
Manning Colliery Monthly Website Report – October 2025

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Department:	Health Safety and Environment
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Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Table of Contents

Summary	3
Introduction	3
Scope	4
Definitions	4
References	4
Monitoring Results	5
Water – Quality	5
Water – Volume.....	7
Water – Groundwater Discharge.....	8
Air Quality – Depositional Dust	8
Air Quality – PM ₁₀	10
Air Quality – PM _{2.5}	12
Weather Data	12

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Summary

Environmental monitoring results are presented in this report for monitoring undertaken during the period of October 2025.

Introduction

Great Southern Energy Pty Ltd (trading as Delta Coal) operates Mannering Colliery, an underground coal mine at the southern end of Lake Macquarie.

Mannering Colliery operates under the following regulatory instruments:

- Section 66(6) of the *Protection of the Environment Operations Act 1997*, to make monitoring data related to an Environment Protection Licence (EPL) publicly available;
- Condition 10 & 13, Schedule 5, of Project Approval 06_0311 (as modified) to provide details of monitoring results and environmental performance;
- An Environment Protection Licence (EPL 191) issued under the *Protection of the Environment Operations Act 1997*; and
- A Water Access Licence (WAL40461), Aquifer (Sydney Basin – North Coast Groundwater Source) for 450-unit shares (megalitres).

Details of the Mannering Colliery EPL 191 are provided below.

Mannering Colliery Information	
Premises name	Mannering Colliery
Address	Ruttleys Road, Doyalson, NSW, 2262
Licensee	Great Southern Energy Pty Ltd
EPL #	191
EPL location	EPL 0191 - 24 June 2025

The overall purpose of this monthly report is to keep stakeholders informed of the environmental monitoring results at Mannering Colliery and maintain a transparent and accountable reporting system.

Monthly Website Report

Manning Colliery Monthly Environmental Report – October 2025

Scope

This report presents the results from the various environmental monitoring programs undertaken for Manning Colliery. Results are presented monthly with annual data, averages and trends in data also shown where relevant.

Where applicable, the results of the monitoring programs are compared with the relevant criteria (from the EPL or Project Approval) to assess compliance.

Monitoring results presented include:

- Water – quality;
- Water – volume;
- Air Quality – Depositional Dust
- Air Quality – PM₁₀
- Air Quality – PM_{2.5}; and
- Meteorological data.

Definitions

g/m²/month – grams per square metre per month;

kL – kilolitre;

ML – megalitre;

mg/L – milligrams per litre;

TSS – total suspended solids;

µg/L – micrograms per litre; and

µS/cm – microSiemens per centimetre.

References

Project Approval MP06_0311 (as modified)

Environment Protection Licence 191 (Licence version date: 9 April 2025)

ALS - Dust Deposition Report **October 2025**

ALS – MC Water Analysis Reports **October 2025**

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Monitoring Results

Water – Quality

Weekly water quality results for discharge point LDP001 are presented below.

October 2025				
EPL	191			
Licensee	Great Southern Energy Pty Ltd			
Premises	Mannering Colliery			
Location	LDP001 (EPA ID # 1)			
Sample Frequency	Weekly			
pH limit	6.5 - 8.5			
TSS limit (mg/L)	50			
Oil and grease limit (mg/L)	10			
Water Quality Results				
Date	pH	TSS (mg/L)	Oil and grease (mg/L)	Electrical Conductivity (µS/cm)
30/09/2025	7.84	7	<5	27800
7/10/2025	7.99	13	<5	10200
14/10/2025	7.80	<5	<5	25800
22/10/2025	7.69	5	<5	27600
28/10/2025	7.75	19	2.1	28000
Average	7.81	11	2.42	23880

There were no exceedances of water quality criteria in October 2025 at Mannering Colliery.

Monthly water quality results, primarily metals and metalloids, at LDP001 are presented below.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		LDP001
		Sampling date / time		14-Oct-2025 09:15
Compound	CAS Number	LOR	Unit	EN2517483-001
				Result
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	161
Silicon as SiO2	14464-46-1	0.1	mg/L	12.3
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	250
Magnesium	7439-95-4	1	mg/L	262
Potassium	7440-09-7	1	mg/L	35
EG020F: Dissolved Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	<10
Arsenic	7440-38-2	1	µg/L	<1
Beryllium	7440-41-7	1	µg/L	<1
Cadmium	7440-43-9	0.1	µg/L	<0.1
Chromium	7440-47-3	1	µg/L	<1
Cobalt	7440-48-4	1	µg/L	<1
Copper	7440-50-8	1	µg/L	<1
Lead	7439-92-1	1	µg/L	<1
Manganese	7439-96-5	1	µg/L	37
Molybdenum	7439-98-7	1	µg/L	6
Nickel	7440-02-0	1	µg/L	2
Selenium	7782-49-2	10	µg/L	<10
Silver	7440-22-4	1	µg/L	<1
Vanadium	7440-62-2	10	µg/L	<10
Zinc	7440-66-6	5	µg/L	90
EG020T: Total Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	<10
Antimony	7440-36-0	1	µg/L	<1
Arsenic	7440-38-2	1	µg/L	<1
Beryllium	7440-41-7	1	µg/L	<1
EG020T: Total Metals by ICP-MS - Continued				
Barium	7440-39-3	1	µg/L	209
Cadmium	7440-43-9	0.1	µg/L	<0.1
Chromium	7440-47-3	1	µg/L	<1
Cobalt	7440-48-4	1	µg/L	<1
Copper	7440-50-8	1	µg/L	5
Lead	7439-92-1	1	µg/L	<1
Lithium	7439-93-2	1	µg/L	496
Molybdenum	7439-98-7	1	µg/L	9
Nickel	7440-02-0	1	µg/L	3
Selenium	7782-49-2	10	µg/L	<10
Silver	7440-22-4	1	µg/L	<1
Tin	7440-31-5	1	µg/L	<1
Titanium	7440-32-6	10	µg/L	<10
Vanadium	7440-62-2	10	µg/L	<10
Zinc	7440-66-6	5	µg/L	66
Boron	7440-42-8	50	µg/L	370
Iron	7439-89-6	50	µg/L	90
EG035F: Dissolved Mercury by FIMS				
Mercury	7439-97-6	0.1	µg/L	<0.1
EG035T: Total Recoverable Mercury by FIMS				
Mercury	7439-97-6	0.1	µg/L	<0.1
EK055G: Ammonia as N by Discrete Analyser				
Ammonia as N	7664-41-7	0.01	mg/L	0.72
EK067G: Total Phosphorus as P by Discrete Analyser				
Total Phosphorus as P	----	0.01	mg/L	<0.01

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Water – Volume

Monthly water volumes discharged via MC's LDP1 during October 2025 at Mannering Colliery are summarised below.

EPL	191
Licensee	Great Southern Energy Pty Ltd
Premises	Mannering Colliery
Date Sampled	Daily
Discharge volume limit	4000 kilolitres per day
Sampling Point	LDP001 (EPA ID # 1)

Date (24 hour period)	LDP 1 Volume (kL/day)	Rainfall (mm)
01/10/2025	1251.6	0
02/10/2025	1195.25	0
03/10/2025	1356.84	0
04/10/2025	1394.31	0
05/10/2025	1378.23	0
06/10/2025	1360.25	0.2
07/10/2025	576.56	6
08/10/2025	272.42	0
09/10/2025	736.82	0
10/10/2025	82.39	0
11/10/2025	455.04	0
12/10/2025	677.68	0
13/10/2025	1054.02	0
14/10/2025	2277.88	0
15/10/2025	1065.32	0
16/10/2025	880.89	0
17/10/2025	1115.43	1.4
18/10/2025	697.61	0
19/10/2025	1124.19	0
20/10/2025	1119.45	0
21/10/2025	990.89	0
22/10/2025	1069.8	0
23/10/2025	1105.36	0
24/10/2025	1116.54	0
25/10/2025	1014.16	0
26/10/2025	1122.8	0
27/10/2025	1008.64	1.8
28/10/2025	1103.66	14.8
29/10/2025	1158.24	4.2
30/10/2025	455.85	0.6
31/10/2025	182.37	1.8

Average	981 kL/day	1 mm/day
Maximum	2278 kL/day	14.8 mm/day

Volumetric discharge remained below the daily limit of 4,000 kL per day.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Water – Groundwater Discharge

Groundwater discharged from underground workings to the MCs surface retention Dams has been detailed below. Mannering Colliery operates Water Access License 40461 permitting the extraction of 450 megalitres per financial year and reports annual use to the Water NSW, Water Accounting System (iWAS).

MC Groundwater Pumped to Surface Totals FY2025-2026		
Date (month)	GW Discharge (ML/Month)	GW Discharge (Cumulative ML YTD)
July 2025	22	22
August 2025	24	46
September 2025	20	66
October	25	91

Air Quality – Depositional Dust

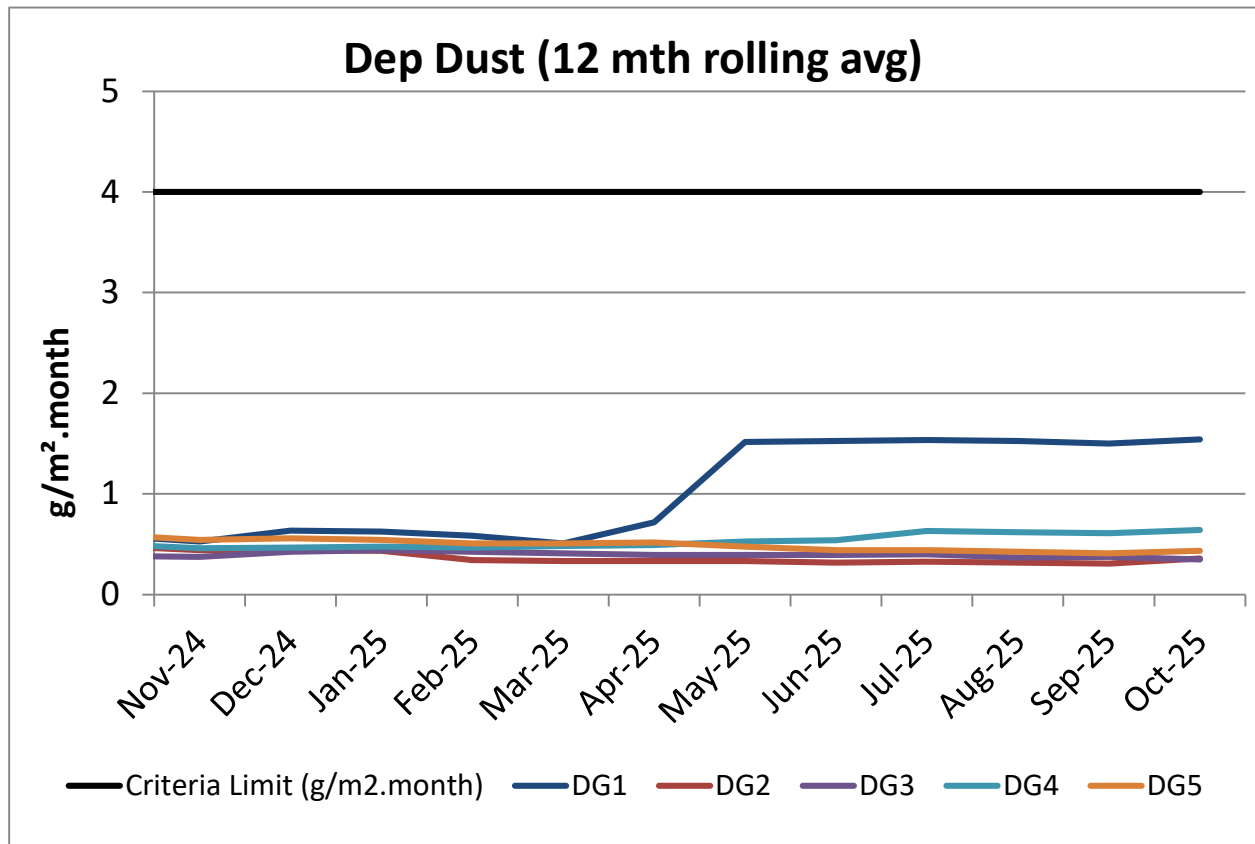
Monthly depositional dust results are shown below.

October 2025		
EPL 191		
Limits	Max. total deposited dust level	4g/m ² /month
	Max. increase in deposited dust level	2g/m ² /month
Sampling Date	5/09/2025 – 7/10/2025	
EPA ID no.	Site	Insoluble Matter (g/m ² /month)
3	DG1	1
4	DG2	1
5	DG3	0.3
6	DG4	0.7
7	DG5	0.7
Notes:	Sampling locations provided in Delta Coal Air Quality and Greenhouse Gas Management Plan available on the Delta Coal website.	

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

A 12-month rolling average of depositional dust concentrations has been presented below. Mannering Colliery's dust gauges are located around the perimeter of the Mannering Colliery site boundary.

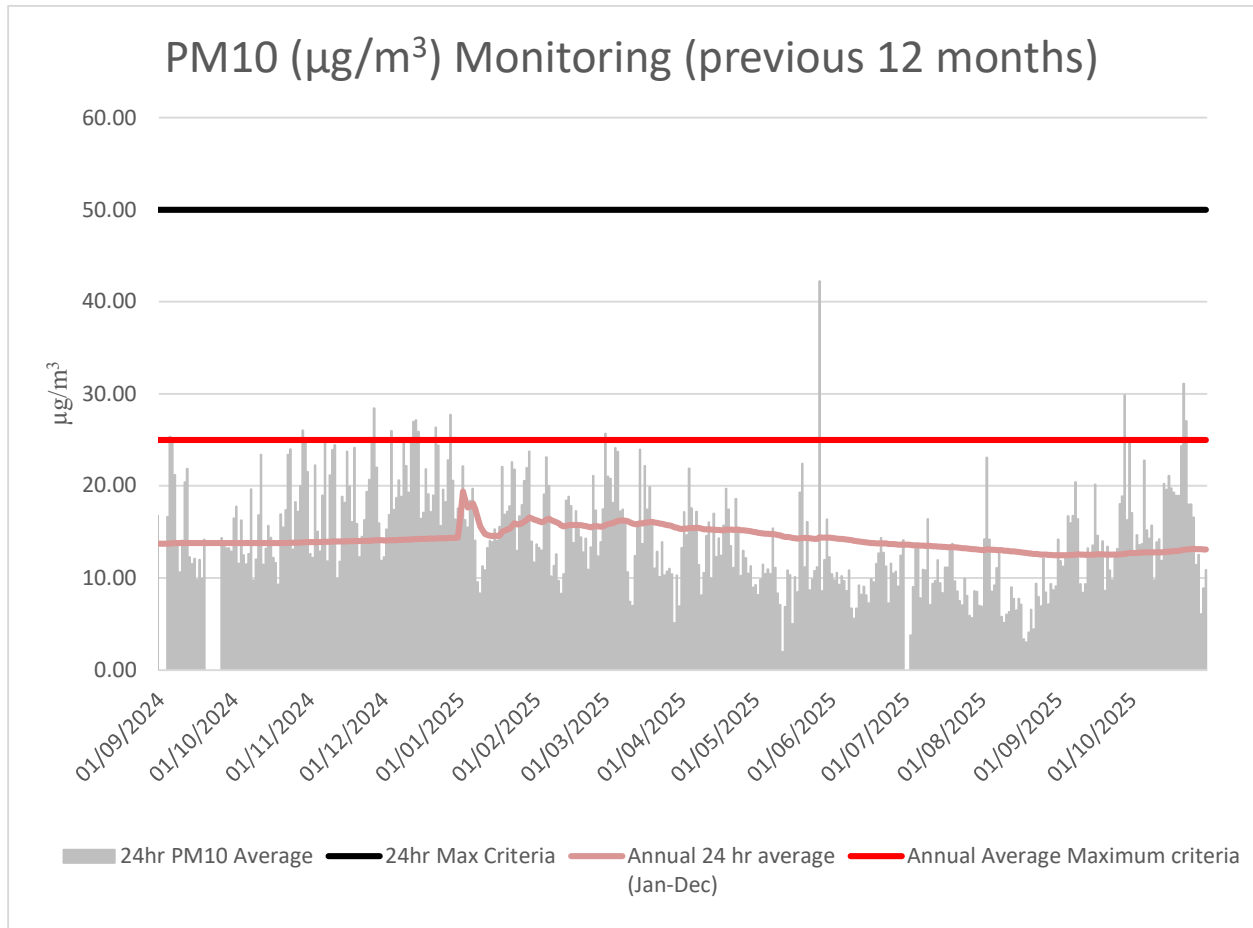


Monthly Website Report

Manning Colliery Monthly Environmental Report – October 2025

Air Quality – PM₁₀

The 24hr PM₁₀ average from Delta Coal's Tapered Element Oscillating Microbalance (TEOM), located at the Manning Park Sewage Treatment Plant, is presented below for the previous 12 months.



Annual 24hr PM₁₀ average maximum criteria for October 2025 was below the annual average maximum criteria limit. A summary of data availability for Delta Coal's TEOM is presented below for the reporting period. Delta Coals TEOM had a data availability of 99.3% for the month of October 2025.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

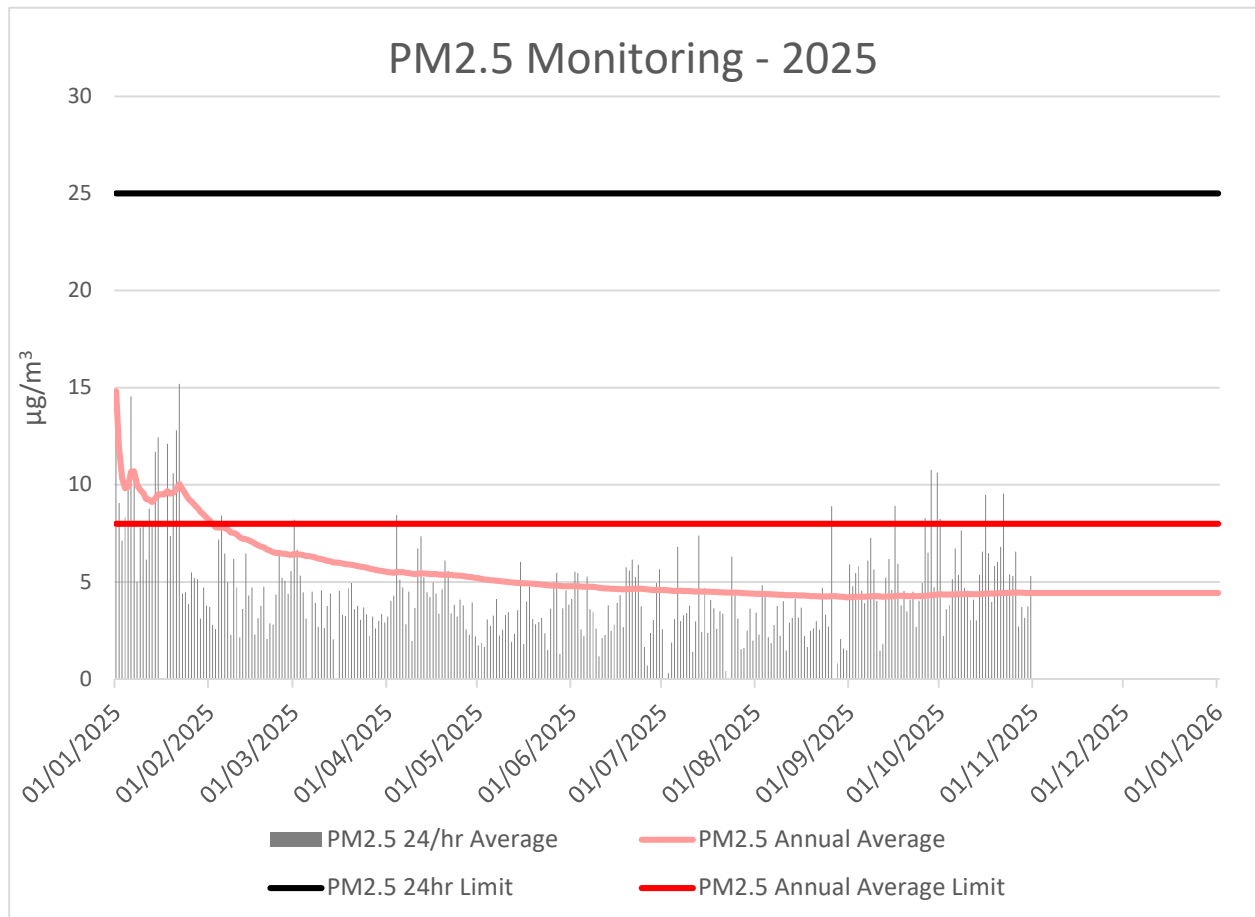
Variable	October	Total	Valid
A/C Temp	99.8%	8928	8909
A1_Scaled	99.8%	8928	8909
Band	99.8%	8928	8909
Bypass Flow	99.8%	8928	8909
Cap Temp	99.8%	8928	8909
Case Temp	99.8%	8928	8909
Config	99.8%	8928	8909
Dew Point	99.8%	8928	8909
Dig-In	99.8%	8928	8909
Dig-Latch	99.8%	8928	8909
ESN	99.8%	8928	8909
Filter Freq	99.8%	8928	8909
Filter Load	99.8%	8928	8909
Humidity	99.8%	8928	8909
MC	99.8%	8928	8909
MC 12Hr	99.8%	8928	8909
MC 1Hr	99.8%	8928	8909
MC 24Hr	99.8%	8928	8909
MC 30min	99.8%	8928	8909
MC 8Hr	99.8%	8928	8909
MC Total	99.8%	8928	8909
Mobile Signal	99.8%	8928	8909
Noise	99.8%	8928	8909
PM10 Flow	99.8%	8928	8909
Pressure	99.8%	8928	8909
Site	0.0%	8928	0
Temperature	99.8%	8928	8909
Tube Temp	99.8%	8928	8909
Vac Pressure	99.8%	8928	8909
Volts	99.8%	8928	8909

Monthly Website Report

Manning Colliery Monthly Environmental Report – October 2025

Air Quality – PM_{2.5}

Delta Coal utilises PM_{2.5} data obtained from Delta Electricity owned and operated beta attenuation monitor (BAM). The PM_{2.5} monitor is located on Tingley Road, Wyee.



There were no exceedances of the PM_{2.5} daily average limit in October 2025. The 12-month rolling average PM_{2.5} value on 31 October was 4.4 µg/m³. PM_{2.5} data availability in October was 99.3%. The 2025 year to date PM_{2.5} data availability is 94%.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Weather Data

A summary of weather data recorded by a meteorological monitoring station at the adjacent Mannering Colliery is presented below for the year to date. (EPA ID no. 26).

Monthly Weather Data 2025			
Licensee	Great Southern Energy Pty Ltd		
Location	Mannering Colliery Meteorological station		
Date published	Refer report date		
Date sampled	Daily		
Date obtained	4 November 2025		
Month	Total Rainfall/Month (mm)	Min Temp	Max Temp
Jan-25	237	11.9	41.3
Feb-25	31	12.5	33.8
Mar-25	138	15.4	36.3
Apr-25	232	11	29.4
May-25	387	7.5	26
Jun-25	37.8	2.8	22.2
July-25	131	2.1	22.1
Aug-25	286	2.6	24.2
Sep-25	109	5.4	28.6
Oct-25	31	7.3	37.7

Monthly Website Report

Mannering Colliery Monthly Environmental Report – October 2025

Variable	October	Total	Valid
Baro (Corrected)	99.6%	2976	2963
10m Temp	99.6%	2976	2963
2m Temp	99.6%	2976	2963
A1	99.6%	2976	2963
A1_Scaled	99.6%	2976	2963
Assumed Temp	99.6%	2976	2963
Barometric	99.6%	2976	2963
Config	99.6%	2976	2963
Daily Evap	99.6%	2976	2963
Daily Rain	99.6%	2976	2963
Delta T	99.6%	2976	2963
Dew Point	99.6%	2976	2963
Dig-In	99.6%	2976	2963
Dig-Latch	99.6%	2976	2963
ESN	99.6%	2976	2963
FDI	99.6%	2976	2963
Heat Index	99.6%	2976	2963
Humidity	99.6%	2976	2963
Mobile Signal	99.6%	2976	2963
Rain	99.6%	2976	2963
Raw Evap	99.6%	2976	2963
S Class	99.6%	2976	2963
Scalar WS	99.6%	2976	2963
Sigma	99.6%	2976	2963
Site	0.0%	2976	0
Solar Radiation	99.6%	2976	2963
Vector WD	99.6%	2976	2963
Vector WS	99.6%	2976	2963
Volts	99.6%	2976	2963
Wind Chill	99.6%	2976	2963
Wind Direction	99.6%	2976	2963
Wind Speed	99.6%	2976	2963
WS Avg	99.6%	2976	2963
WS Gust	99.6%	2976	2963