
Mannering Colliery Monthly Website Report – September 2025

Site:	Mannering Colliery
Department:	Health Safety and Environment
Report Title:	Monthly Environmental Report – September 2025
Report Date:	8 th October 2025
Distribution:	Delta Coal website

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 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 – September 2025

Summary

Environmental monitoring results are presented in this report for monitoring undertaken during the period of September 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 - 9 April 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

Mannering Colliery Monthly Environmental Report – September 2025

Scope

This report presents the results from the various environmental monitoring programs undertaken for Mannering 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 **September 2025**

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

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 2025

Monitoring Results

Water – Quality

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

September 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)
2/09/2025	7.86	6	<5	16100
9/09/2025	7.71	11	<5	27900
17/09/2025	7.95	9	<5	2240
24/09/2025	7.98	20	<5	1500
Average	7.875	11.5	<5	11935

There were no exceedances of water quality criteria in September 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 – September 2025

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		LDP001
		Sampling date / time		24-Sep-2025 09:30
Compound	CAS Number	LOR	Unit	EN2516321-001
				Result
ED040F: Dissolved Major Anions				
Sulfur as S	63705-05-5	1	mg/L	10
Silicon as SiO2	14464-46-1	0.1	mg/L	3.5
ED093T: Total Major Cations				
Calcium	7440-70-2	1	mg/L	24
Magnesium	7439-95-4	1	mg/L	15
Potassium	7440-09-7	1	mg/L	4
EG020F: Dissolved Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	<10
Arsenic	7440-38-2	1	µg/L	3
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	5
Molybdenum	7439-98-7	1	µg/L	2
Nickel	7440-02-0	1	µg/L	<1
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	6
EG020T: Total Metals by ICP-MS				
Aluminium	7429-90-5	10	µg/L	1010
Antimony	7440-36-0	1	µg/L	4
Arsenic	7440-38-2	1	µg/L	4
Beryllium	7440-41-7	1	µg/L	<1
EG020T: Total Metals by ICP-MS - Continued				
Barium	7440-39-3	1	µg/L	169
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
Lithium	7439-93-2	1	µg/L	35
Molybdenum	7439-98-7	1	µg/L	4
Nickel	7440-02-0	1	µg/L	<1
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	13
Boron	7440-42-8	50	µg/L	<50
Iron	7439-89-6	50	µg/L	270
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	0.02
EK067G: Total Phosphorus as P by Discrete Analyser				
Total Phosphorus as P	----	0.01	mg/L	0.02

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 2025

Water – Volume

Monthly water volumes discharged via MC's LDP1 during September 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)
01/09/2025	1052.91	0
02/09/2025	1027.07	0
03/09/2025	2122.85	0
04/09/2025	1254.65	0
05/09/2025	929.61	0
06/09/2025	710.32	0
07/09/2025	778.72	0
08/09/2025	735.31	0
09/09/2025	836.21	0.4
10/09/2025	1968.72	56.6
11/09/2025	2438.4	9
12/09/2025	1153.72	0
13/09/2025	1007.71	0
14/09/2025	79.56	0
15/09/2025	322.92	0
16/09/2025	128.17	0
17/09/2025	4.37	0
18/09/2025	272.1	0
19/09/2025	409.26	0
20/09/2025	475.64	2
21/09/2025	591.14	0
22/09/2025	909.68	40.4
23/09/2025	1473.81	0
24/09/2025	273.58	0
25/09/2025	812.66	0
26/09/2025	1472.1	0
27/09/2025	1477.94	0
28/09/2025	1482.95	0.4
29/09/2025	1478.33	0
30/09/2025	1433.26	0

Average	970 kL/day	4 mm/day
Maximum	2438 kL/day	56.6 mm/day

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

Monthly Website Report

Manning Colliery Monthly Environmental Report – September 2025

Water – Groundwater Discharge

Groundwater discharged from underground workings to the MCs surface retention Dams has been detailed below. Manning 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

Air Quality – Depositional Dust

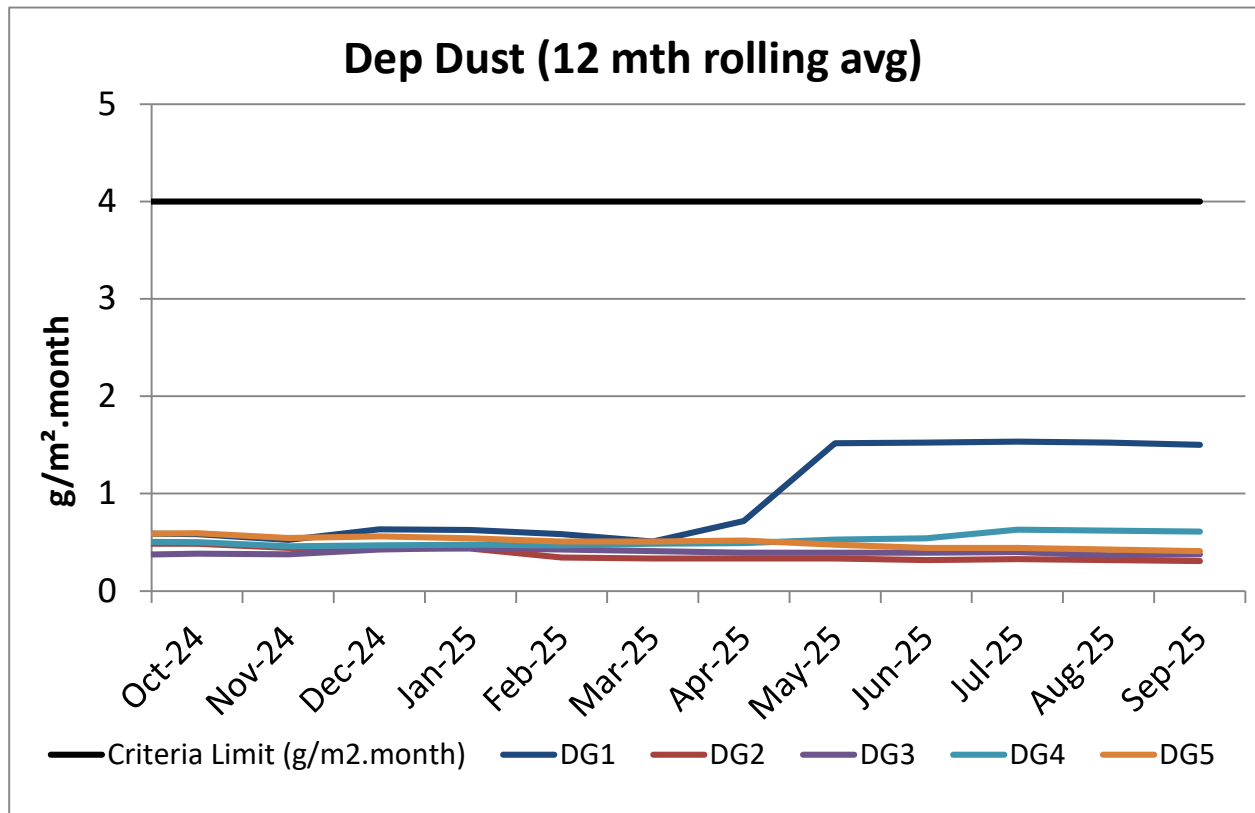
Monthly depositional dust results are shown below.

September 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	7/08/2025 – 5/09/2025	
EPA ID no.	Site	Insoluble Matter (g/m2/month)
3	DG1	0.2
4	DG2	0.1
5	DG3	0.3
6	DG4	0.3
7	DG5	0.3
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 – September 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.

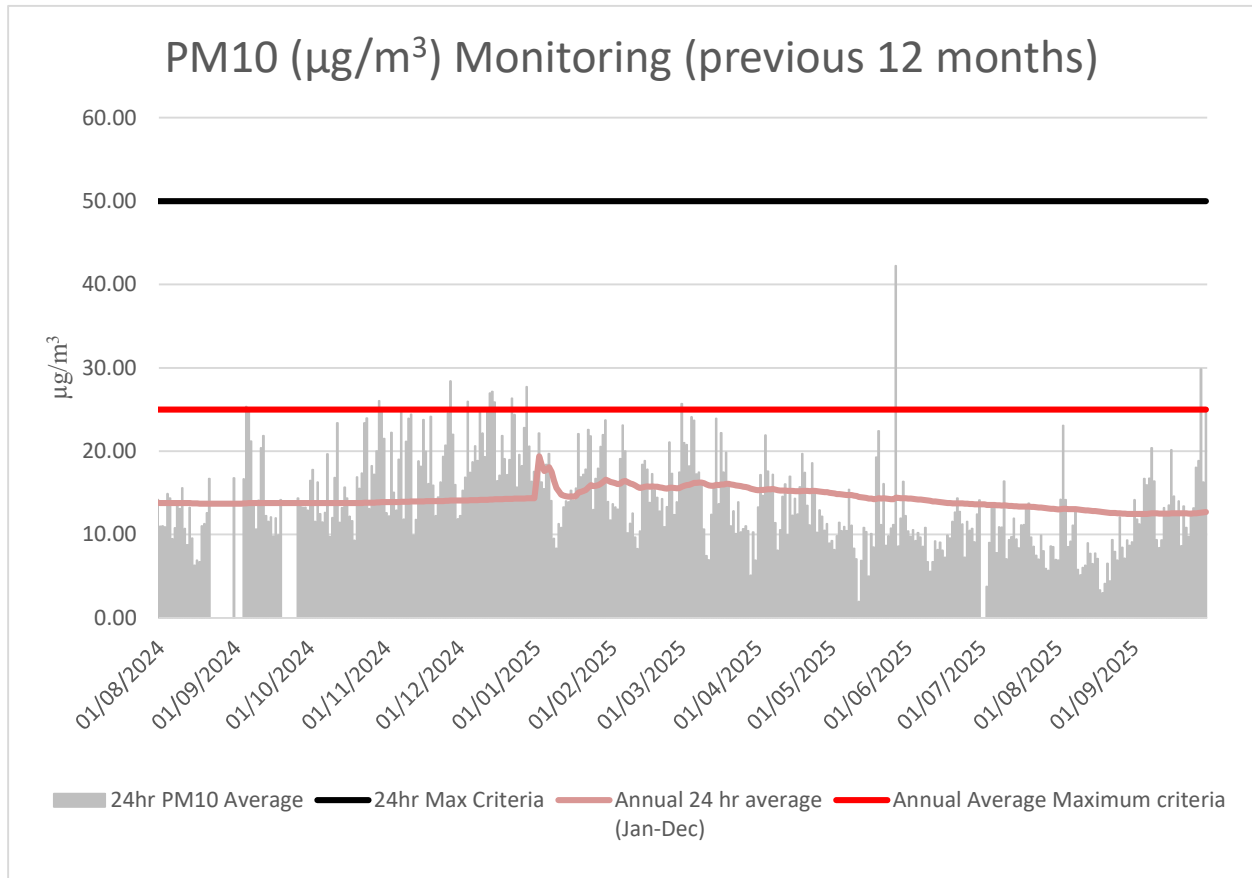


Monthly Website Report

Manning Colliery Monthly Environmental Report – September 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 September 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 99.2% for the month of September 2025.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 2025

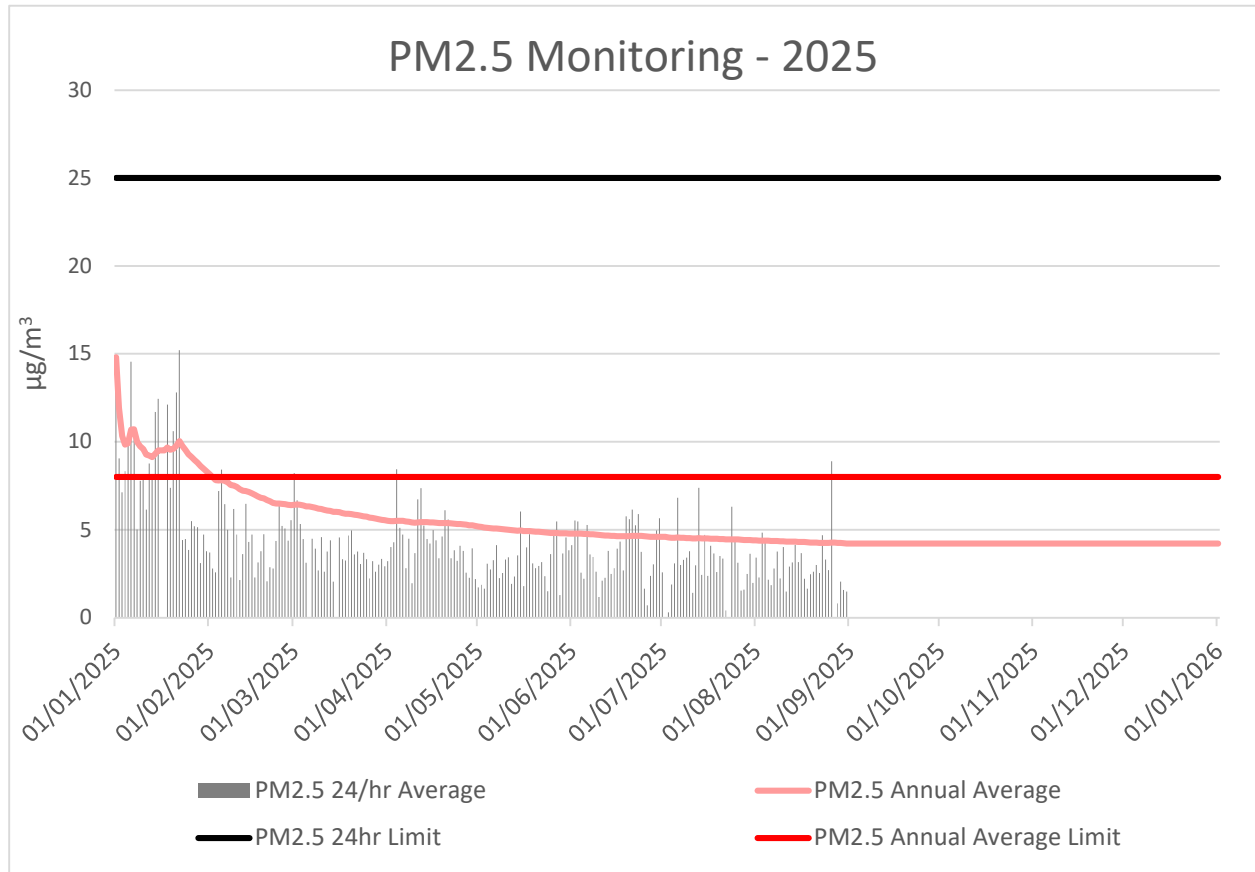
Variable	September	Total	Valid
A/C Temp	100%	8640	8640
A1_Scaled	100%	8640	8640
Band	100%	8640	8640
Bypass Flow	100%	8640	8640
Cap Temp	100%	8640	8640
Case Temp	100%	8640	8640
Config	100%	8640	8640
Dew Point	100%	8640	8640
Dig-In	100%	8640	8640
Dig-Latch	100%	8640	8640
ESN	100%	8640	8640
Filter Freq	100%	8640	8640
Filter Load	100%	8640	8640
Humidity	100%	8640	8640
MC	100%	8640	8640
MC 12Hr	100%	8640	8640
MC 1Hr	100%	8640	8640
MC 24Hr	100%	8640	8640
MC 30min	100%	8640	8640
MC 8Hr	100%	8640	8640
MC Total	100%	8640	8640
Mobile Signal	100%	8640	8640
Noise	100%	8640	8640
PM10 Flow	100%	8640	8640
Pressure	100%	8640	8640
Site	0.0%	8640	0
Temperature	100%	8640	8640
Tube Temp	100%	8640	8640
Vac Pressure	100%	8640	8640
Volts	100%	8640	8640

Monthly Website Report

Manning Colliery Monthly Environmental Report – September 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 September 2025. The 12-month rolling average PM_{2.5} value on 30 September was 4.3 µg/m³. PM_{2.5} data availability in September was 99.7%. The 2025 year to date PM_{2.5} data availability is 93.4%.

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 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	8 October 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

Monthly Website Report

Mannering Colliery Monthly Environmental Report – September 2025

Variable	August	Total	Valid
Baro (Corrected)	100%	2976	2976
10m Temp	100%	2976	2976
2m Temp	100%	2976	2976
A1	100%	2976	2976
A1_Scaled	100%	2976	2976
Assumed Temp	100%	2976	2976
Barometric	100%	2976	2976
Config	100%	2976	2976
Daily Evap	100%	2976	2976
Daily Rain	100%	2976	2976
Delta T	100%	2976	2976
Dew Point	100%	2976	2976
Dig-In	100%	2976	2976
Dig-Latch	100%	2976	2976
ESN	100%	2976	2976
FDI	100%	2976	2976
Heat Index	100%	2976	2976
Humidity	100%	2976	2976
Mobile Signal	100%	2976	2976
Rain	100%	2976	2976
Raw Evap	100%	2976	2976
S Class	100%	2976	2976
Scalar WS	100%	2976	2976
Sigma	100%	2976	2976
Site	0.0%	2976	0
Solar Radiation	100%	2976	2976
Vector WD	100%	2976	2976
Vector WS	100%	2976	2976
Volts	100%	2976	2976
Wind Chill	100%	2976	2976
Wind Direction	100%	2976	2976
Wind Speed	100%	2976	2976
WS Avg	100%	2976	2976
WS Gust	100%	2976	2976