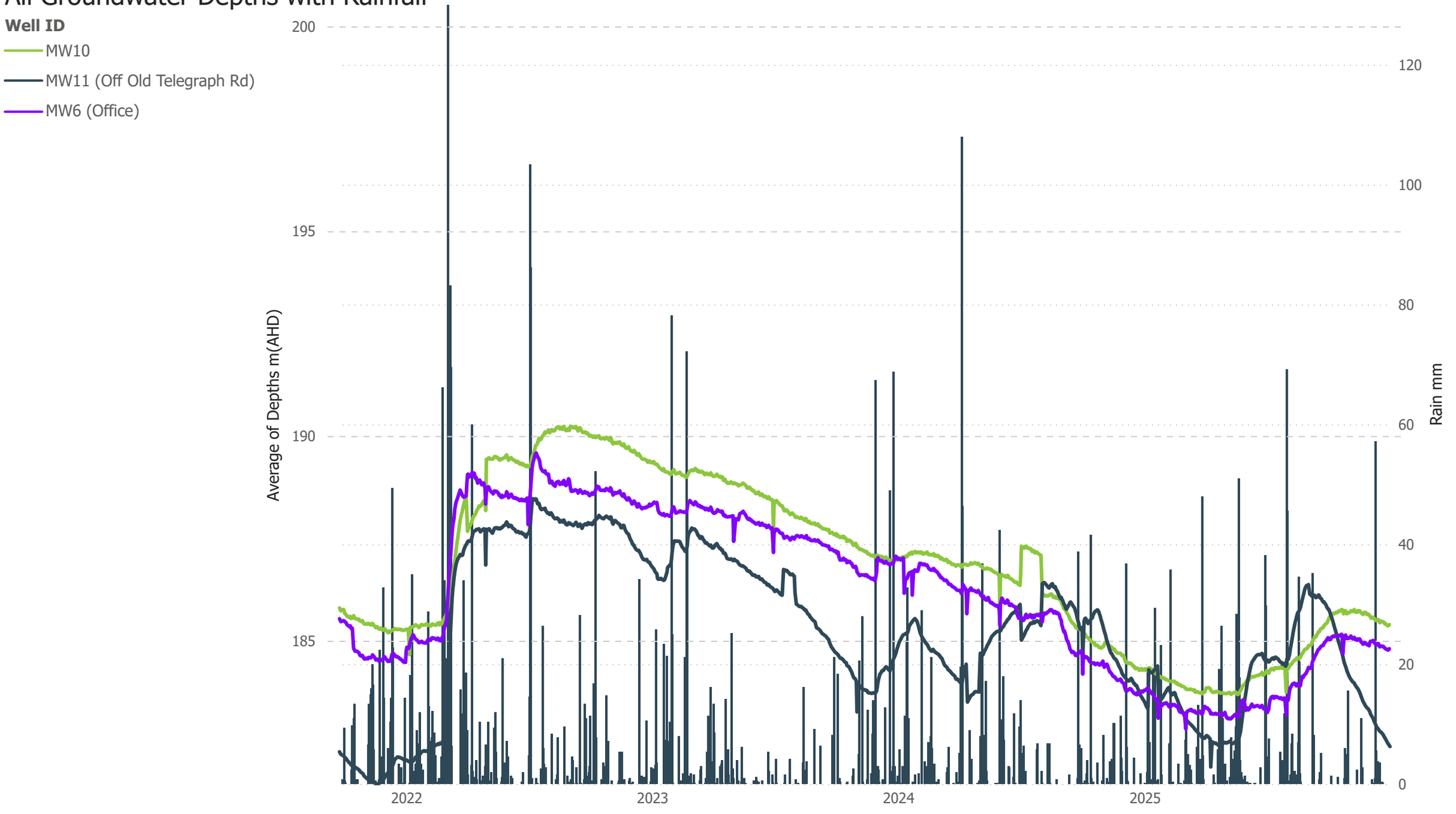
All Groundwater Depths with Rainfall



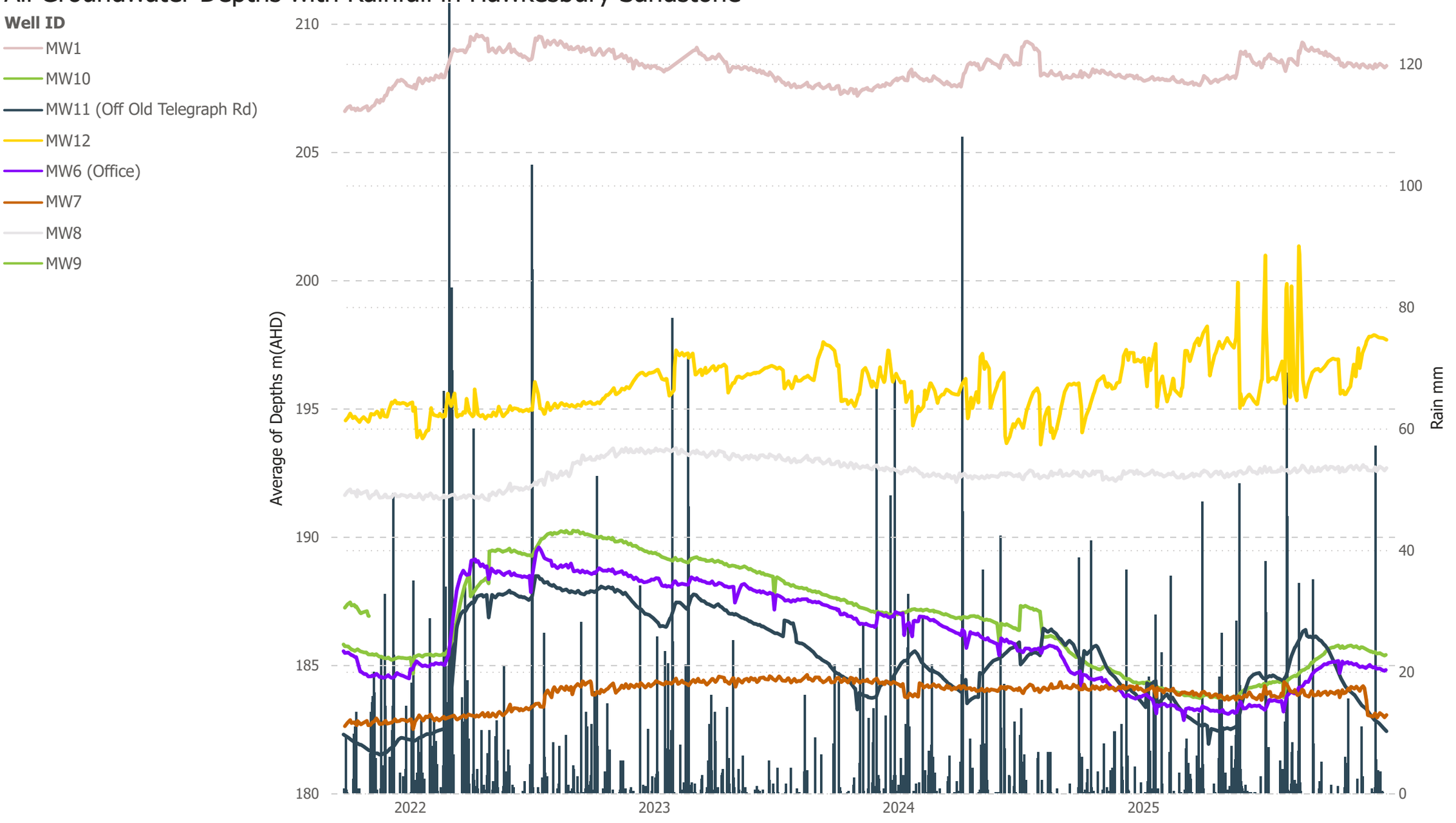
All Groundwater Depths with Rainfall for this Report Period



All Groundwater Depths with Rainfall



All Groundwater Depths with Rainfall in Hawkesbury Sandstone

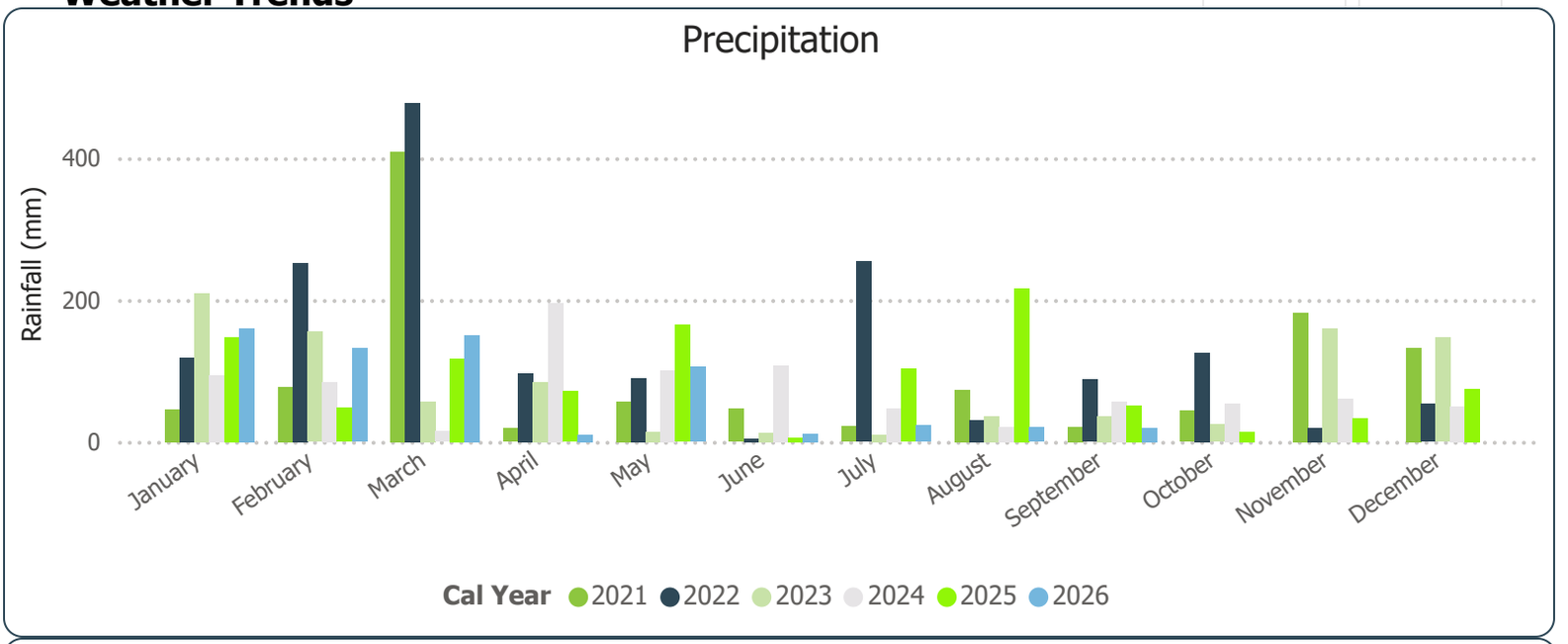


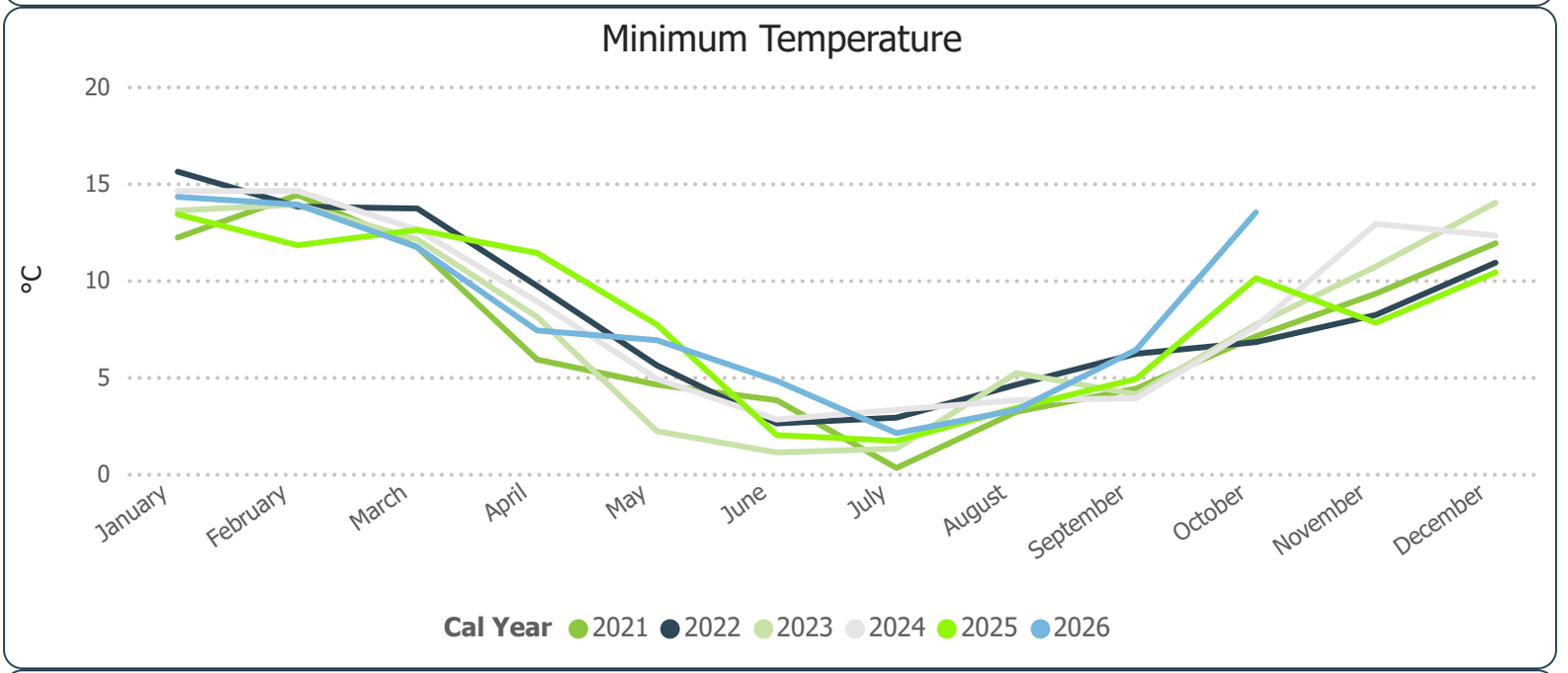
Weather Station Monitoring

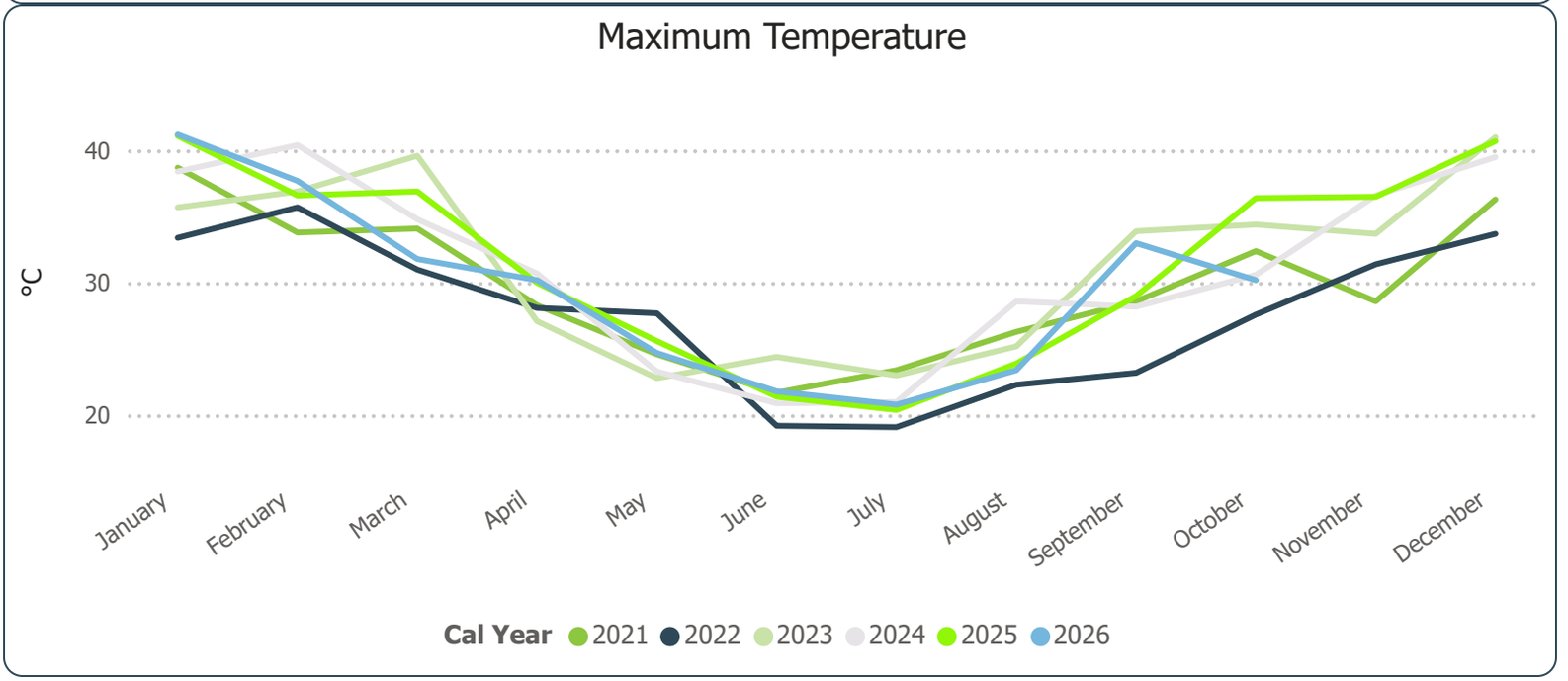
Due to gauge malfunctions, rainfall was not recorded in 2020 until a new weather station was installed onsite 29th May 2020. Where available, daily rainfall received in the interim was been sourced from the Bureau of Meteorology. Temperature monitoring during that period also shows gaps in the data.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

Weather Trends

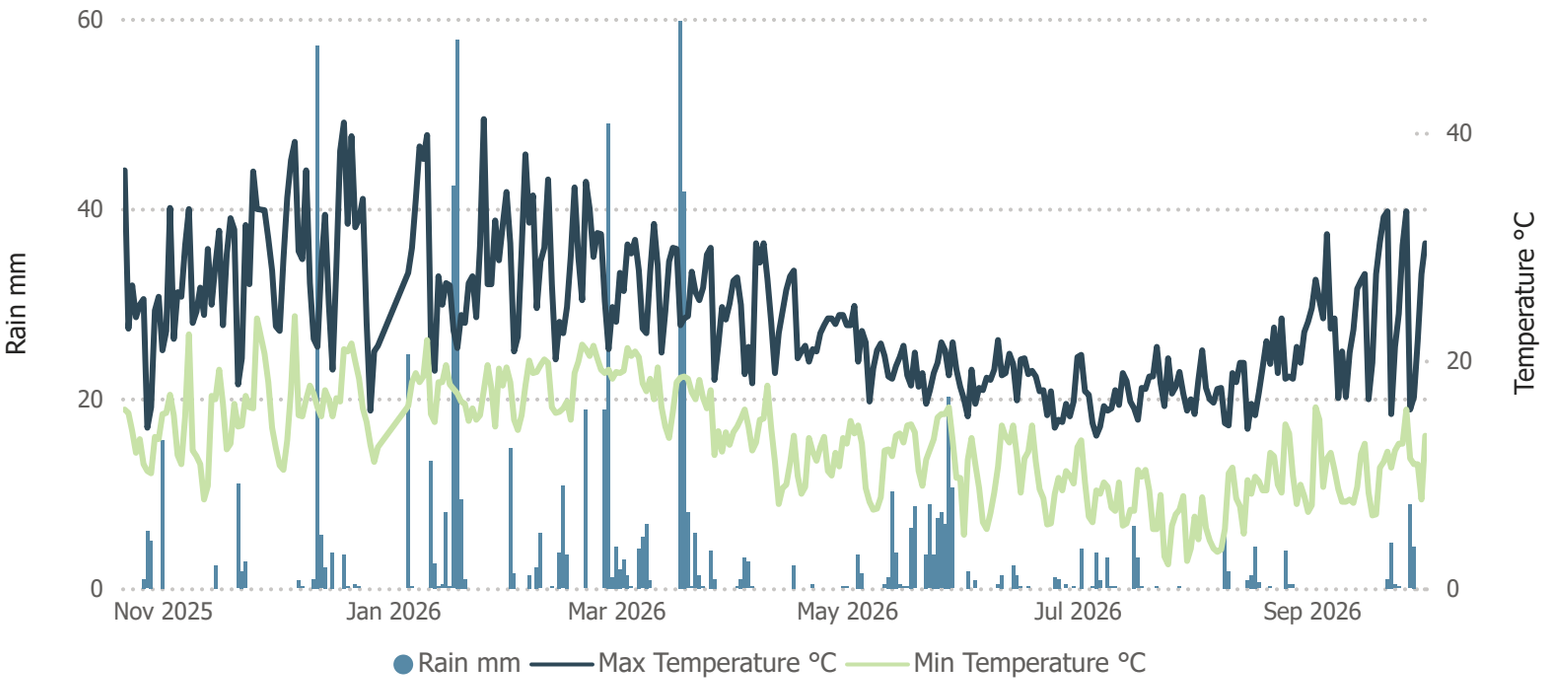
1/01/2021 1/10/2026







Weather Detail in Report Period



Precipitation mm

Year	January	February	March	April	May	June	July	August	September	October	November	December
2022	119.0	252.0	477.6	96.4	89.8	5.0	254.2	30.4	87.8	125.6	19.6	53.4
2023	210.0	155.2	57.0	84.2	13.8	12.8	10.4	36.4	35.8	24.4	160.2	146.8
2024	94.4	84.2	15.0	196.2	101.2	107.4	47.0	21.0	56.8	54.0	60.6	50.2
2025	147.8	48.0	117.8	71.4	165.0	5.8	103.0	216.4	51.4	14.6	33.6	75.2
2026	160.2	132.0	150.4	10.4	105.8	11.4	23.0	20.2	19.6	0.0		

Minimum Temperature °C

Year	January	February	March	April	May	June	July	August	September	October	November	December
2022	15.6	13.8	13.7	9.7	5.6	2.6	2.9	4.6	6.2	6.8	8.2	10.9
2023	13.6	13.9	12.1	8.1	2.2	1.1	1.3	5.2	4.1	7.7	10.7	14.0
2024	14.6	14.6	12.6	8.9	4.9	2.8	3.3	3.8	3.9	7.6	12.9	12.3
2025	13.4	11.8	12.6	11.4	7.7	2.0	1.7	3.4	4.9	10.1	7.8	10.4
2026	14.3	13.9	11.7	7.4	6.9	4.8	2.1	3.3	6.4	13.5		

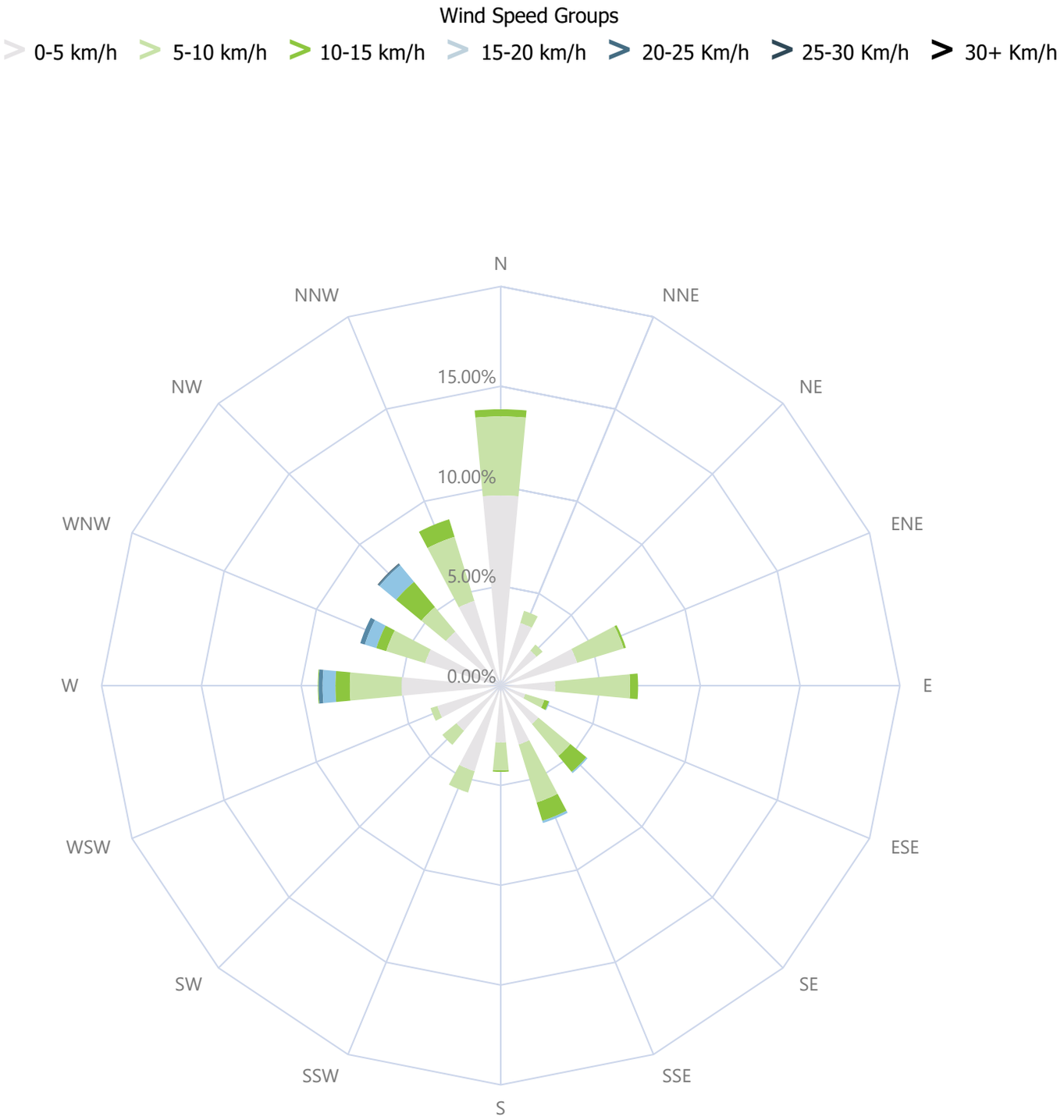
Average Temperature °C

Year	January	February	March	April	May	June	July	August	September	October	November	December
2022	22.1	20.6	19.7	17.3	14.3	10.8	10.8	12.7	14.0	16.7	17.7	19.1
2023	21.0	22.1	21.6	16.5	12.6	11.7	12.4	13.1	16.6	18.1	19.4	22.4
2024	22.8	22.4	20.9	17.3	13.9	11.2	11.1	14.6	16.0	17.0	20.7	22.8
2025	21.5	22.1	21.3	18.3	14.8	10.8	11.1	12.0	16.3	19.5	20.3	21.9
2026	22.3	22.3	20.6	17.3	15.4	13.2	11.7	12.8	16.6	21.1		

Maximum Temperature °C

Year	January	February	March	April	May	June	July	August	September	October	November	December
2022	33.4	35.7	31.0	28.1	27.7	19.2	19.1	22.3	23.2	27.6	31.4	33.7
2023	35.7	36.9	39.6	27.1	22.8	24.4	23.0	25.2	33.9	34.4	33.7	41.0
2024	38.4	40.4	34.8	30.7	23.3	20.9	21.0	28.6	28.2	30.6	36.6	39.5
2025	41.1	36.6	36.9	30.0	25.6	21.4	20.4	23.9	29.0	36.4	36.5	40.7
2026	41.2	37.7	31.8	30.2	24.7	21.8	20.8	23.4	33.0	30.2		

Wind Rose for Report Period

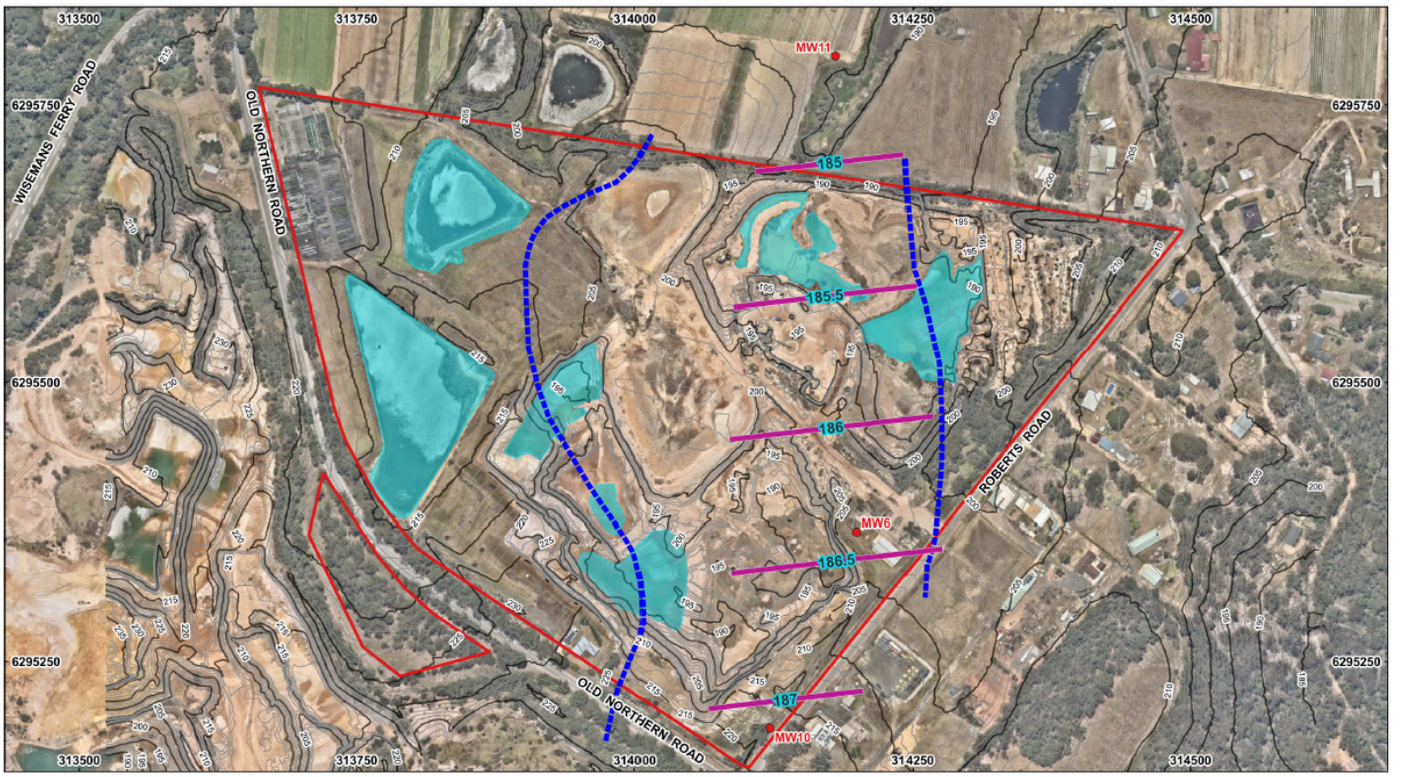


Plan of:	Roberts Road Maroota Sand Quarry - Wet Weather High Groundwater Level Maroota Sands	**Location:**	Maroota Quarry, Roberts Road, Maroota, NSW	**Source:**	nearmap - Image Date 09/12/2025 Zone MGA 56	**Plan By:**	SK
Figure:	ONE	**Council:**	Hills Shire Council	**Survey:**	Fyfe Quarry Contours 24/02/2022 NSW Spatial Services ELVISDEM Surrounding Contours Dated May 2017.	**Project Manager:**	SK
Version/ Date:	V0 25/03/2026	**Tenure:**	Not Applicable	**Projection:**	GDA2020/MGA Zone 56 EPSG:7856		
Our Ref:	12783_HMA_GWGeneral_Q008_V0_F1	**Client:**	Hodgson Quarries & Plant Pty Ltd	**Contour Interval:**	1m		

0 50 100 m

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This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.



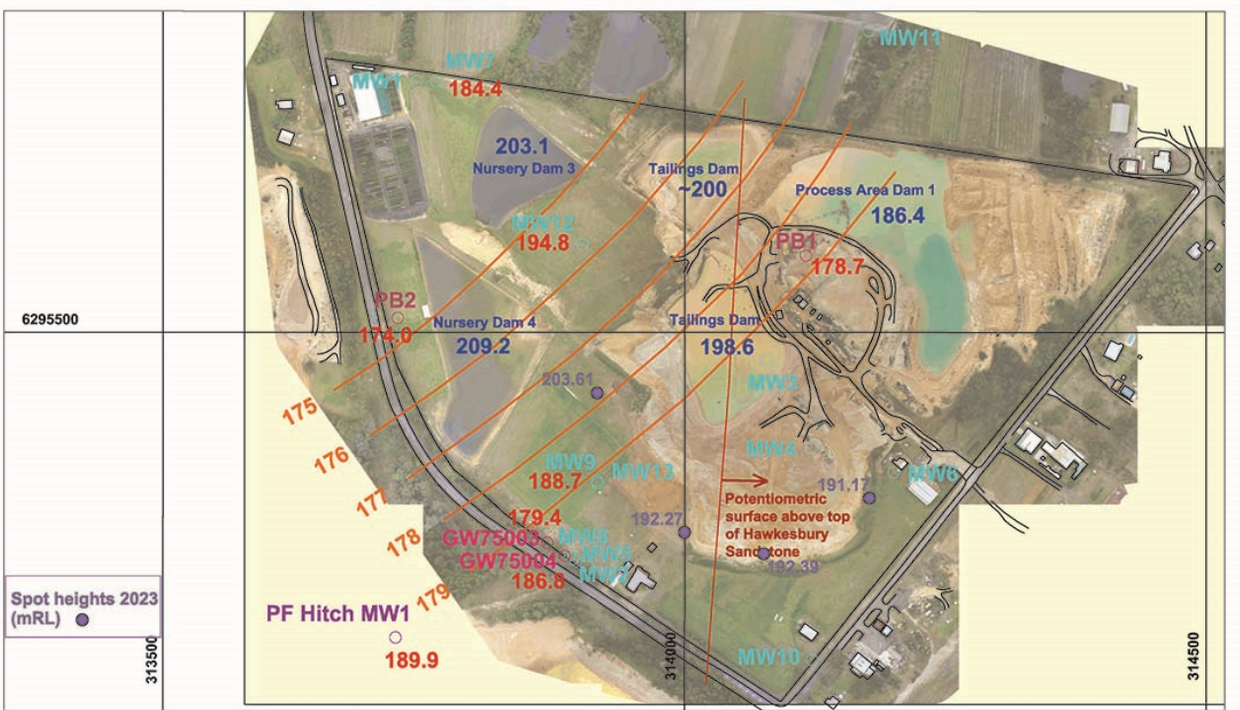
Legend

- Property Boundary
- Dam Areas
- Contours of Wet Weather High GW Level (mRL)
- Edge of Saturated Maroota Sands
- Groundwater Monitoring Well Location

Plan of:	Annual Review & Compliance Report 2022 for Roberts Road Maroota Sand Quarry - Wet Weather High Groundwater Level Hawkesbury Sandstone (Feb 2018)	***Location:***	Maroota Quarry, Roberts Road, Maroota, NSW	***Source:***	Dundon Consulting Pty Ltd Figure 16 Dwg No. 06-0318-021d 08/03/2018	***Our Ref:***	12498_HMA_AR2022_C001_V0_F5B.cdr
Figure:	FIVE-B	***Council:***	Hills Shire Council	***Survey:***	Dundon Consulting Pty Ltd 08/03/2018	***Plan By:***	LT/JD/SK
Sheet:	1 of 1	***Tenures:***	N/A	***Projection:***	MGA	***Project Manager:***	LT
Version/Date:	V0 15/03/2023	***Client:***	Hodgson Quarries & Plant Pty Ltd	***Contour Interval:***	1m	***Office:***	Thornton

This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.

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LEGEND:

- Hodgson monitoring bore
- Hodgson production bore
- 174.0 Hawkesbury Sandstone water level
- Contours of wet weather high GW level
- Potentiometric surface above top of HS

DATE: 8 March 2018	SCALE:	**Hodgson Quarry and Plant Pty Ltd**	
PROJECT NO: 06-0318	AUTHOR: PD	**ROBERTS ROAD MAROOTA SAND QUARRY** **Wet Weather High Groundwater Level** **Hawkesbury Sandstone (February 2018)**	**Figure 16**
DRAWING NO: 06-0318-021d	REVISION: D		
Dundon Consulting Pty Ltd			

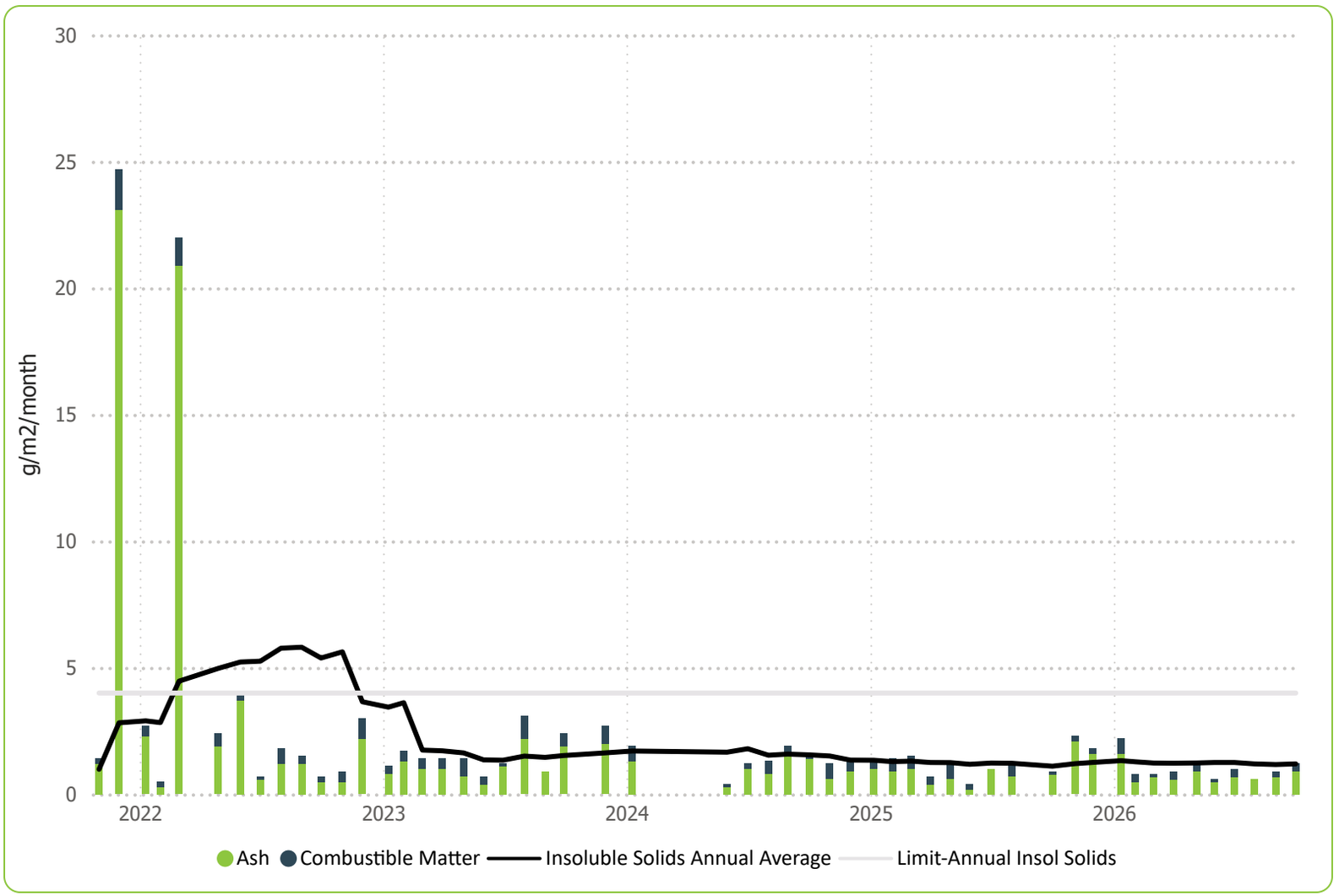
Depositional Dust and Particulate Matter Monitoring

Depositional Dusts

D1 Gate

Insoluble Solids Annual Average g/m2/month





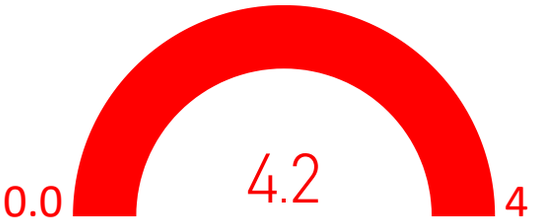
Date & Time On	Comments
1/10/2025	
4/11/2025	
1/12/2025	
12/01/2026	
2/02/2026	
2/03/2026	
1/04/2026	
6/05/2026	
1/06/2026	
1/07/2026	
31/07/2026	
1/09/2026	

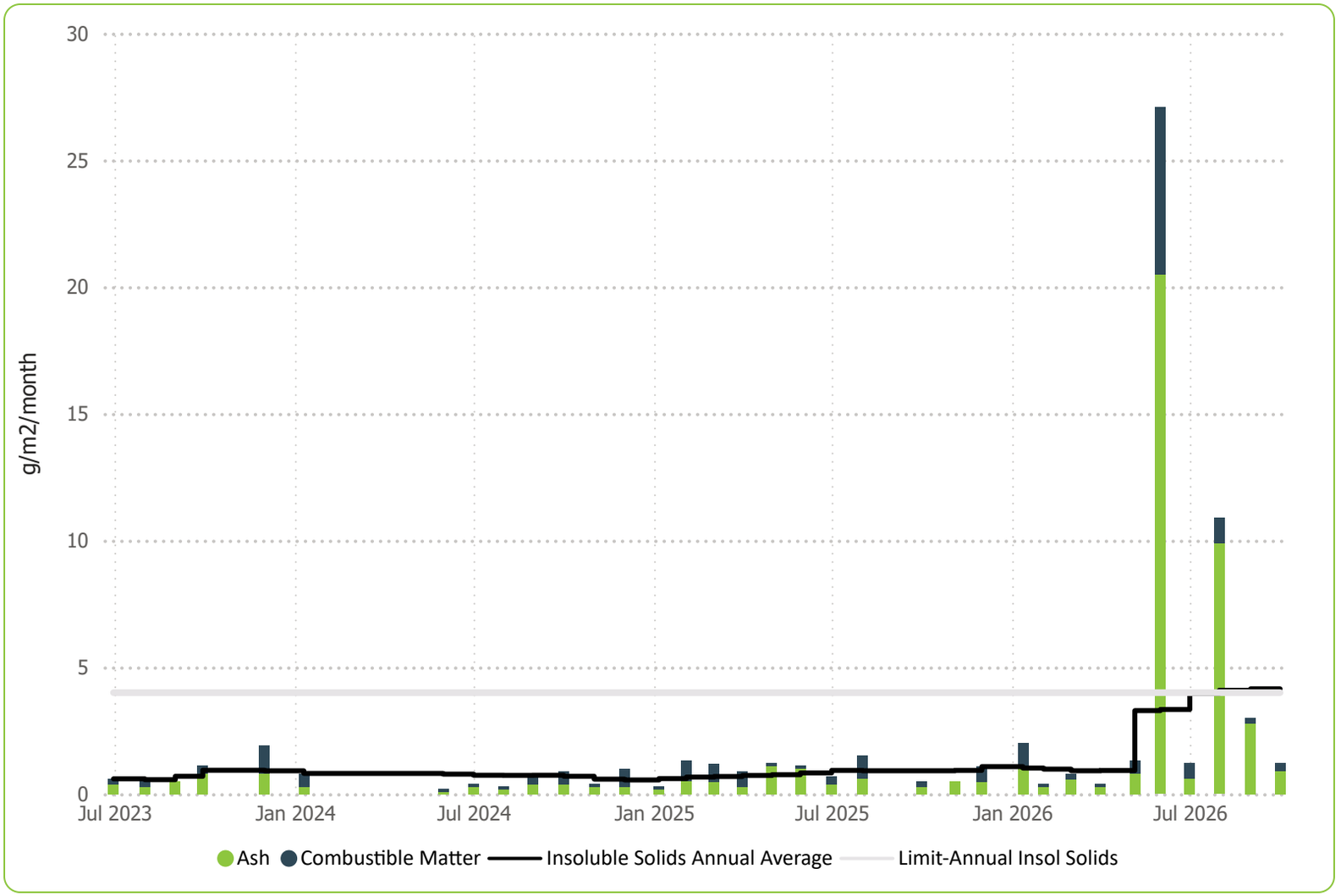
Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
4/11/2025	28	2.3	2.1	0.2	30
1/12/2025	27	1.8	1.6	0.2	23
12/01/2026	28	2.2	1.6	0.6	115
2/02/2026	28	0.8	0.5	0.3	115
2/03/2026	28	0.8	0.7	0.1	30
1/04/2026	30	0.9	0.6	0.3	115
6/05/2026	35	1.3	0.9	0.4	23
1/06/2026	26	0.6	0.5	0.1	106
1/07/2026	30	1.0	0.7	0.3	28
31/07/2026	30	0.6	0.6	0.0	23
1/09/2026	32	0.9	0.7	0.2	28
1/10/2026	30	1.2	0.9	0.3	23

Depositional Dusts

D2a North East Corner

Insoluble Solids Annual Average g/m2/month





Date & Time On	Comments
1/10/2025	
4/11/2025	
1/12/2025	
12/01/2026	
2/02/2026	
2/03/2026	
1/04/2026	
6/05/2026	
1/06/2026	
1/07/2026	
31/07/2026	
1/09/2026	

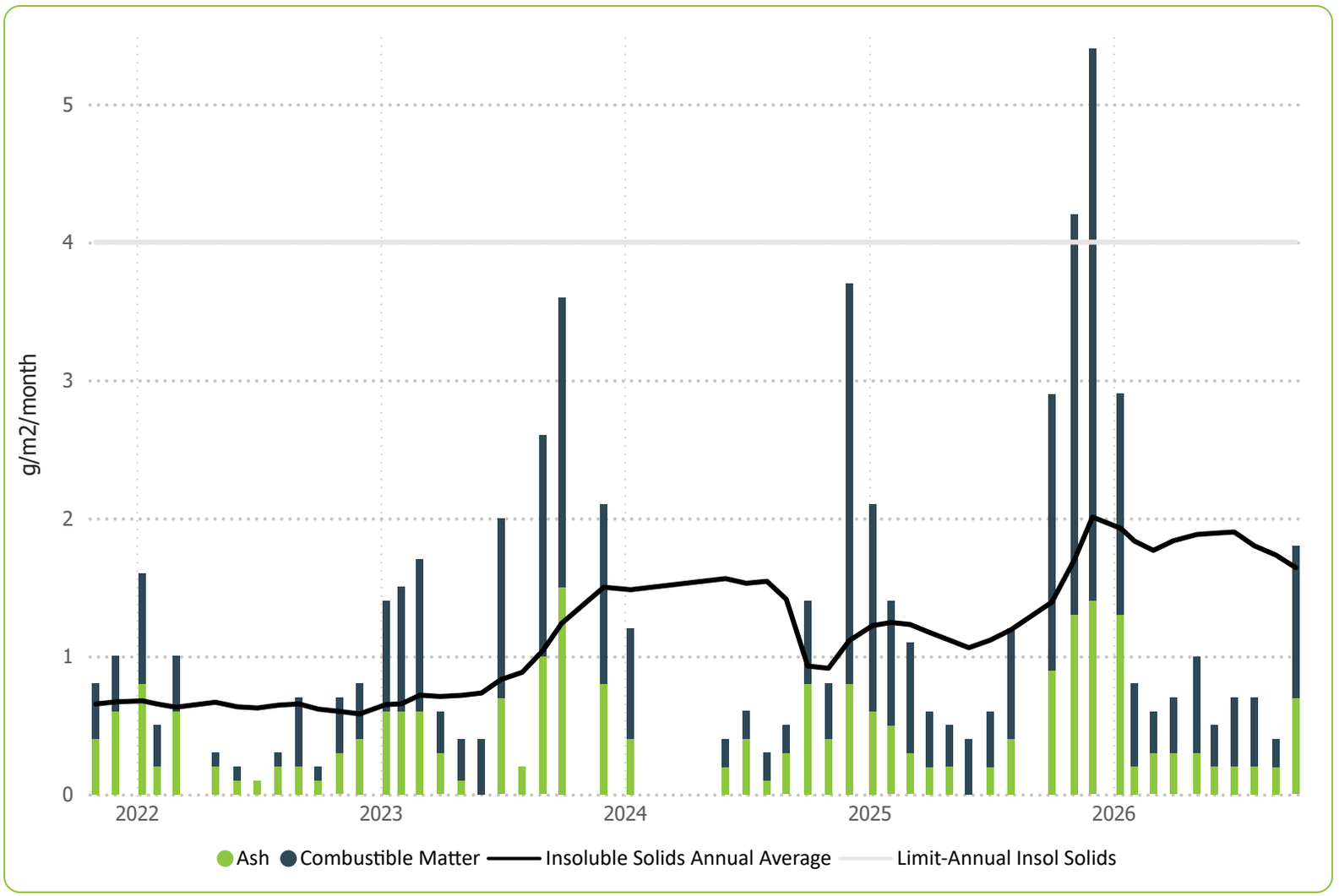
Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
4/11/2025	28	0.4	0.5	0.0	26
1/12/2025	27	1.1	0.5	0.6	11
12/01/2026	28	2.0	1.0	1.0	115
2/02/2026	28	0.4	0.3	0.1	114
2/03/2026	28	0.8	0.6	0.2	114
1/04/2026	30	0.4	0.3	0.1	114
6/05/2026	35	1.3	0.8	0.5	10
1/06/2026	26	27.1	20.5	6.6	108
1/07/2026	30	1.2	0.6	0.6	26
31/07/2026	30	10.9	9.9	1.0	19
1/09/2026	32	3.0	2.8	0.2	19
1/10/2026	30	1.2	0.9	0.3	16

Depositional Dusts

D3A Bundwall

Insoluble Solids Annual Average g/m2/month

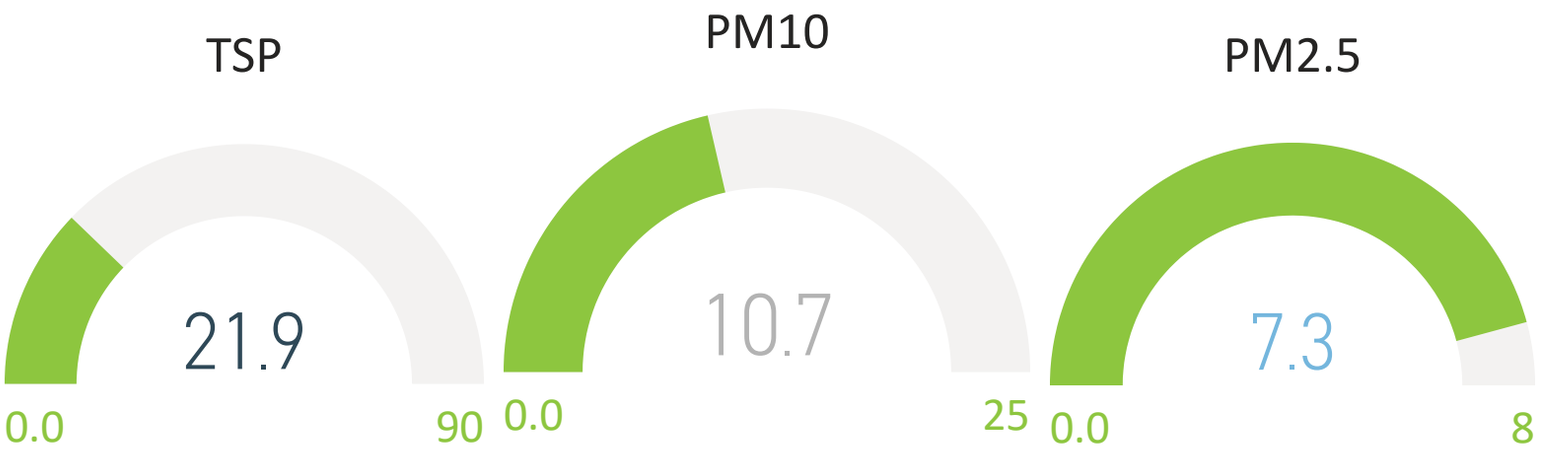




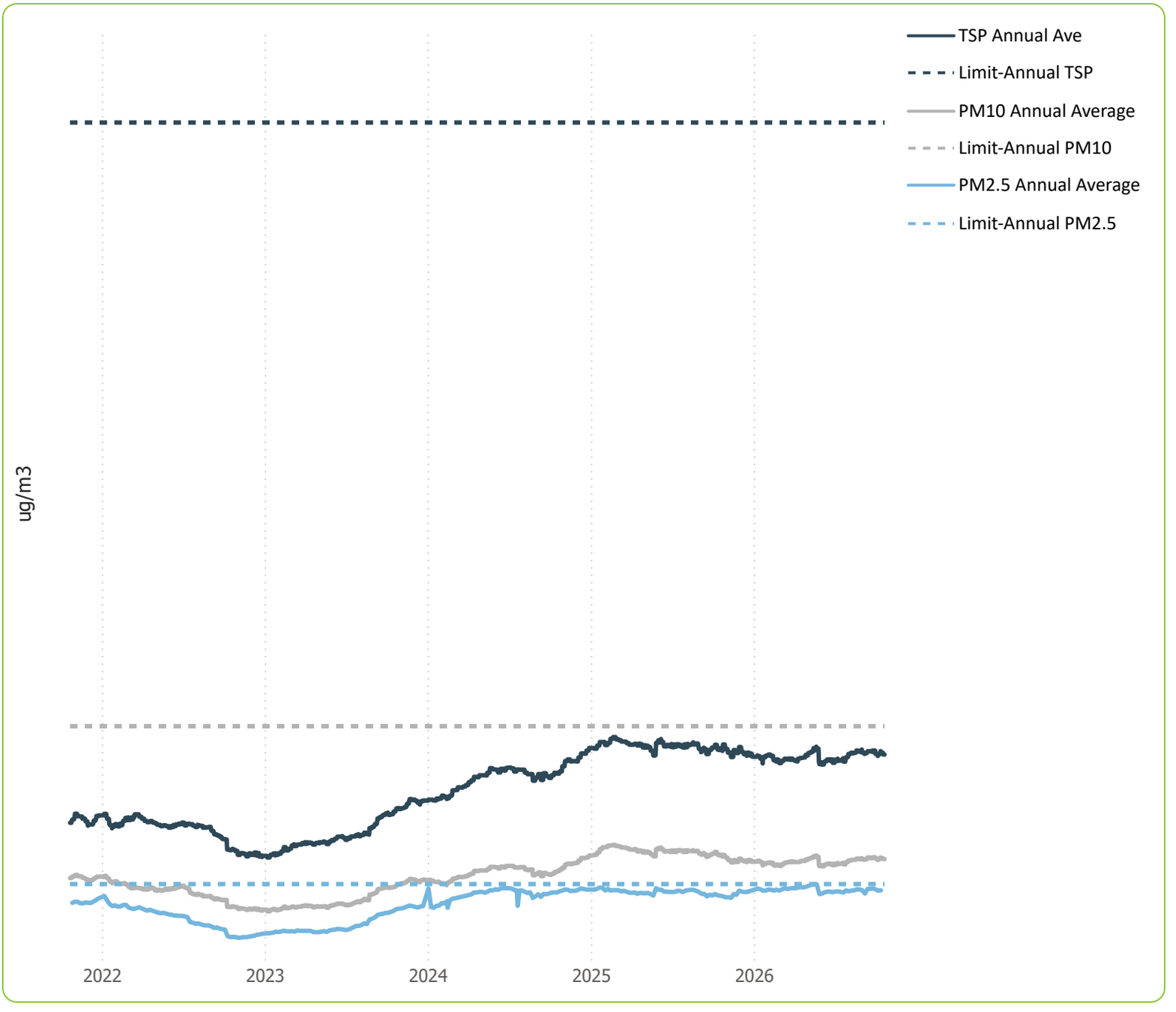
Date & Time On	Comments
1/10/2025	
4/11/2025	
1/12/2025	
12/01/2026	
2/02/2026	
2/03/2026	
1/04/2026	
6/05/2026	
1/06/2026	
1/07/2026	
31/07/2026	
1/09/2026	

Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
4/11/2025	28	4.2	1.3	2.9	32
1/12/2025	27	5.4	1.4	4.0	22
12/01/2026	28	2.9	1.3	1.6	110
2/02/2026	28	0.8	0.2	0.6	115
2/03/2026	28	0.6	0.3	0.3	115
1/04/2026	30	0.7	0.3	0.4	110
6/05/2026	35	1.0	0.3	0.7	19
1/06/2026	26	0.5	0.2	0.3	98
1/07/2026	30	0.7	0.2	0.5	18
31/07/2026	30	0.7	0.2	0.5	21
1/09/2026	32	0.4	0.2	0.2	0
1/10/2026	30	1.8	0.7	1.1	18

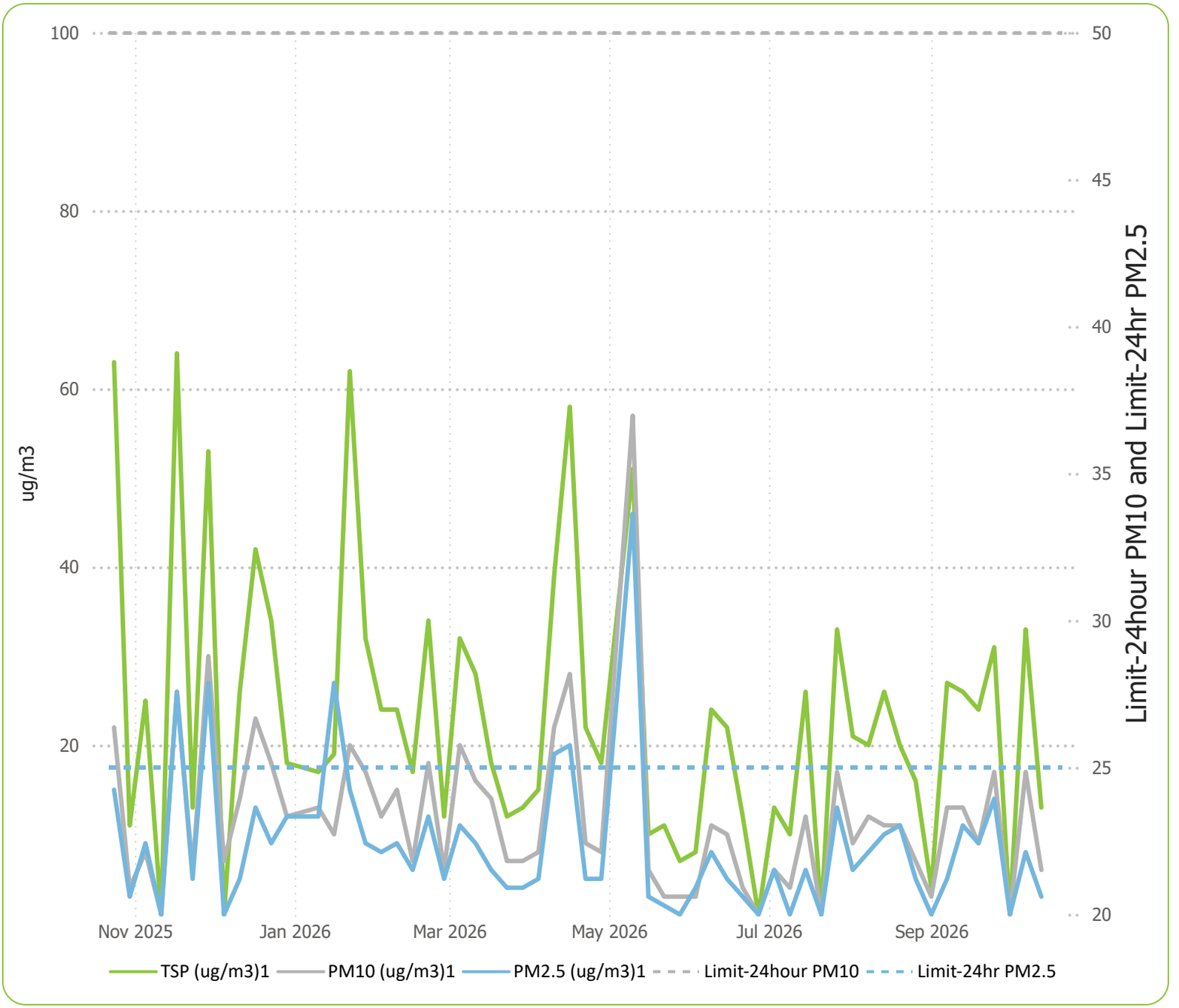
Particulate Matter Annual Averages (µg/m3)



HVAS annual averages calculated excluding extraordinary events



Particulate Matter 24 Hour Averages (µg/m3)



Cal Year	Max of TSP (ug/m3)1	Max of PM10 (ug/m3)1	Max of PM2.5 (ug/m3)1
2025	64.00	30.00	27.00

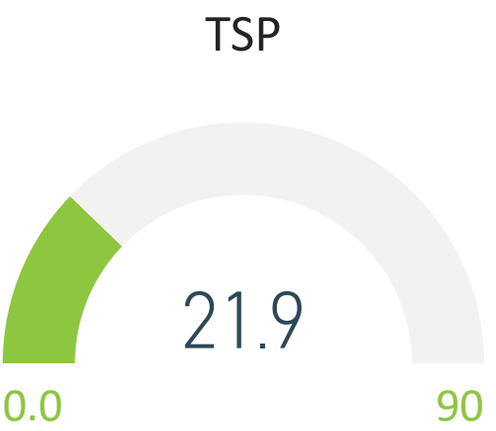
PM10 24 hour exceedances (>50 µg/m3)

Date	PM10 (ug/m3)1	Sampling Comments
10/05/26	57.00	Back burning

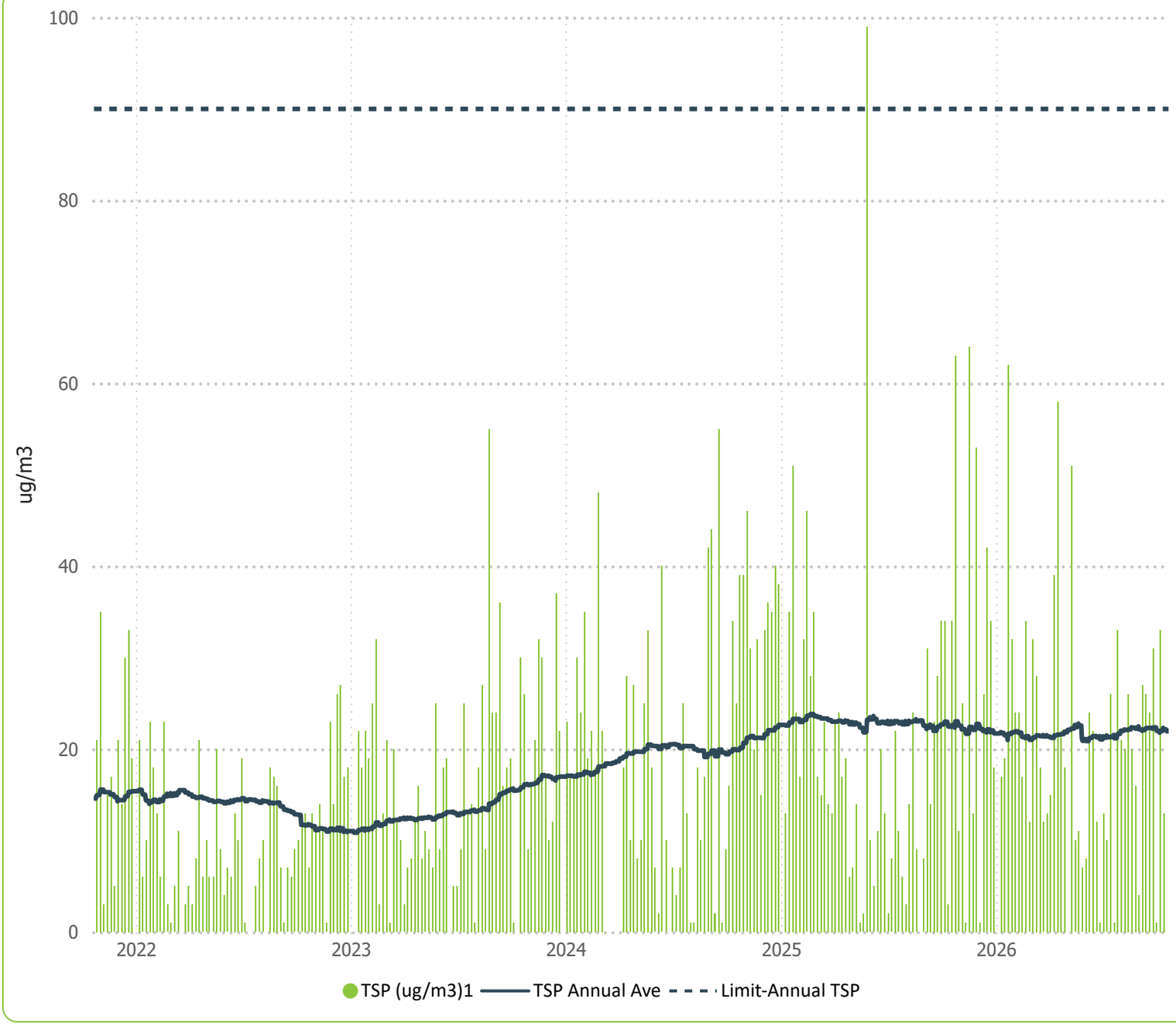
PM2.5 24 hour exceedances (>25 µg/m3)

Date	PM2.5 (ug/m3)1	Sampling Comments
17/11/25	26.00	
29/11/25	27.00	
16/01/26	27.00	Paper got wet and dirt spilt on it
10/05/26	46.00	Back burning

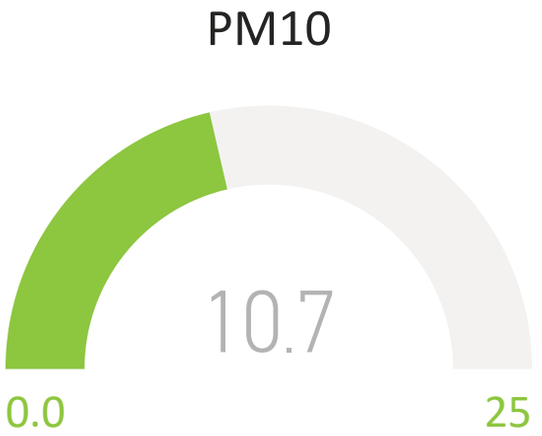
Particulate Matter Annual Averages (µg/m3)



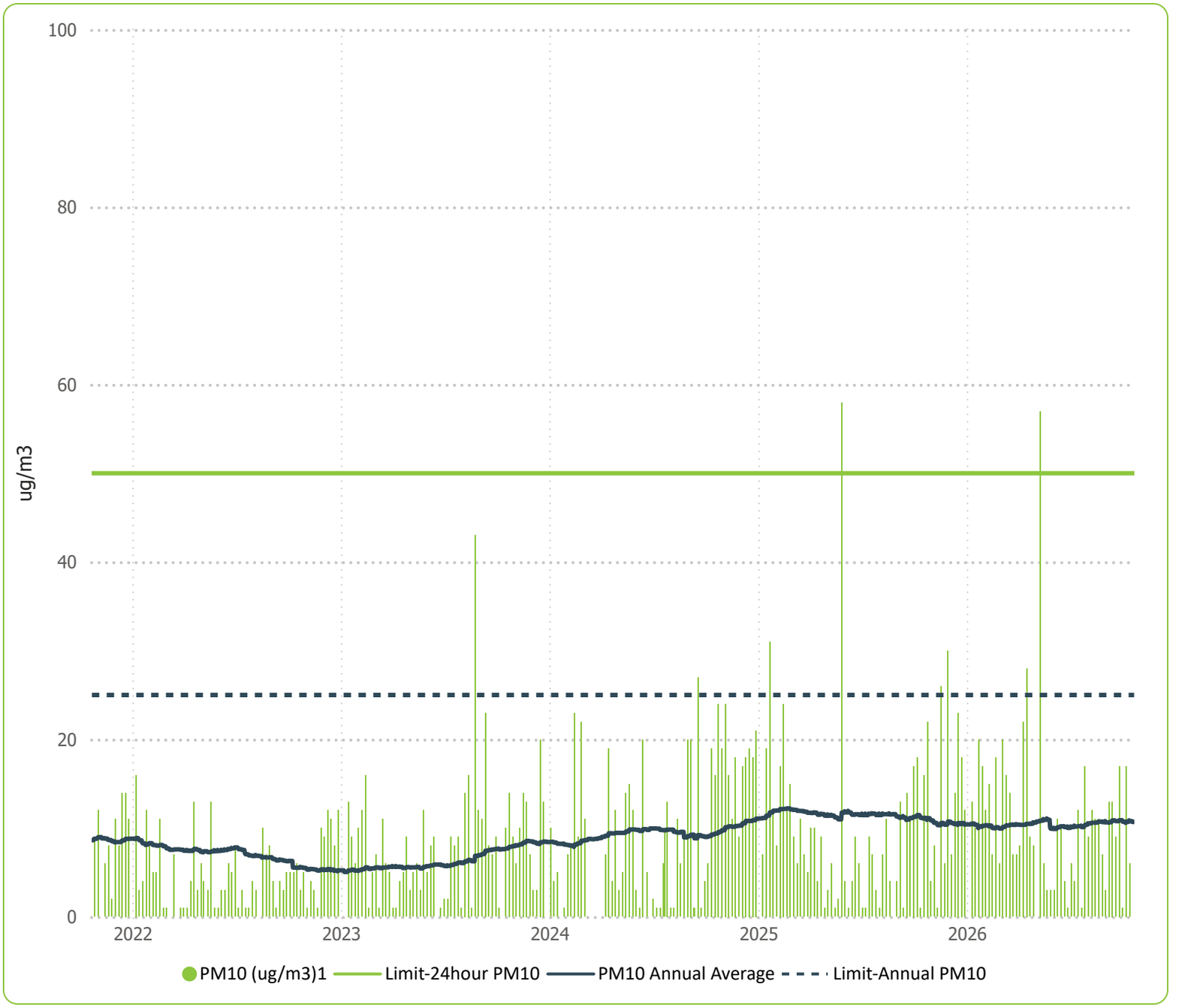
HVAS annual averages calculated excluding extraordinary events



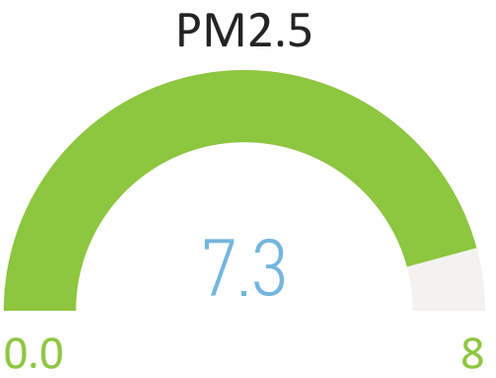
Particulate Matter Annual Averages (µg/m3)



HVAS annual averages calculated excluding extraordinary events



Particulate Matter Annual Averages (µg/m3)

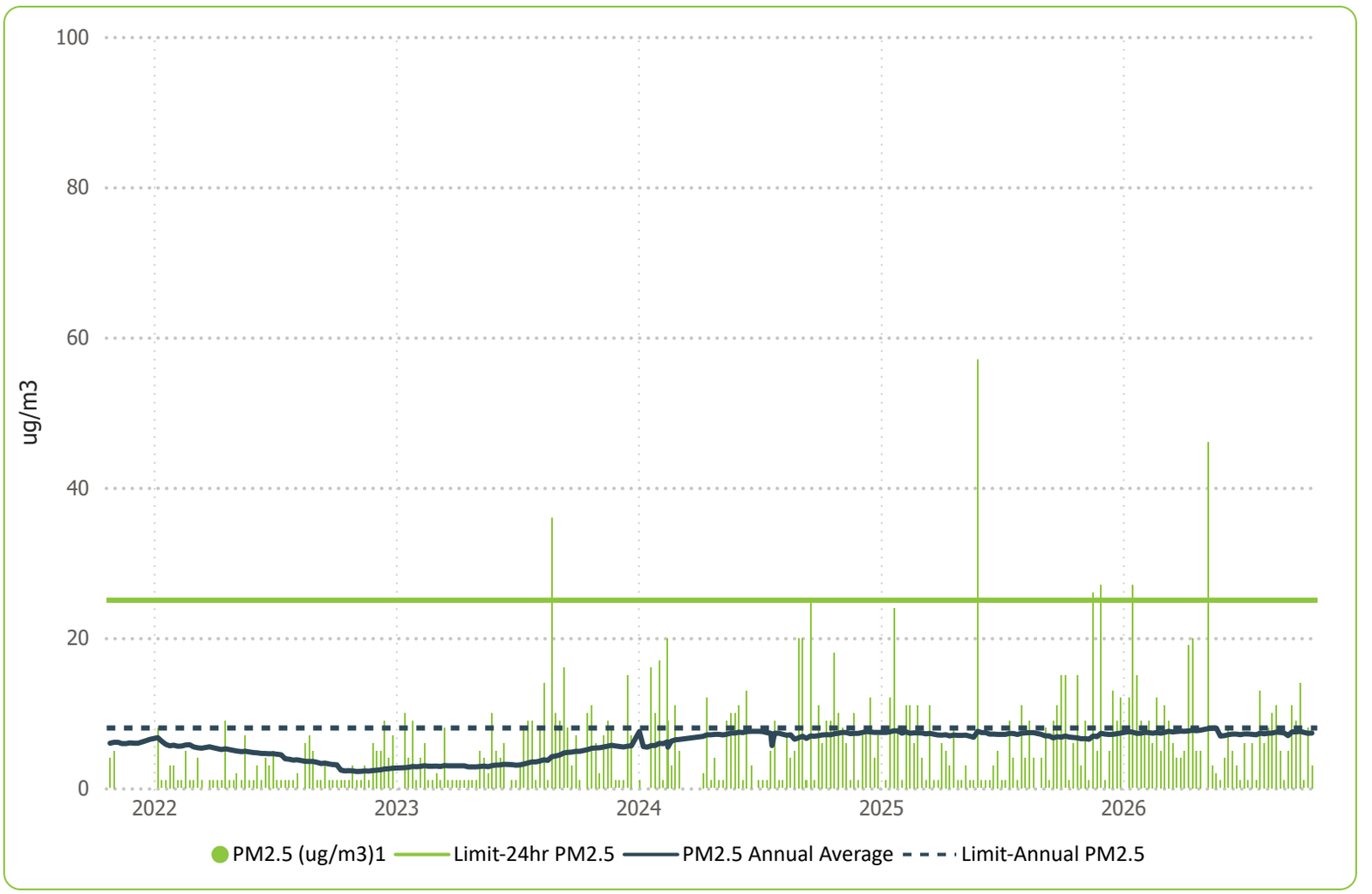


HVAS annual averages calculated excluding extraordinary events

Samples >8ug/m3

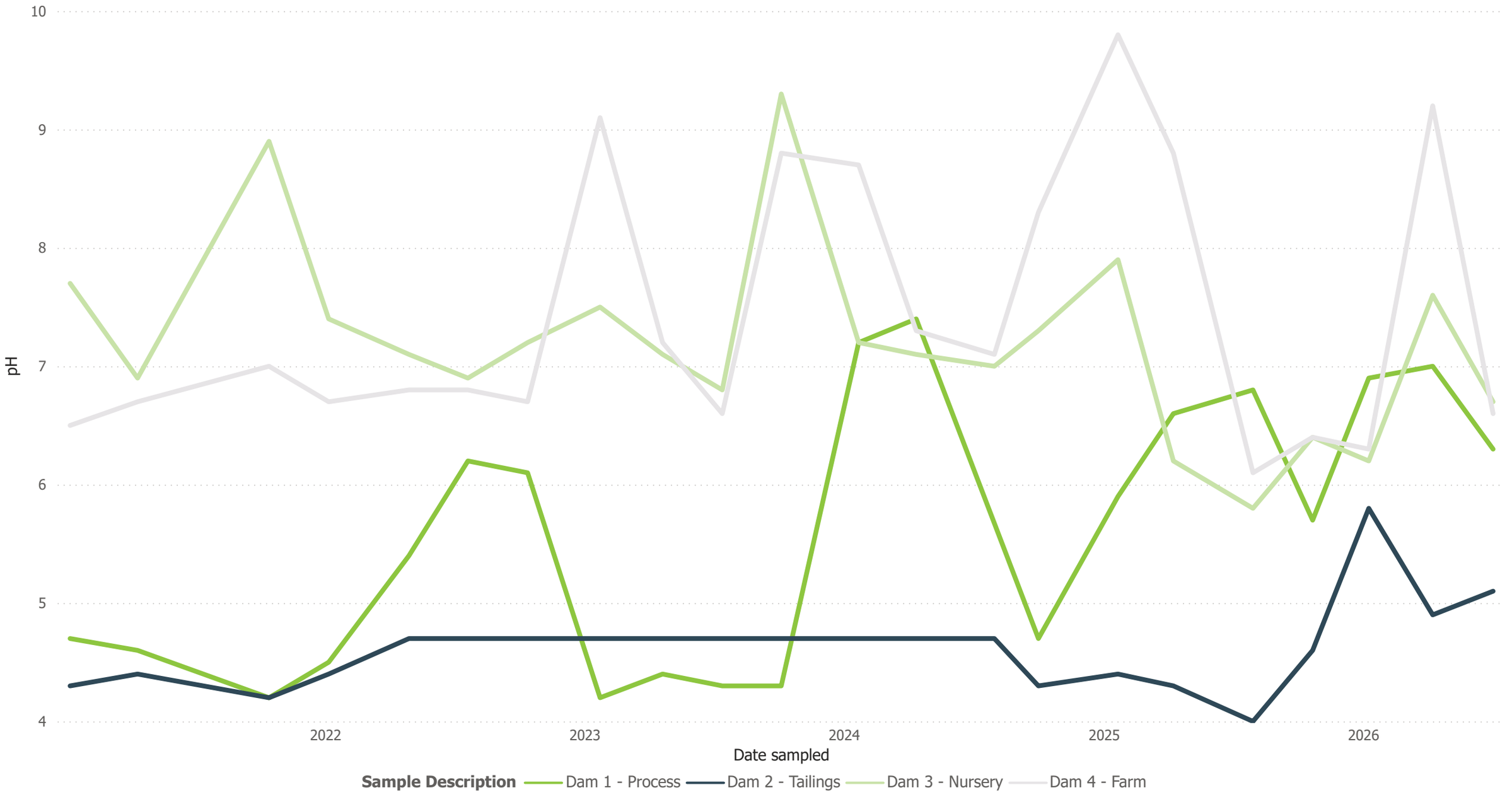
Date	Sampling Comments	PM2.5 (ug/m3)
13/09/26		11.00
19/09/26		9.00
25/09/26		14.00
7/10/26		8.00

Date	*Results from extraordinary events are not included in the annual average calculation	Extraordinary Event - PM2.5*

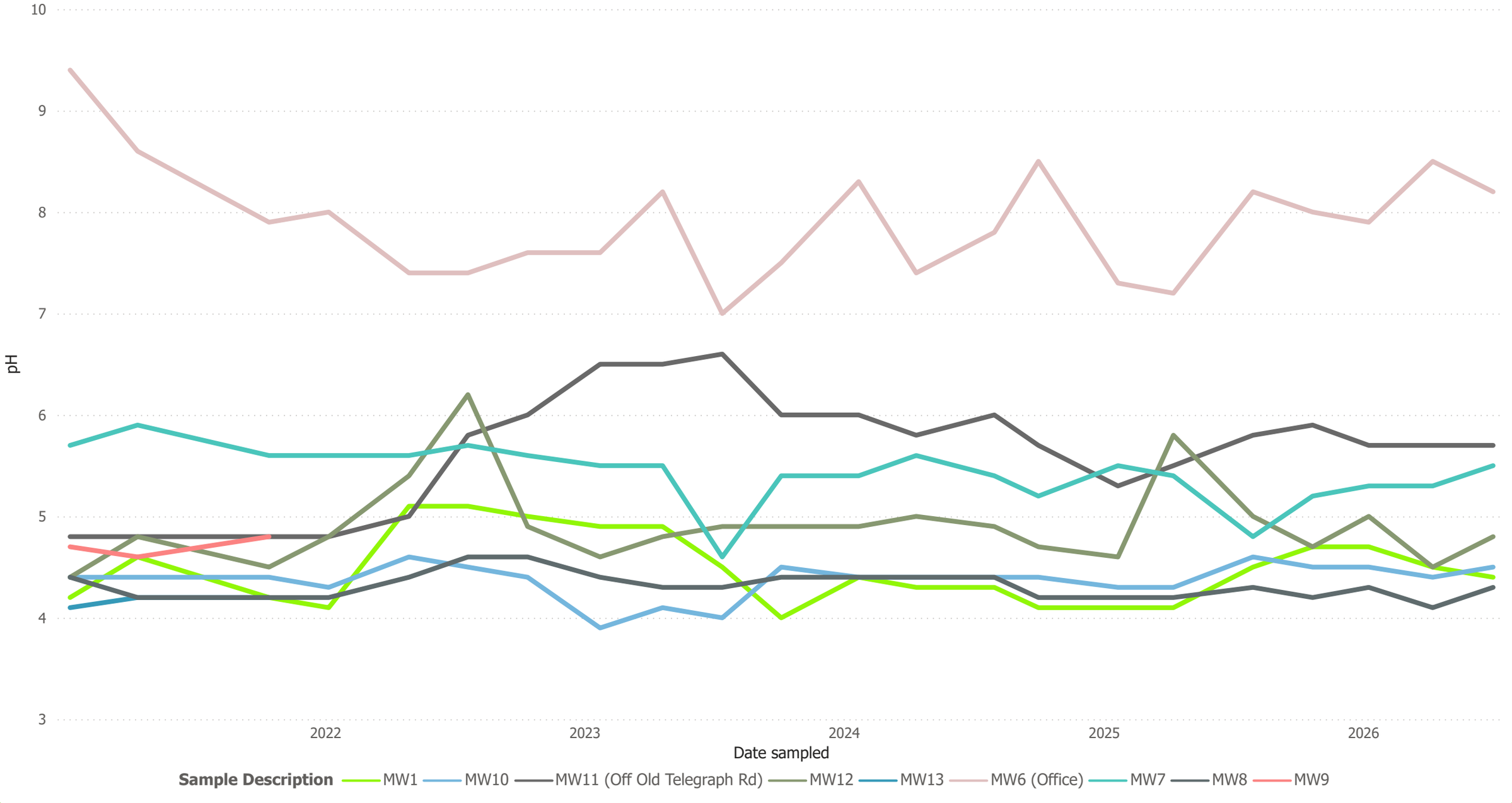


Water Quality Trends

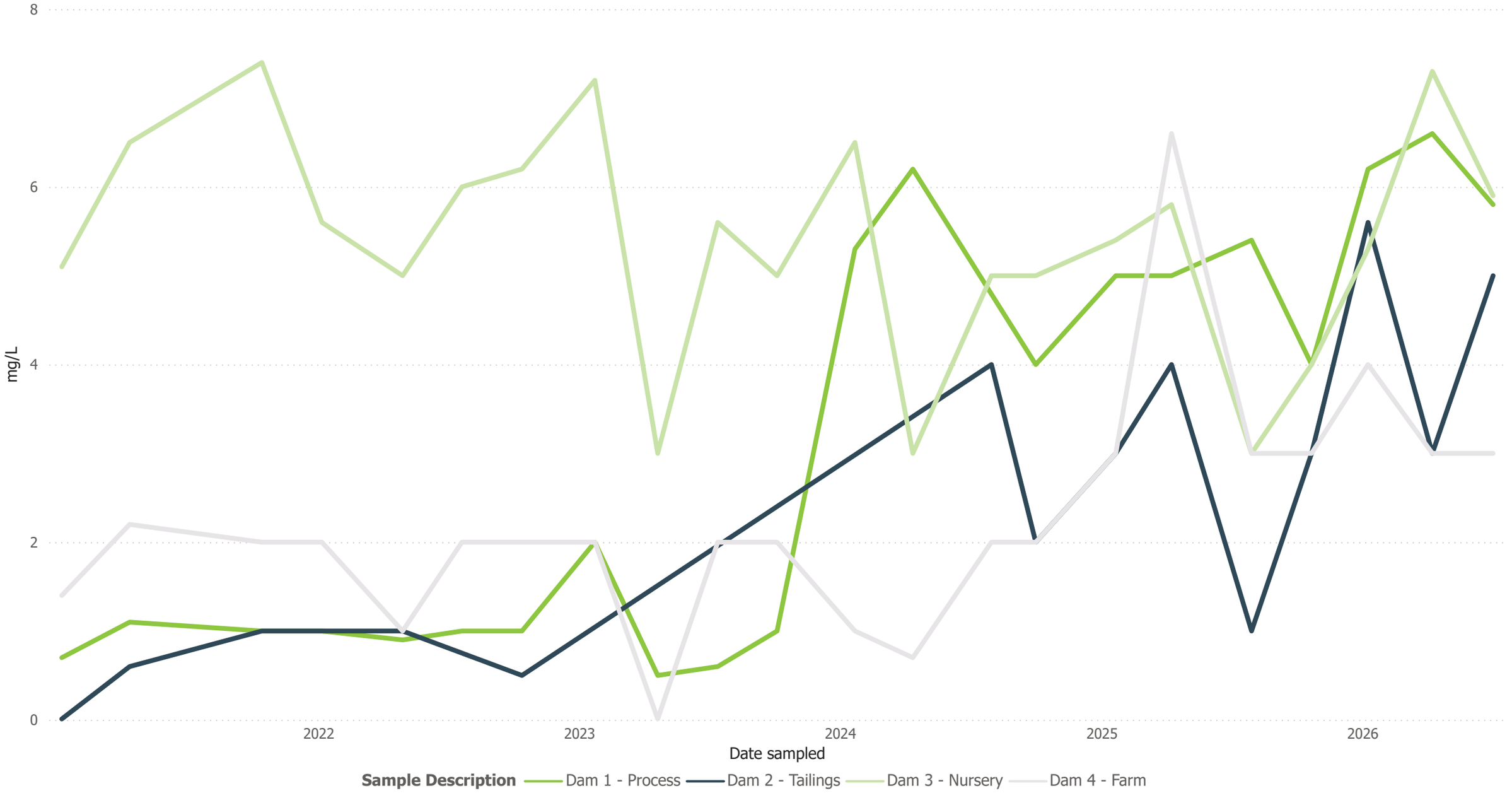
pH - Surface Water



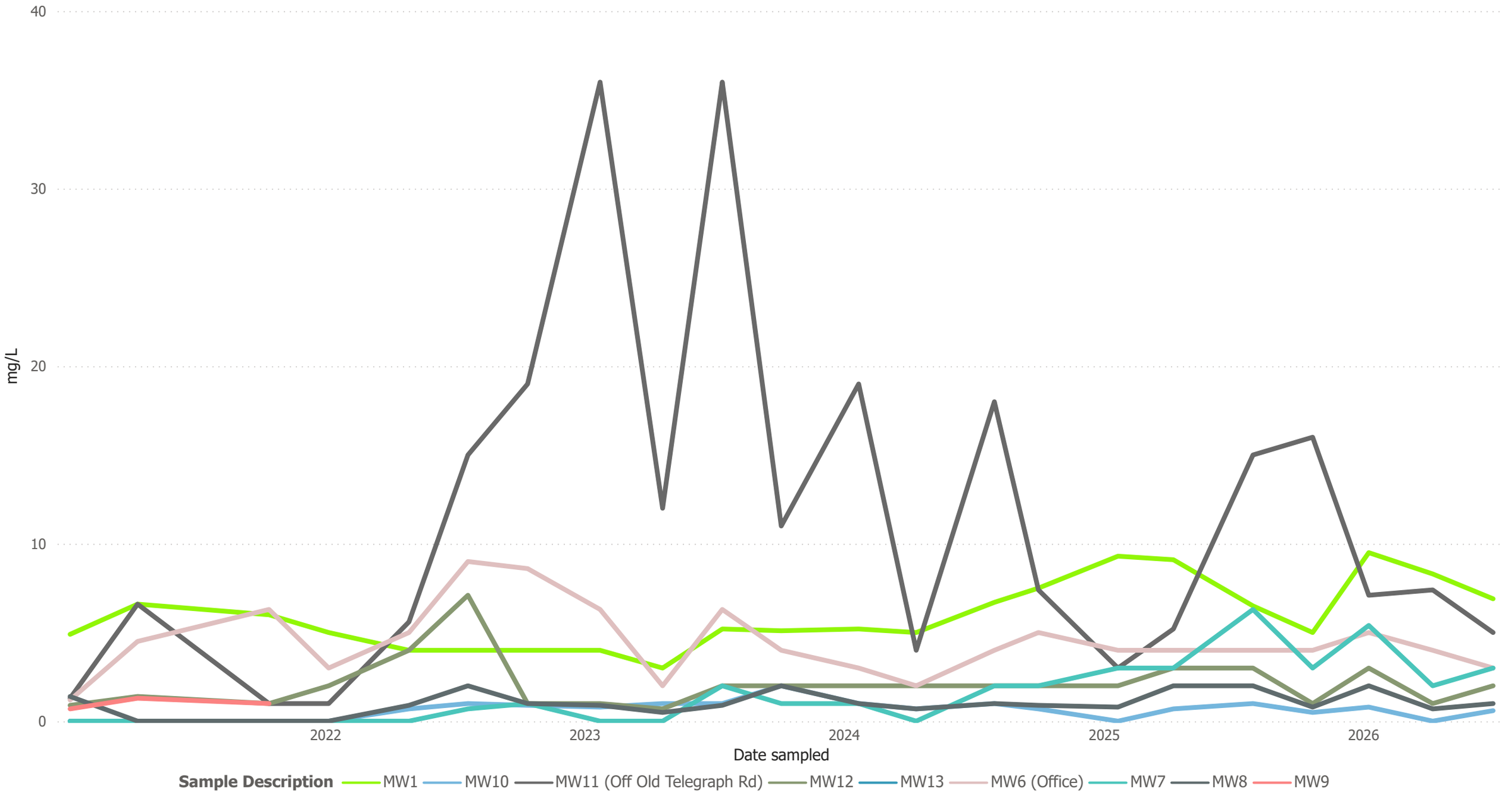
pH - Groundwater



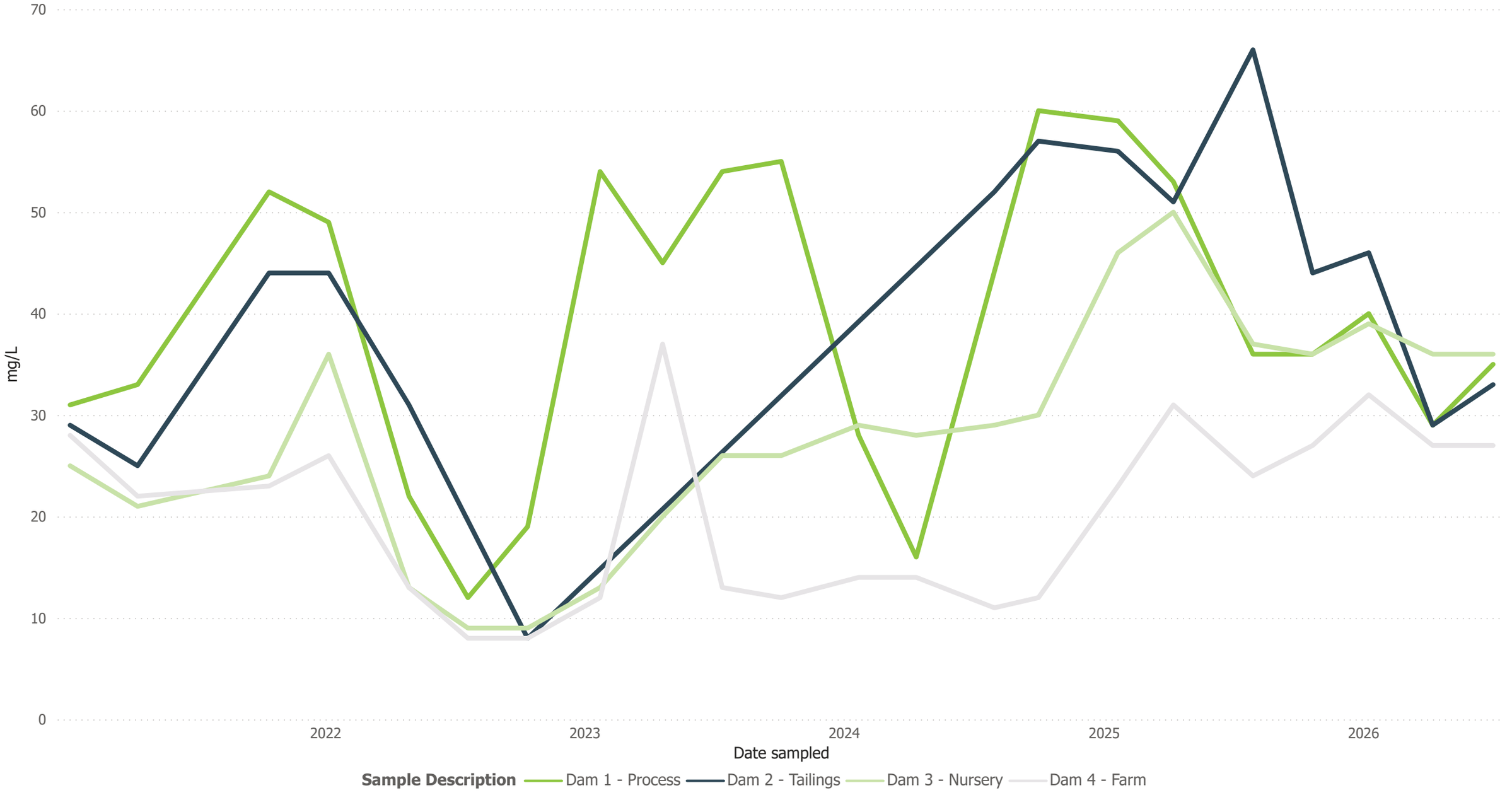
Calcium - Surface Water



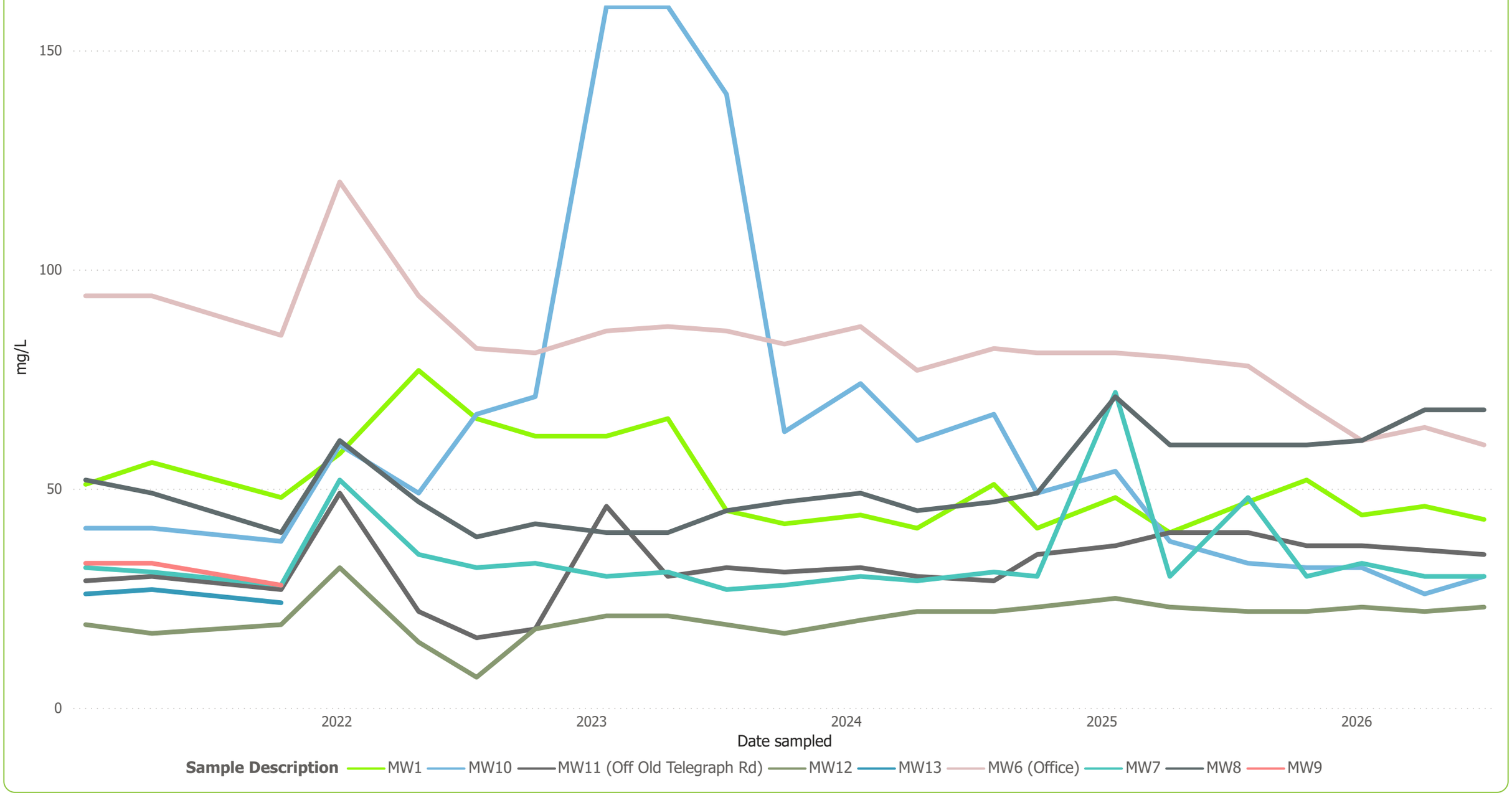
Calcium - Groundwater



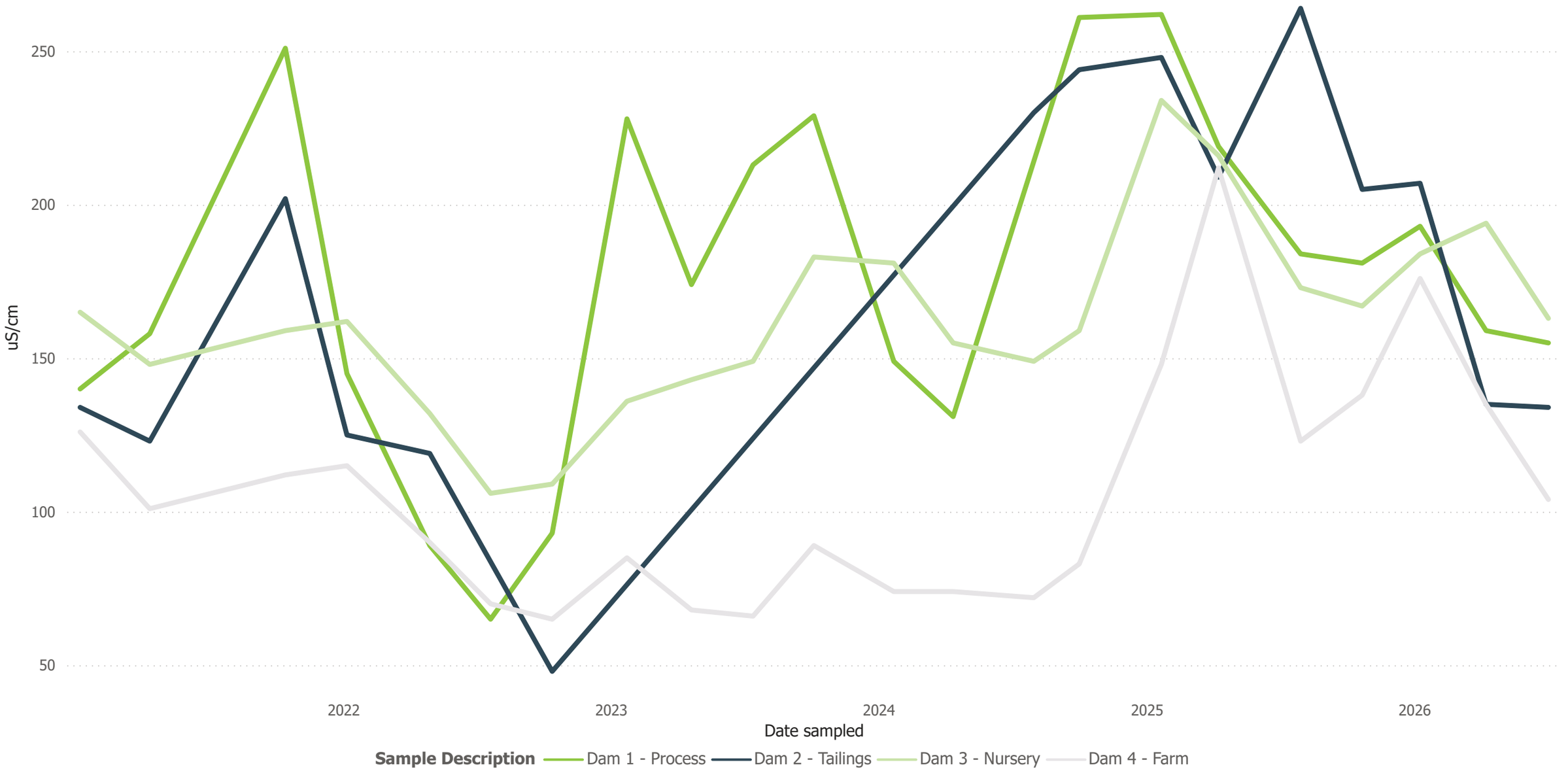
Chloride - Surface Water



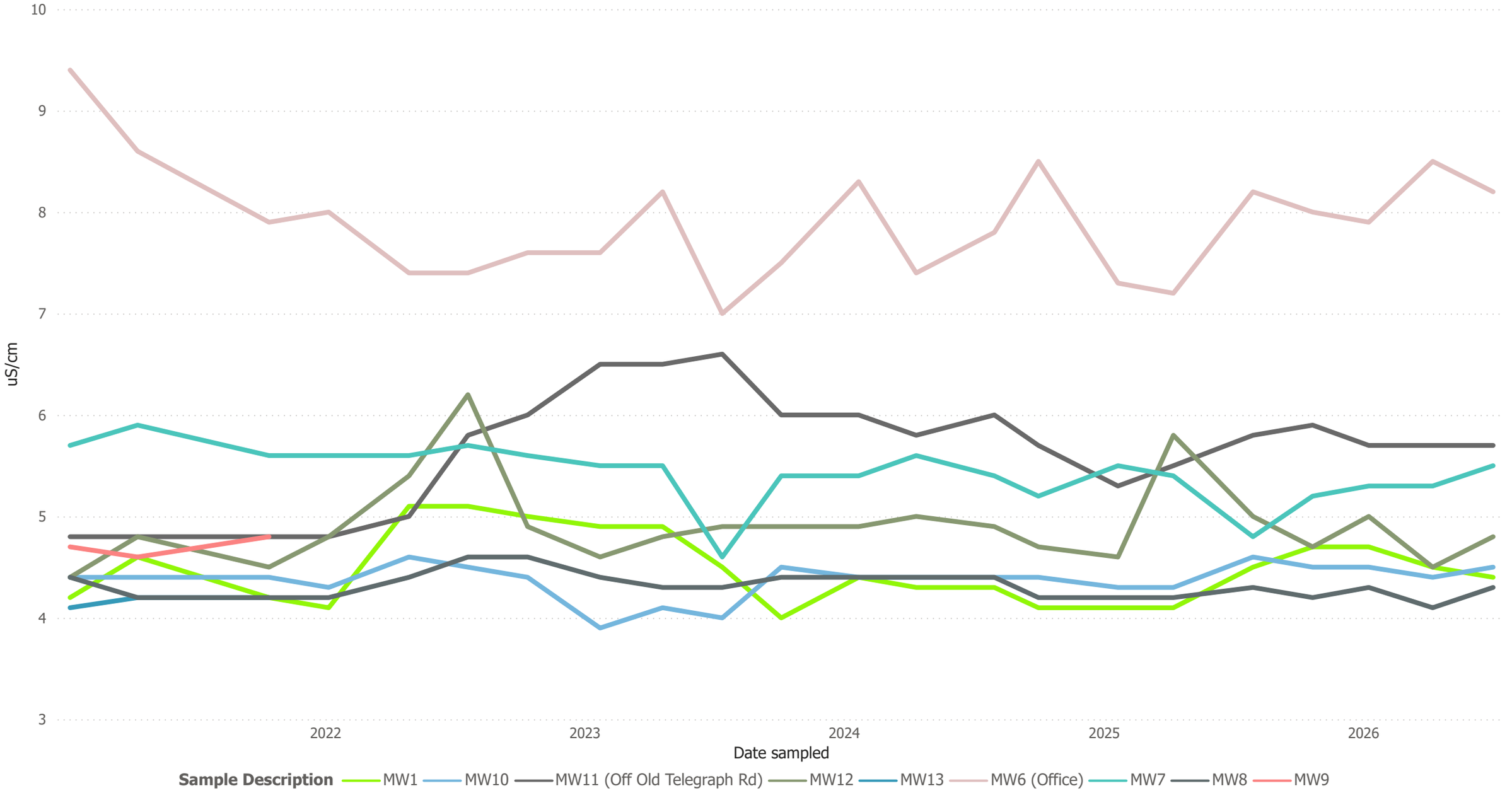
Chloride - Groundwater



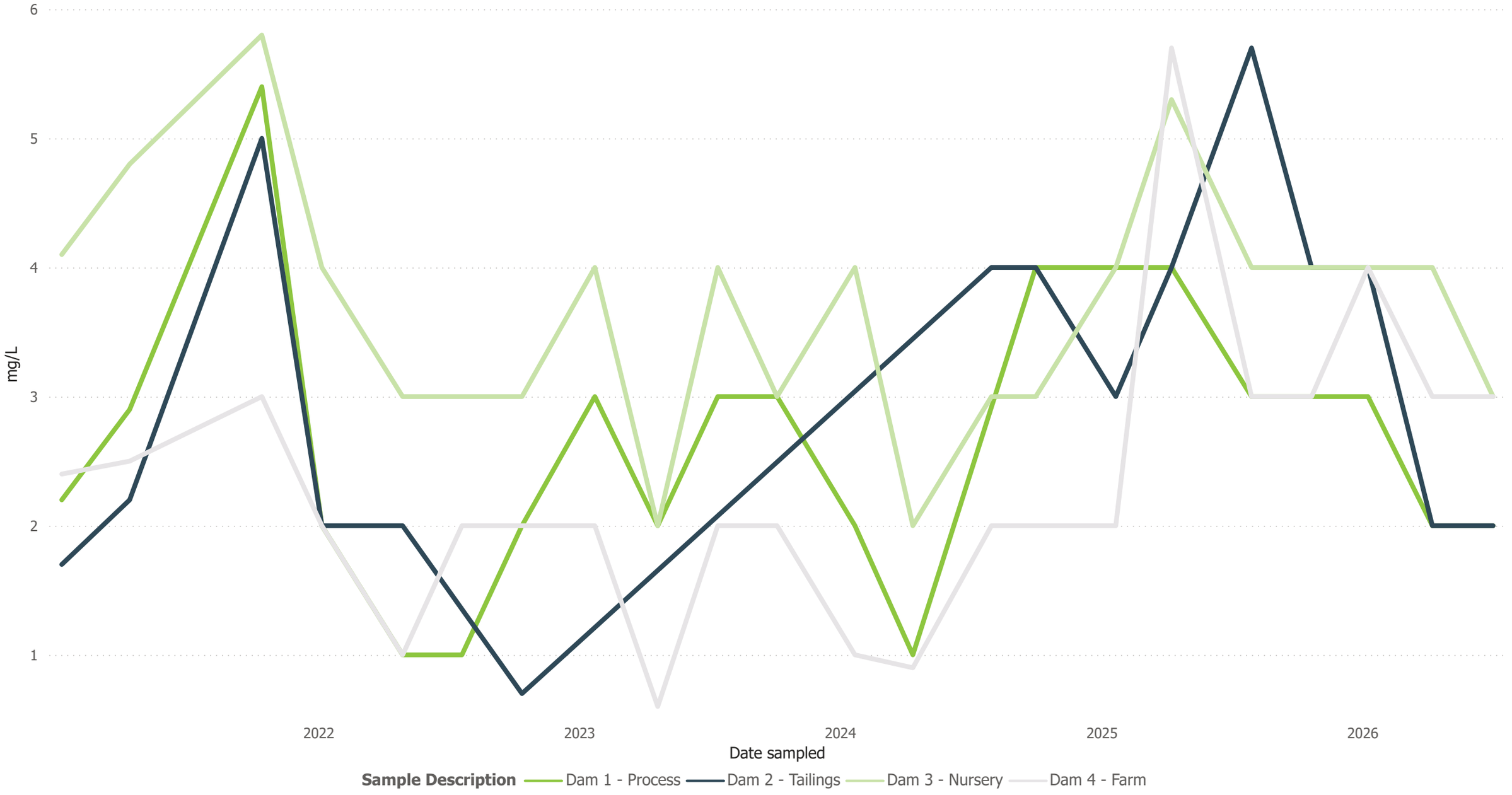
Electrical Conductivity - Surface Water



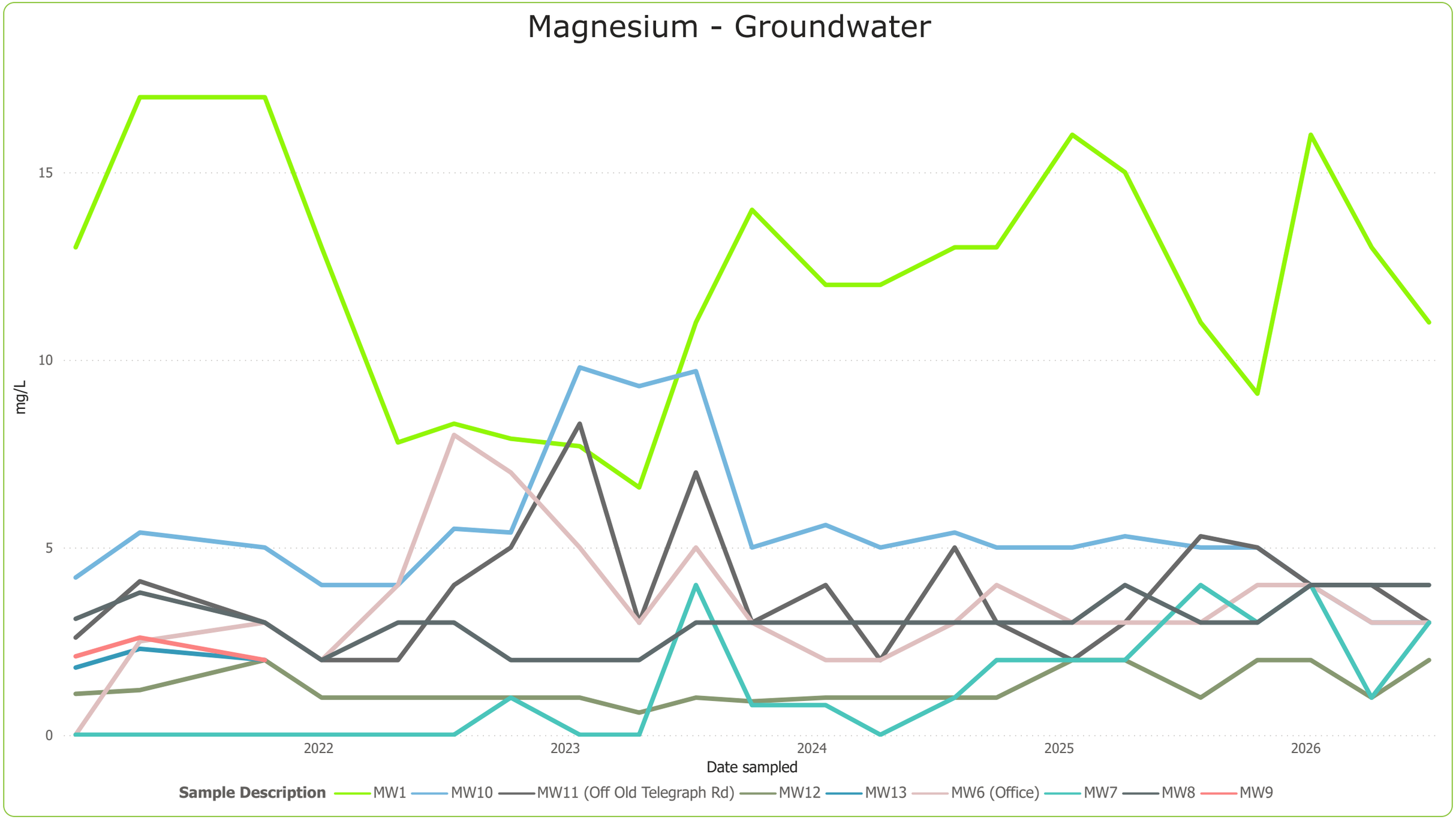
Electrical Conductivity - Groundwater



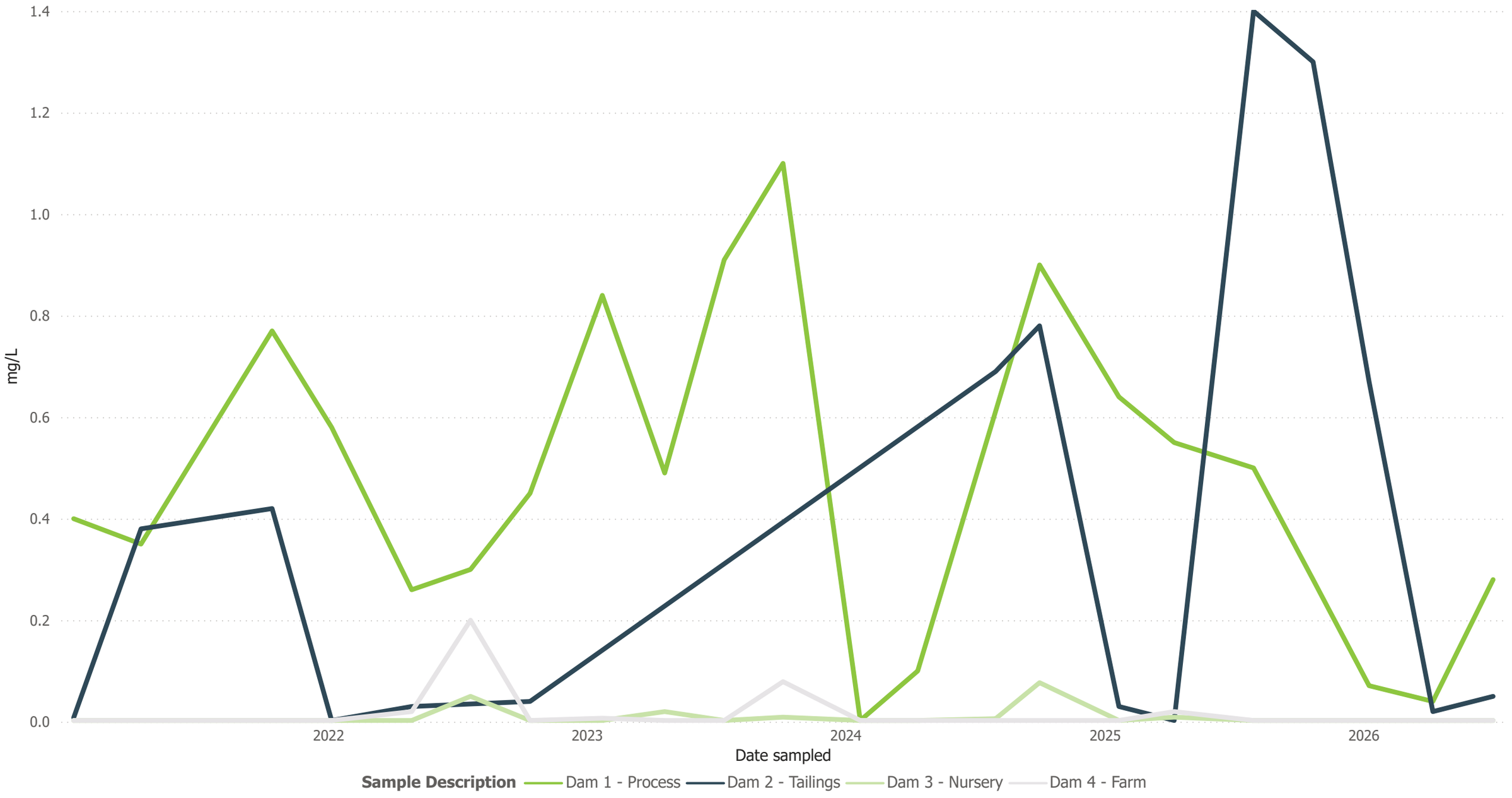
Magnesium - Surface Water



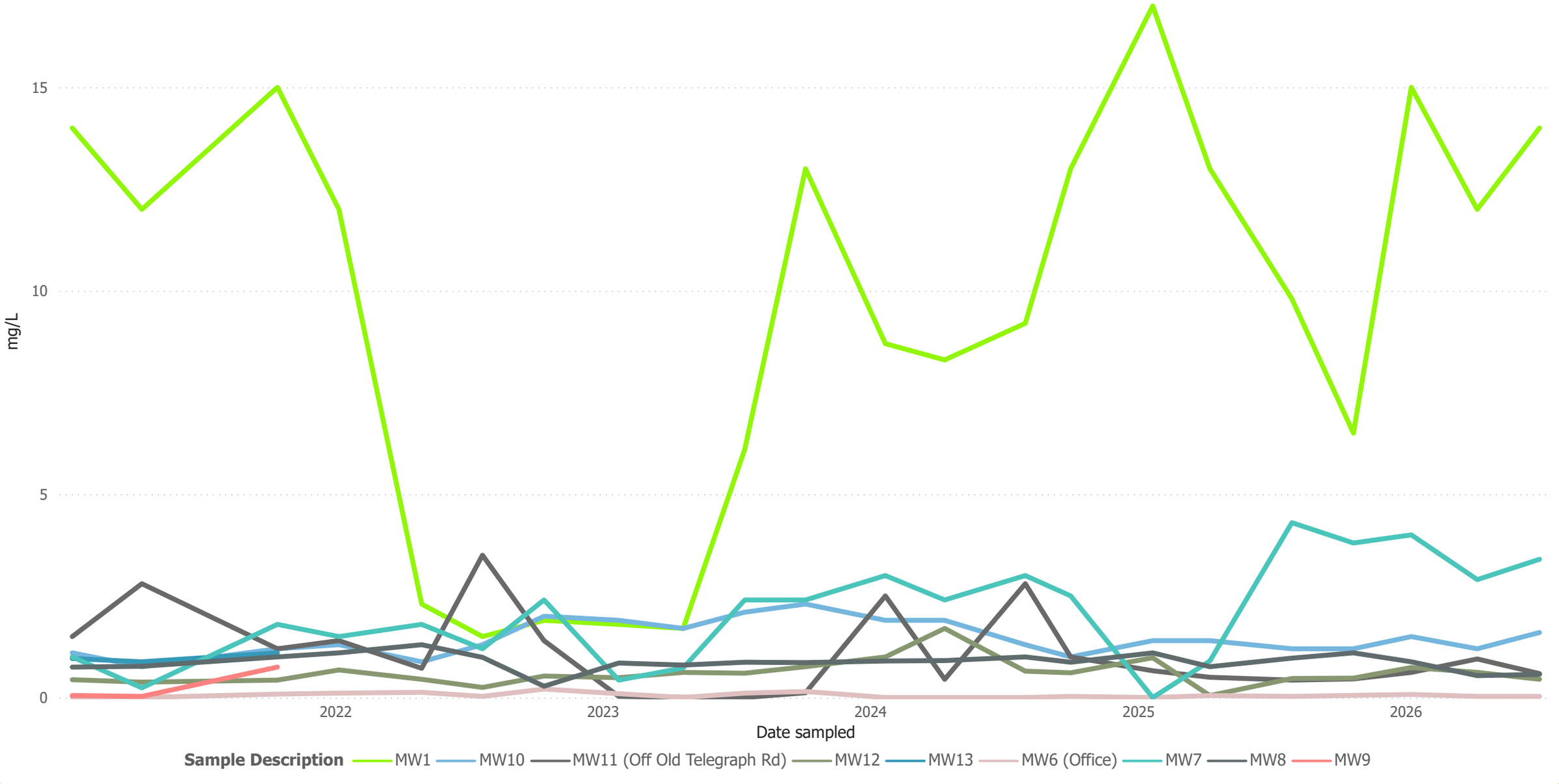
Magnesium - Groundwater



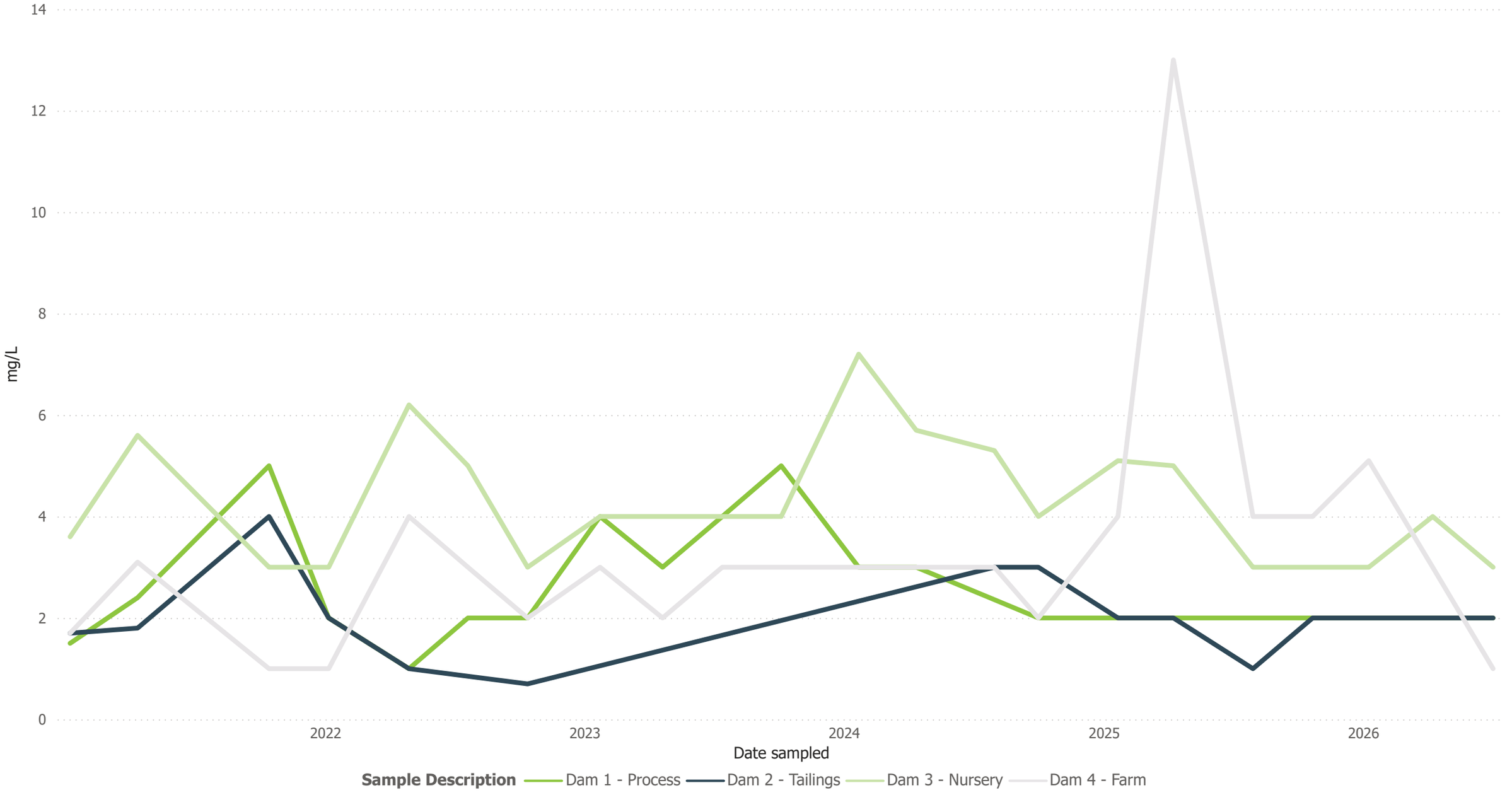
Nitrate - Surface Water



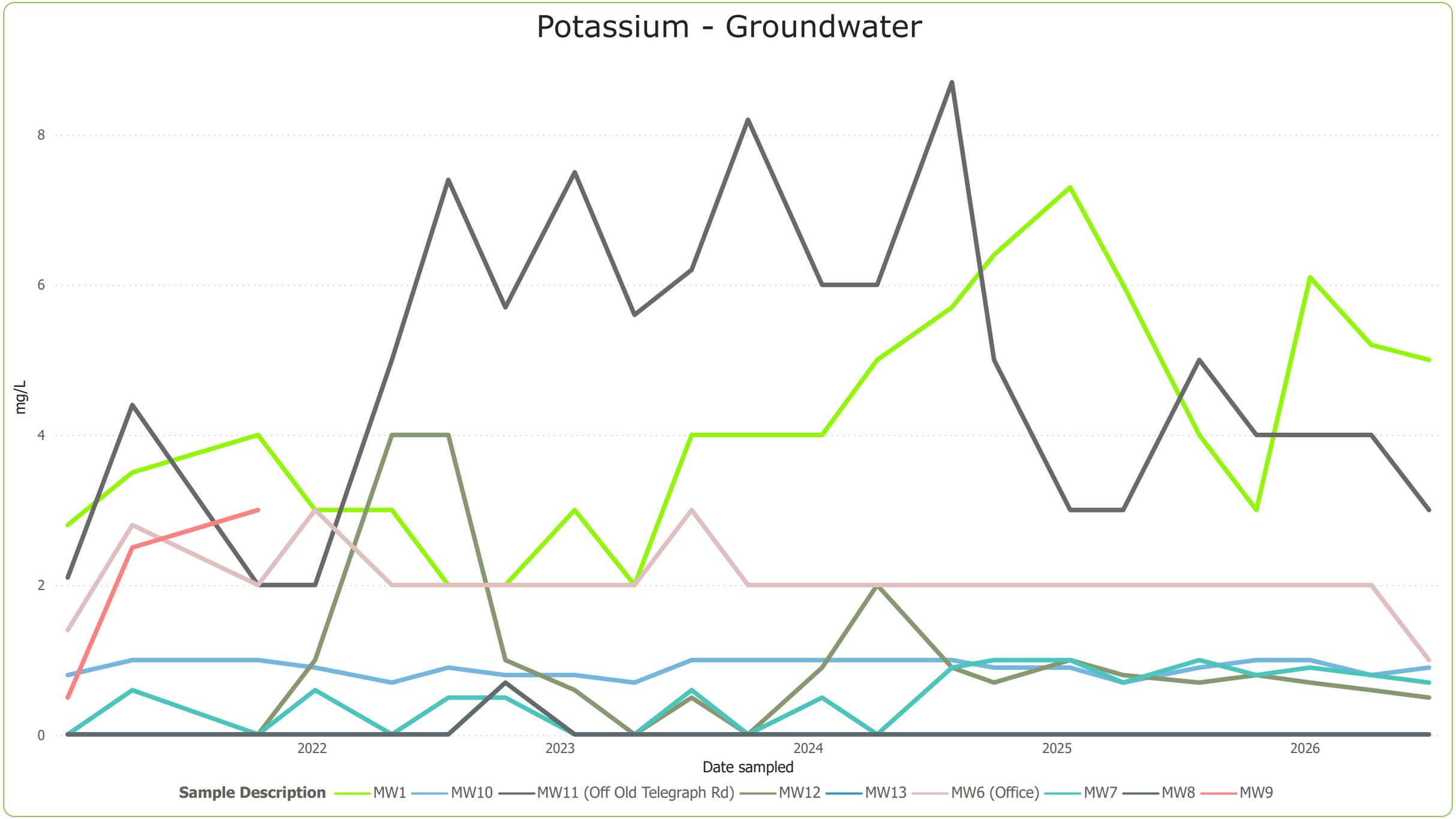
Nitrate - Groundwater



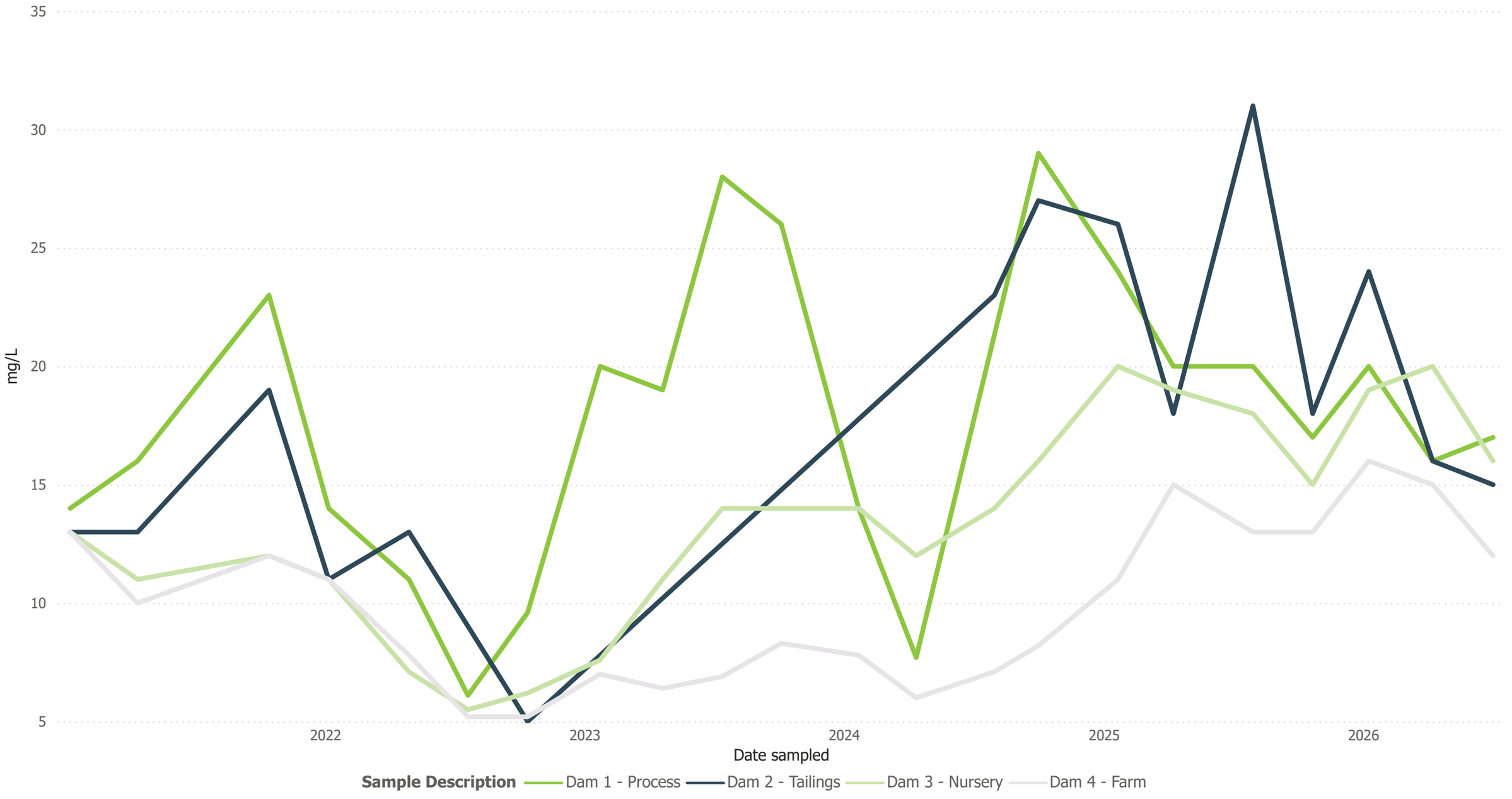
Potassium - Surface Water



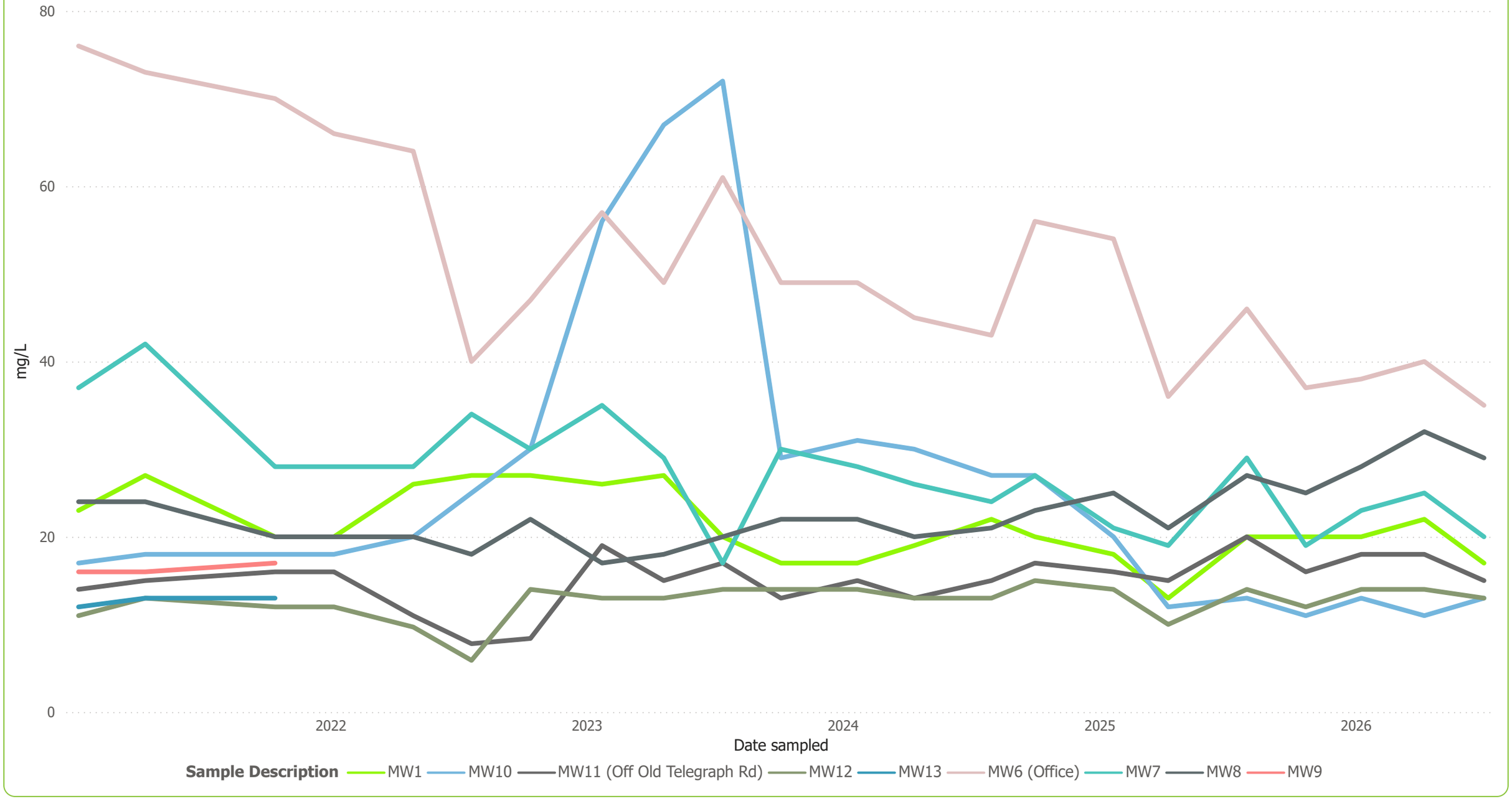
Potassium - Groundwater



Sodium - Surface Water



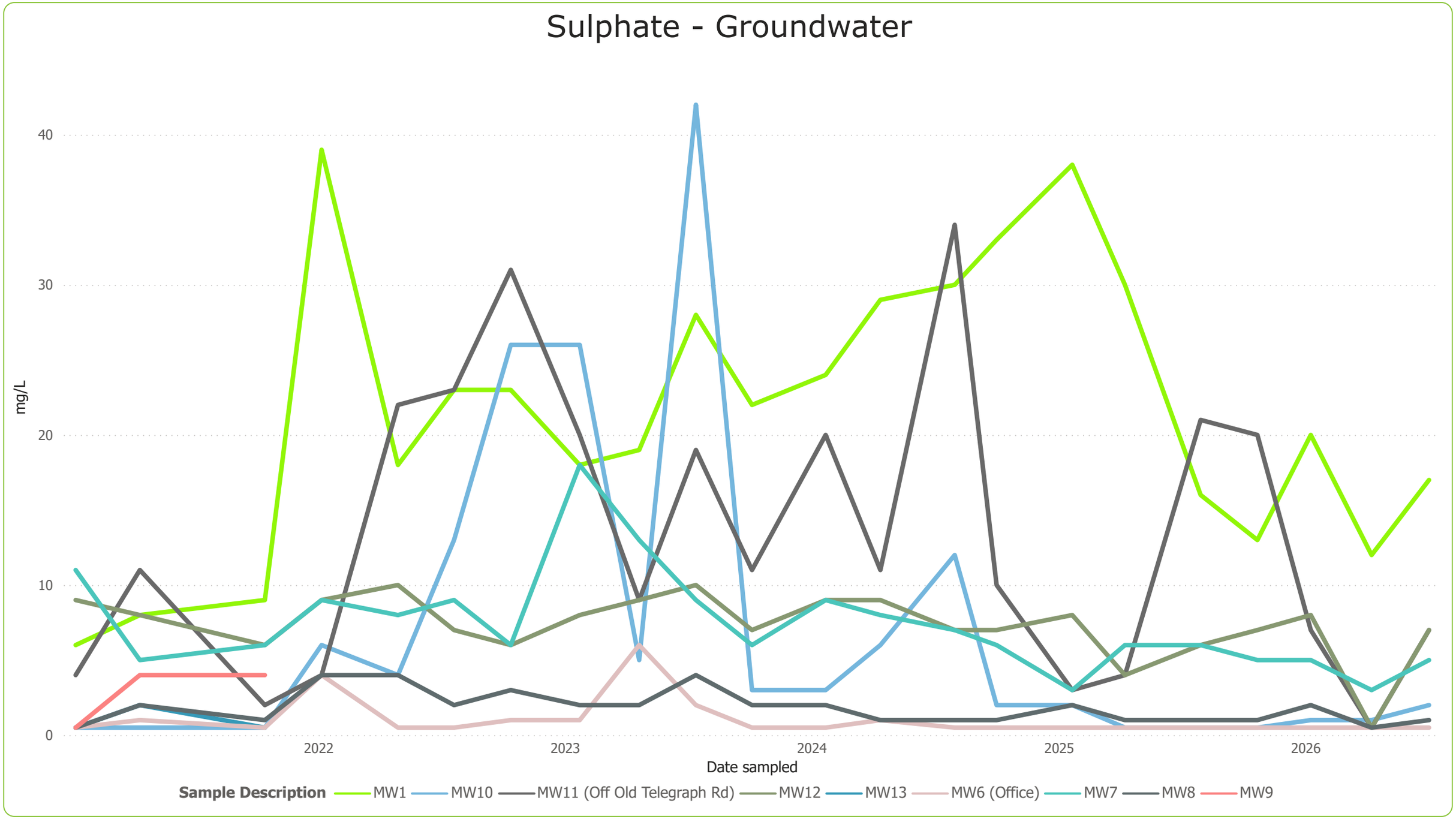
Sodium - Groundwater



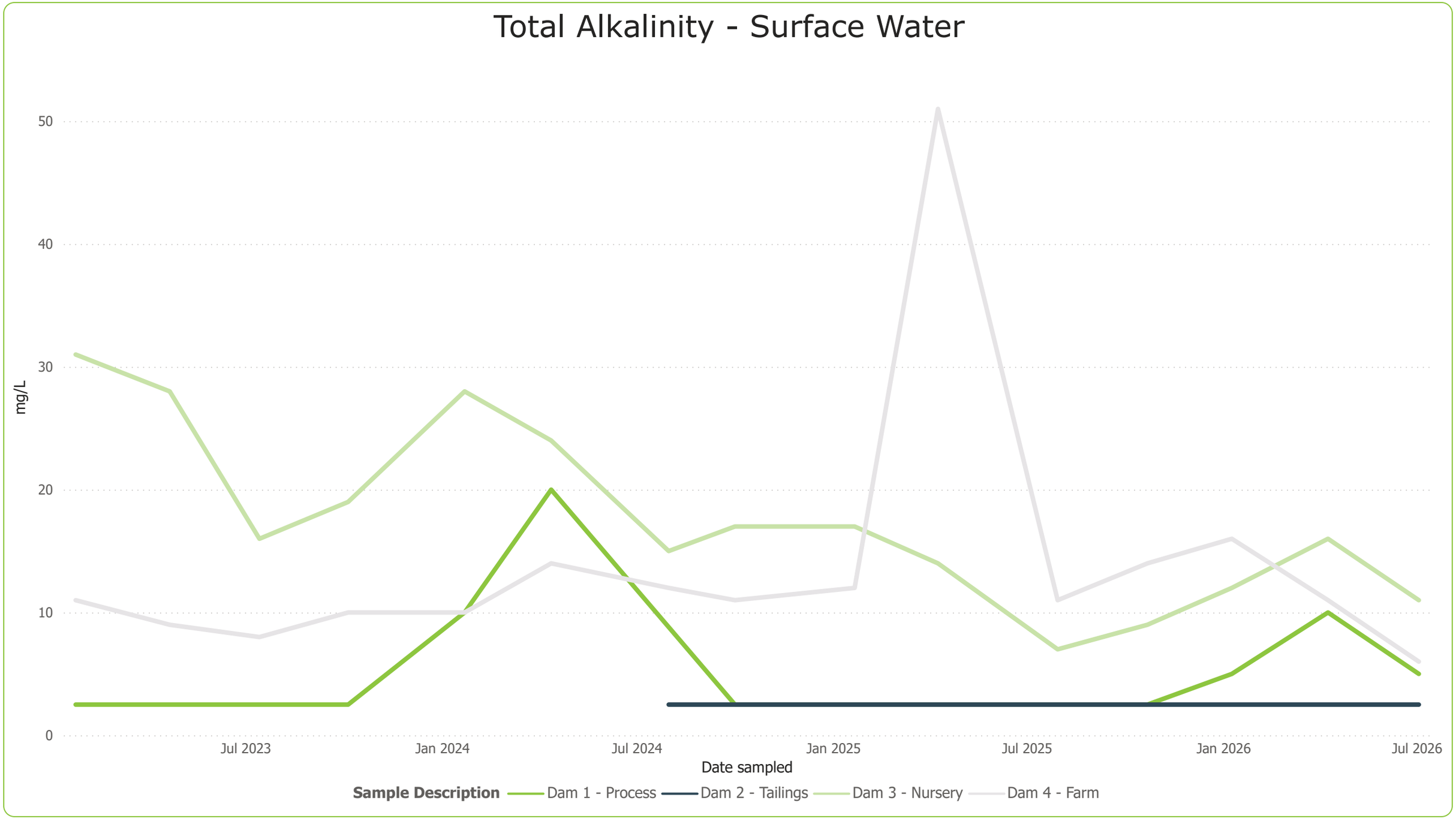
Sulphate - Surface Water



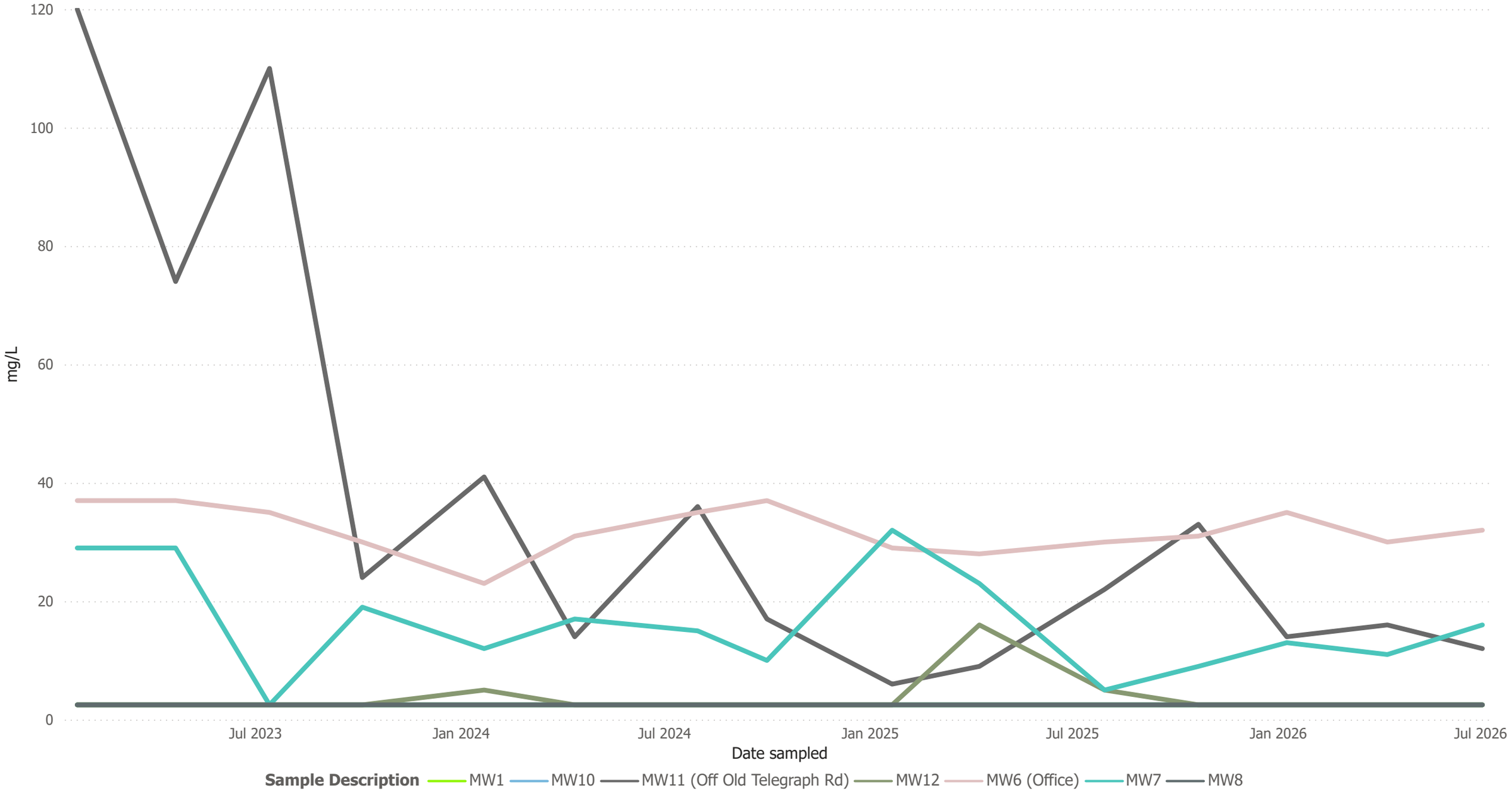
Sulphate - Groundwater



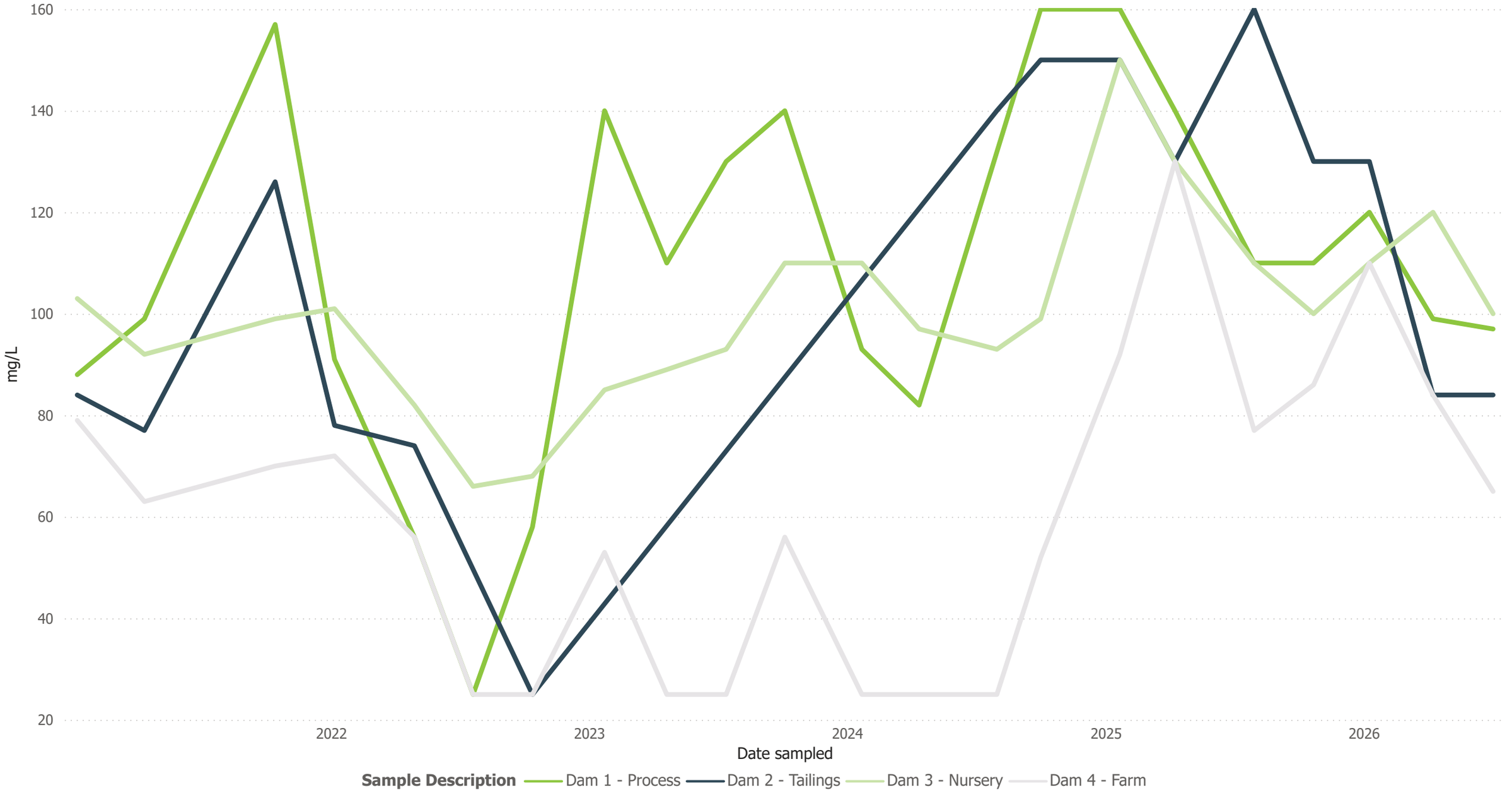
Total Alkalinity - Surface Water



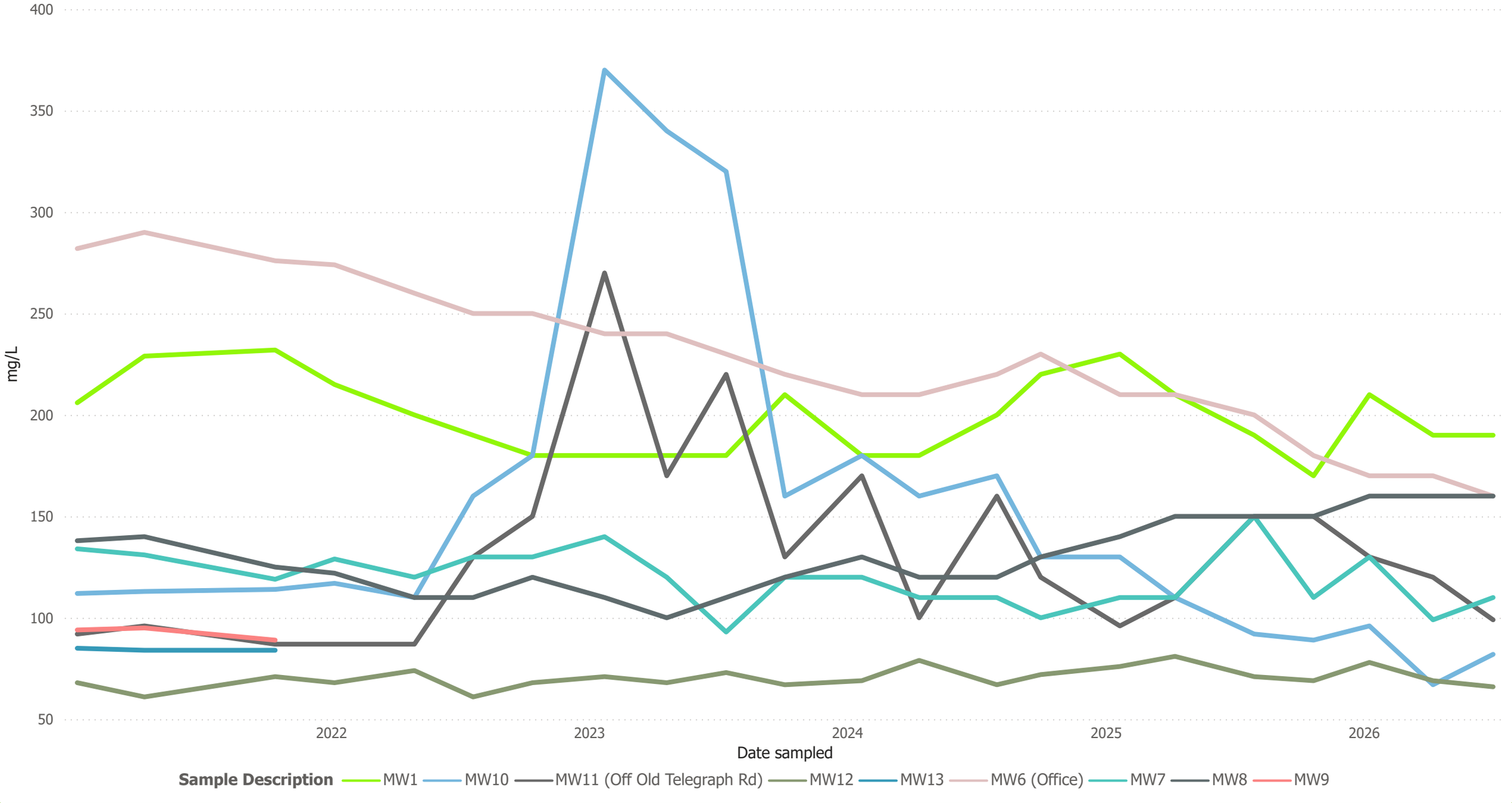
Total Alkalinity - Groundwater



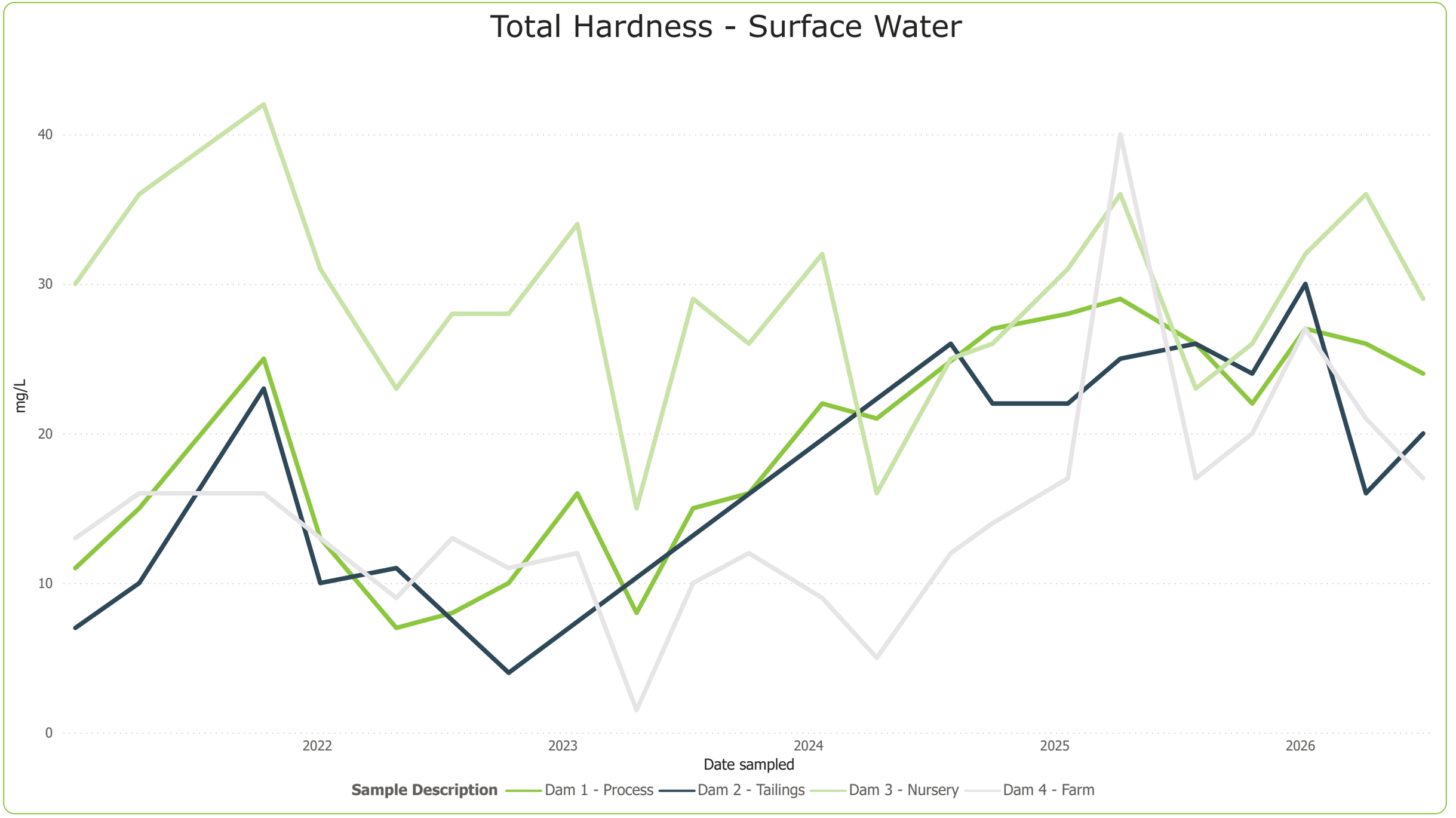
Total Dissolved Solids - Surface Water



Total Dissolved Solids - Groundwater



Total Hardness - Surface Water



Total Hardness - Groundwater

