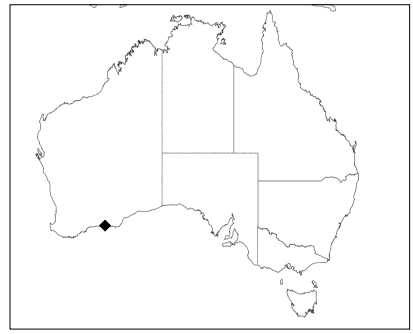
Australian Government
Bureau of Meteorology

Basic Climatological Station Metadata

Current status

Metadata compiled: 26 JUL 2025



Station: ESPERANCE

Bureau of Meteorology station number: 009789
Bureau of Meteorology district name: South Coast
State: WA

World Meteorological Organization number: 94638
Identification: YEST

Network Classification: CLIMAT Stations, CLIMAT TEMP Stations, GCOS Surface Network, Regional Basic Synoptic Network
Station purpose: Synoptic, Upper Air, Aeronautical
Automatic Weather Station: Almos

Current Station Location				
Latitude	**Decimal**	-33.8300	**Hour Min Sec**	33°49'48"S
Longitude	**Decimal**	121.8925	**Hour Min Sec**	121°53'33"E
Station Height	25 m	**Barometer Height**	27 m	
Method of station geographic positioning			GPS	

Year opened: 1969
Status: Open

Station summary

No summary for this site has been written as yet.

Historical metadata for this site has not been quality controlled for accuracy and completeness. Data other than current station information, particularly earlier than 1998, should be considered accordingly. Information may not be complete, as backfilling of historical data is incomplete.

Australian Government
Bureau of Meteorology

Basic Climatological Station Metadata
Current status

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

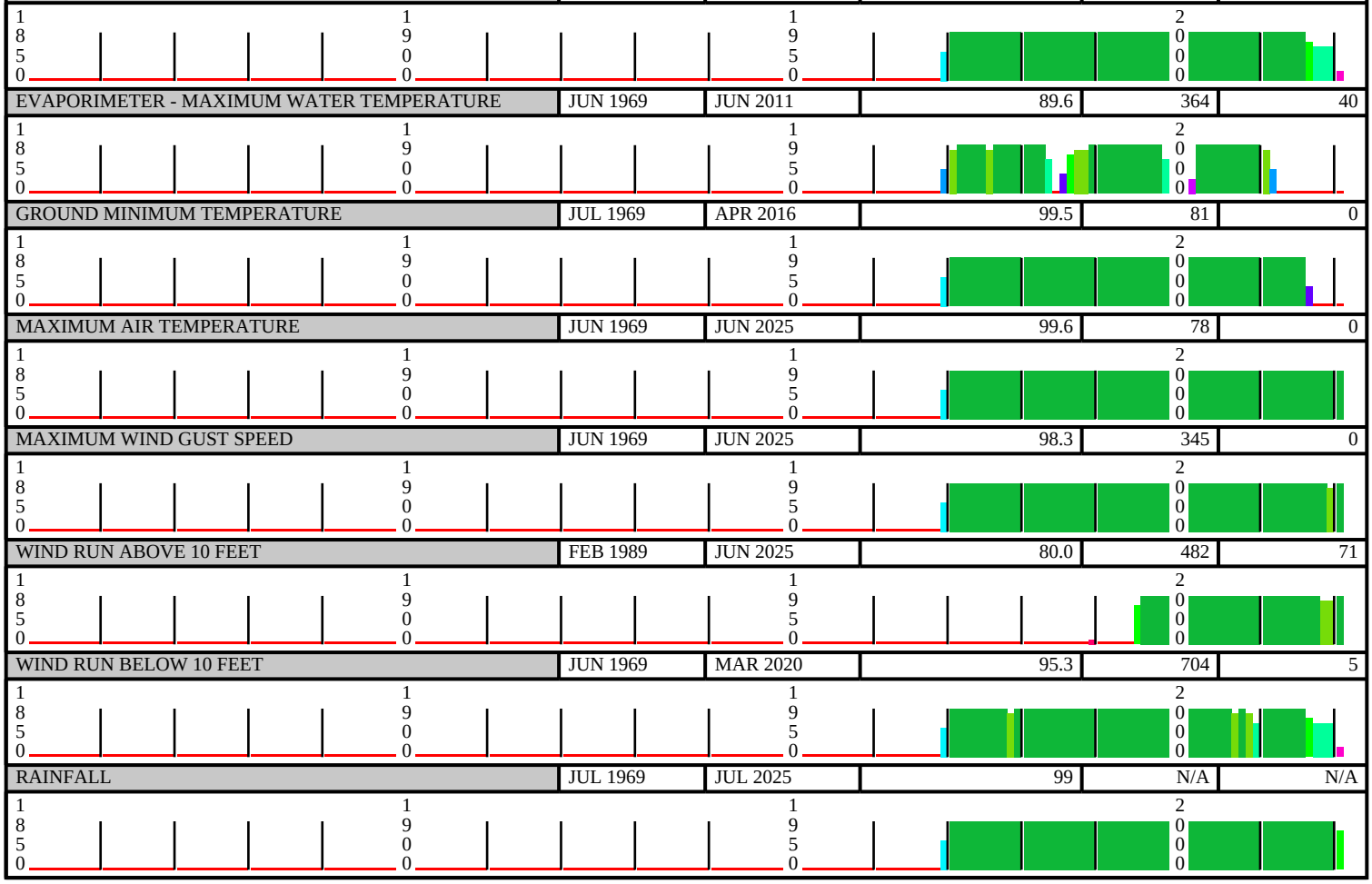
Observation summary

The table below indicates the approximate completeness of the record for individual element types within the Australian Data Archive for Meteorology. For elements not listed see the note below.

Completeness
0% → 100%

DAILY DATA HOLDINGS

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	SINGLE DAYS MISSED	FULL MONTHS MISSED
EVAPORATION	JUN 1969	MAR 2020	96.9	561	0
EVAPORIMETER - MAXIMUM WATER TEMPERATURE	JUN 1969	JUN 2011	89.6	364	40
GROUND MINIMUM TEMPERATURE	JUL 1969	APR 2016	99.5	81	0
MAXIMUM AIR TEMPERATURE	JUN 1969	JUN 2025	99.6	78	0
MAXIMUM WIND GUST SPEED	JUN 1969	JUN 2025	98.3	345	0
WIND RUN ABOVE 10 FEET	FEB 1989	JUN 2025	80.0	482	71
WIND RUN BELOW 10 FEET	JUN 1969	MAR 2020	95.3	704	5
RAINFALL	JUL 1969	JUL 2025	99	N/A	N/A



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Australian Government
Bureau of Meteorology

Basic Climatological Station Metadata

Current status

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
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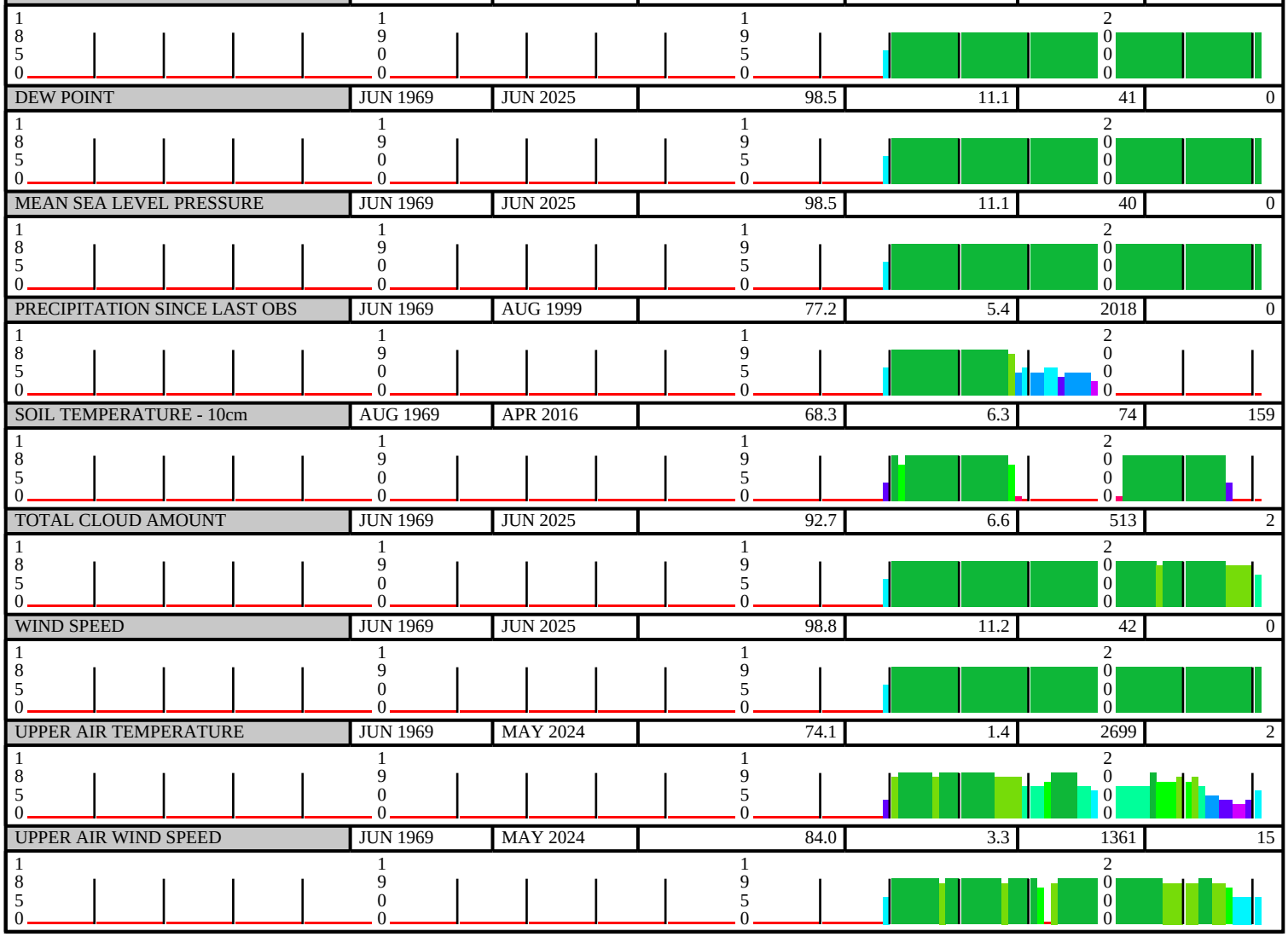
HOURLY DATA HOLDINGS - from 1 to 24 observations per day

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	FREQUENCY average daily	SINGLE DAYS MISSED	FULL MONTHS MISSED
AIR TEMPERATURE	JUN 1969	JUN 2025	98.5	11.1	41	0
DEW POINT	JUN 1969	JUN 2025	98.5	11.1	41	0
MEAN SEA LEVEL PRESSURE	JUN 1969	JUN 2025	98.5	11.1	40	0
PRECIPITATION SINCE LAST OBS	JUN 1969	AUG 1999	77.2	5.4	2018	0
SOIL TEMPERATURE - 10cm	AUG 1969	APR 2016	68.3	6.3	74	159
TOTAL CLOUD AMOUNT	JUN 1969	JUN 2025	92.7	6.6	513	2
WIND SPEED	JUN 1969	JUN 2025	98.8	11.2	42	0
UPPER AIR TEMPERATURE	JUN 1969	MAY 2024	74.1	1.4	2699	2
UPPER AIR WIND SPEED	JUN 1969	MAY 2024	84.0	3.3	1361	15



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Australian Government
Bureau of Meteorology

Basic Climatological Station Metadata

Current status

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
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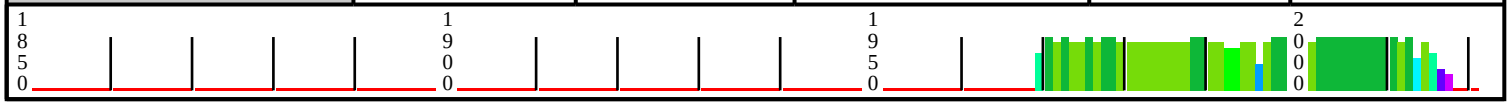
RAINFALL INTENSITY DATA HOLDINGS

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	SINGLE DAYS MISSED	FULL MONTHS MISSED
RAINFALL INTENSITY	MAY 1969	AUG 2017	86.9	1853	15



ONE-MINUTE DATA HOLDINGS

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	FREQUENCY average daily	SINGLE DAYS MISSED	FULL MONTHS MISSED
ALL ELEMENTS	NOV 2002	JUL 2025	99.4	1431.9	N/A	0

HALF-HOURLY DATA HOLDINGS

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	FREQUENCY average daily	SINGLE DAYS MISSED	FULL MONTHS MISSED
ALL ELEMENTS	DEC 1993	JUL 2025	104.7	50.3	N/A	3

UPPER-AIR EDT DATA HOLDINGS

OBSERVATION TYPE	FIRST MONTH	LAST MONTH	COMPLETENESS (% estimate)	FREQUENCY average daily	SINGLE DAYS MISSED	FULL MONTHS MISSED
Wind only flights	May 2000	Jul 2019	N/A	2.0	684	1
Wind, temperature and pressure flights	Mar 1991	Mar 2018	N/A	1.1	1251	1

Holdings calculated up to 01 Jul 2025

The % complete figure is the completeness of observations averaged over all months of record, for the given station and observation type, taking gaps into account. For hourly holdings, the completeness is relative to the maximum number of daily observations for the site each month, and is therefore an estimate. For daily holdings, the completeness figure shown is exact.

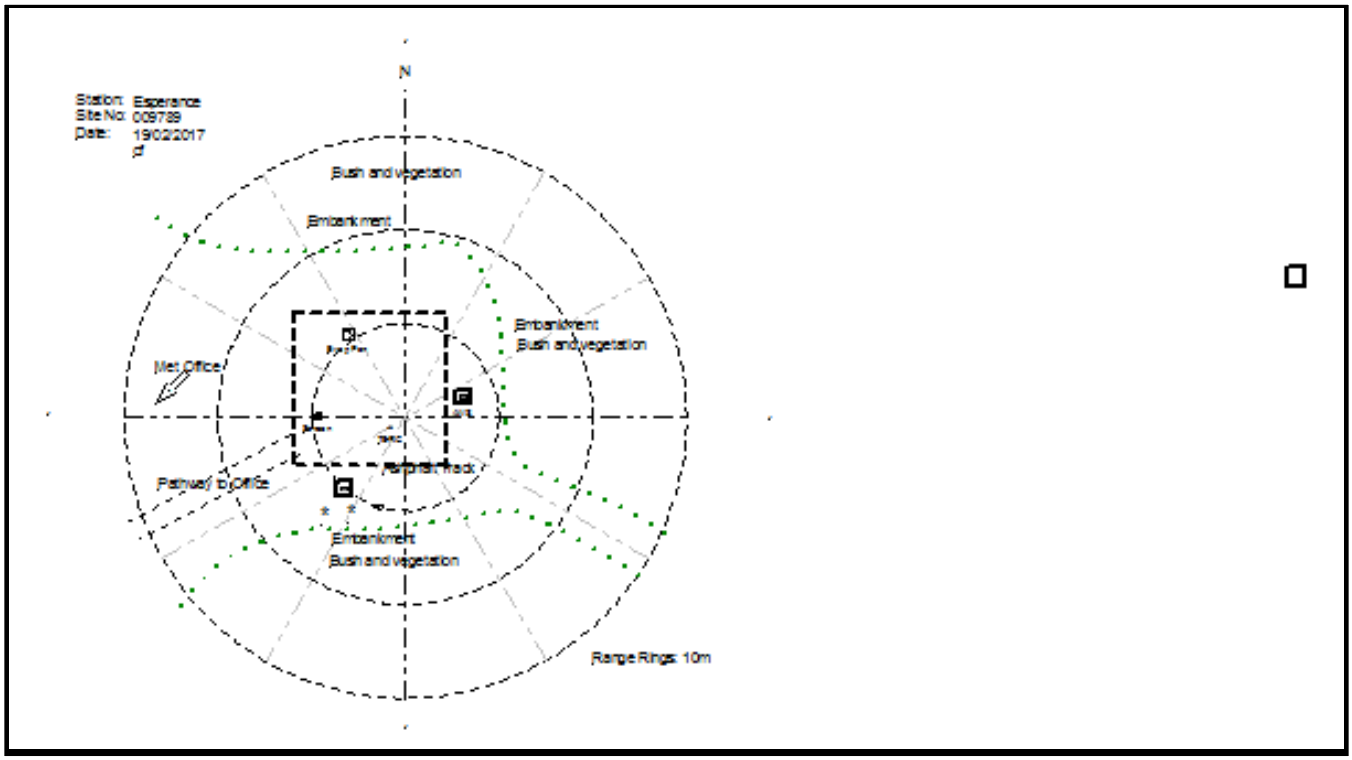
The single days missed figure is the total number of days for which no observation was received, not including full missed months. The full months missed figure is the total of full month gaps over the period of record. Where an element is not included assumptions can generally be made about availability, and the list to use has been suggested below.

Unlisted element	Listed element to use
Minimum air temperature	Maximum air temperature
Wet bulb temperature	Dew point
Soil temperature at 20, 50 & 100cm	10cm soil temperature
Relative humidity	Dew point
Minimum temp. of water in evaporimeter	Evaporimeter - max water temp
Visual observations eg. weather, visibility	Total cloud amount
Sea related observations	Sea state

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Instrument Location and Surrounding Features
19/02/2017(most recent)



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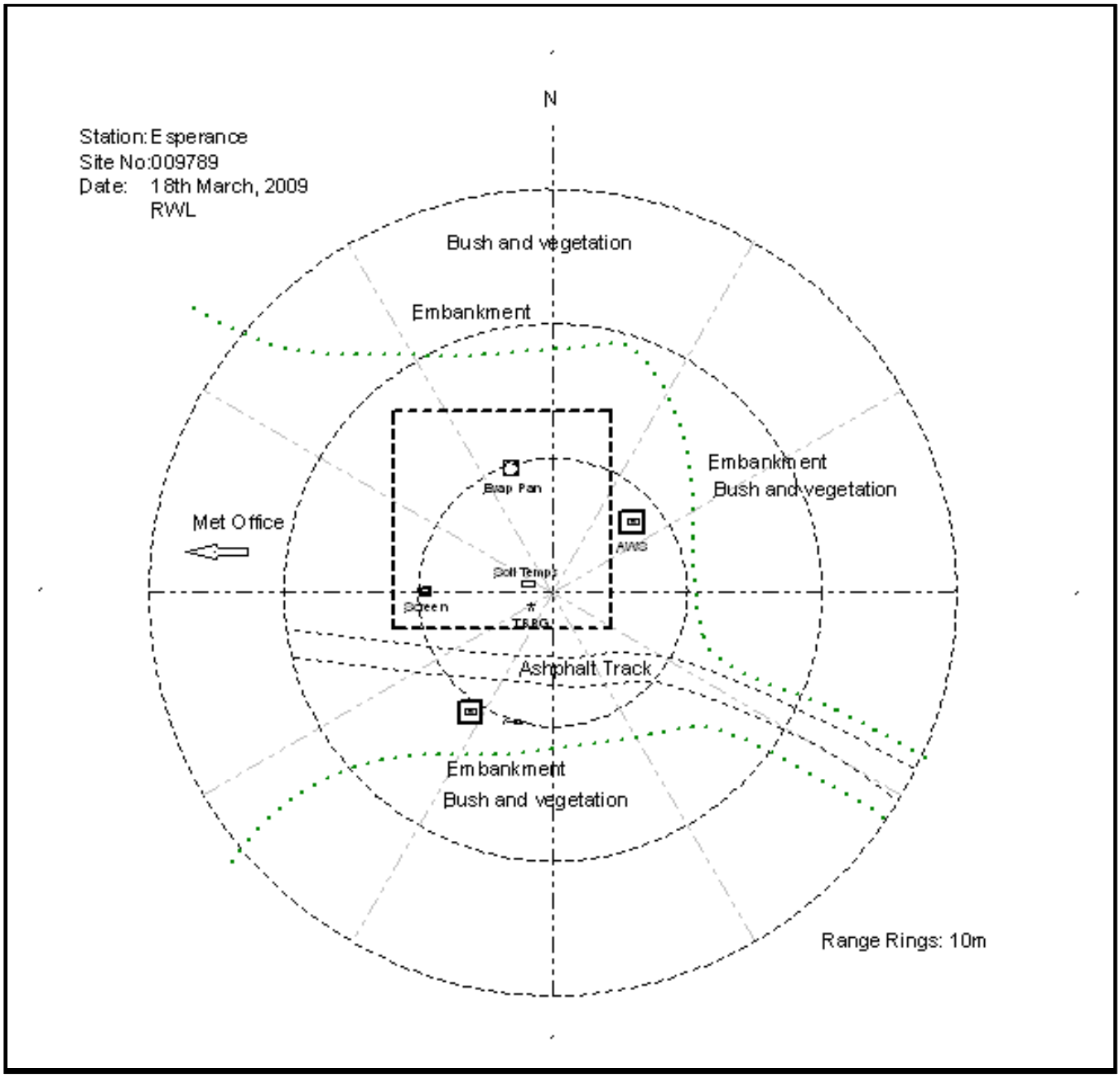
Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

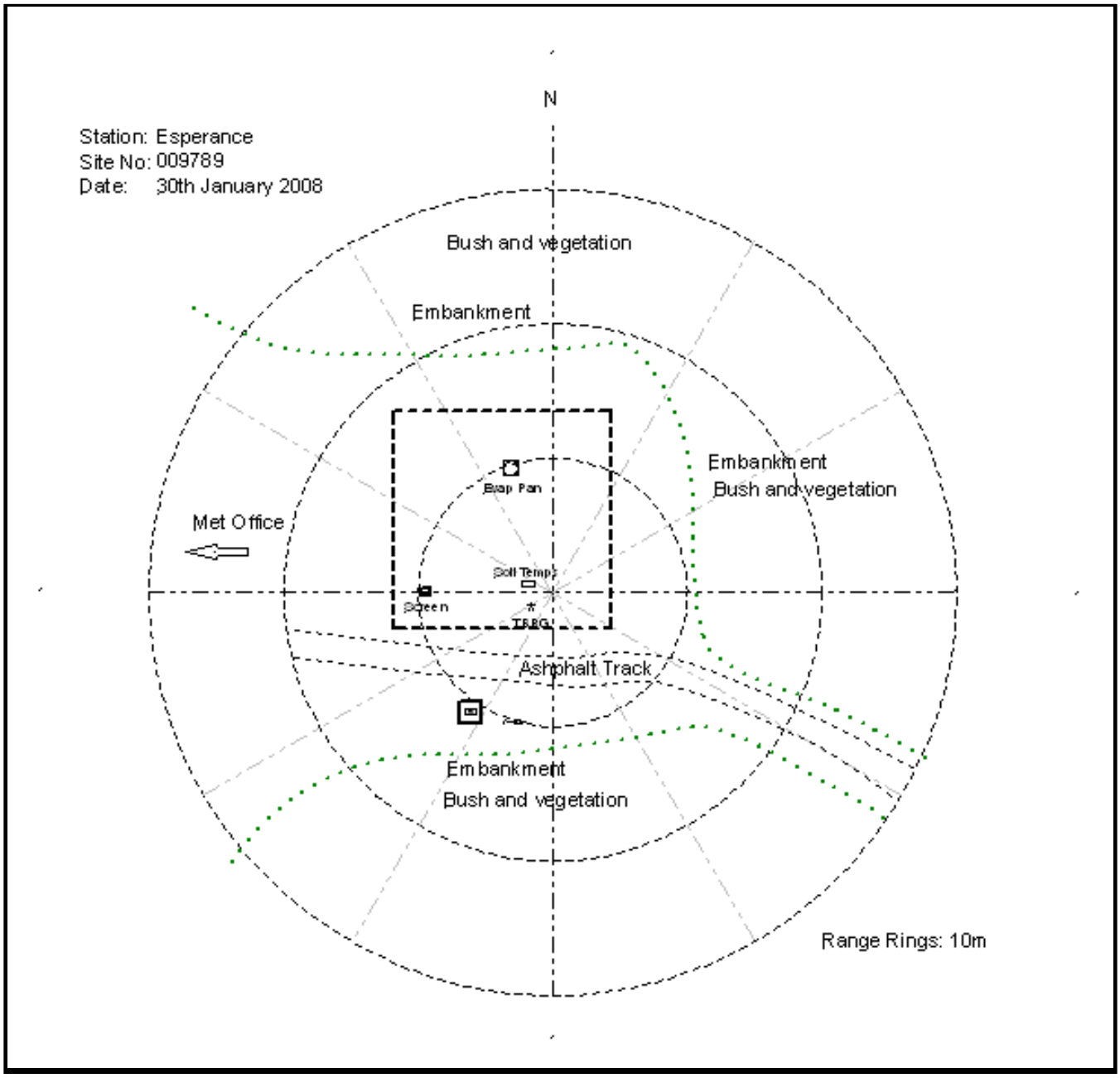
Instrument Location and Surrounding Features
26/03/2009



Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Instrument Location and Surrounding Features
30/01/2008



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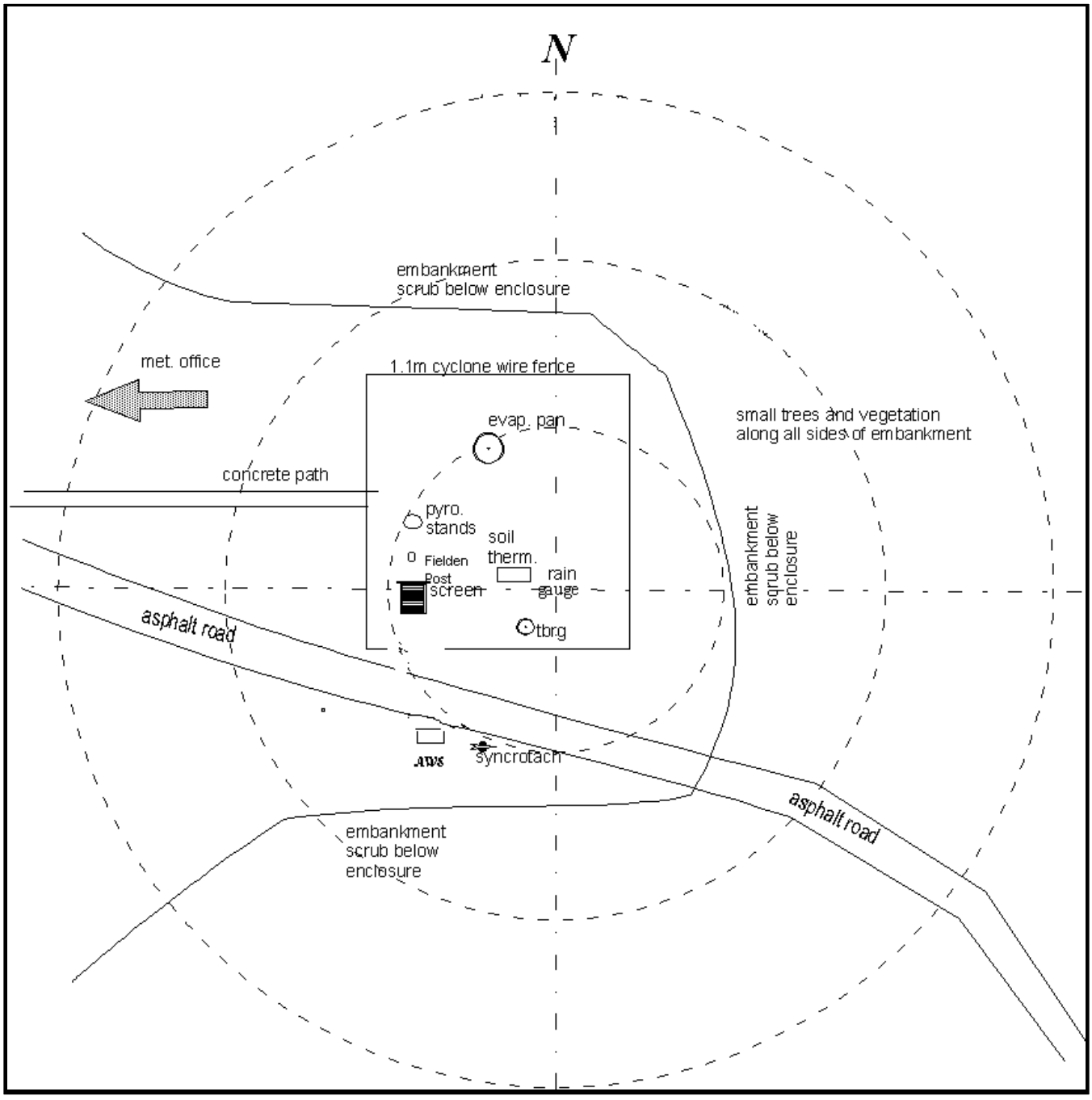
Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Instrument Location and Surrounding Features
08/03/2001



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Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
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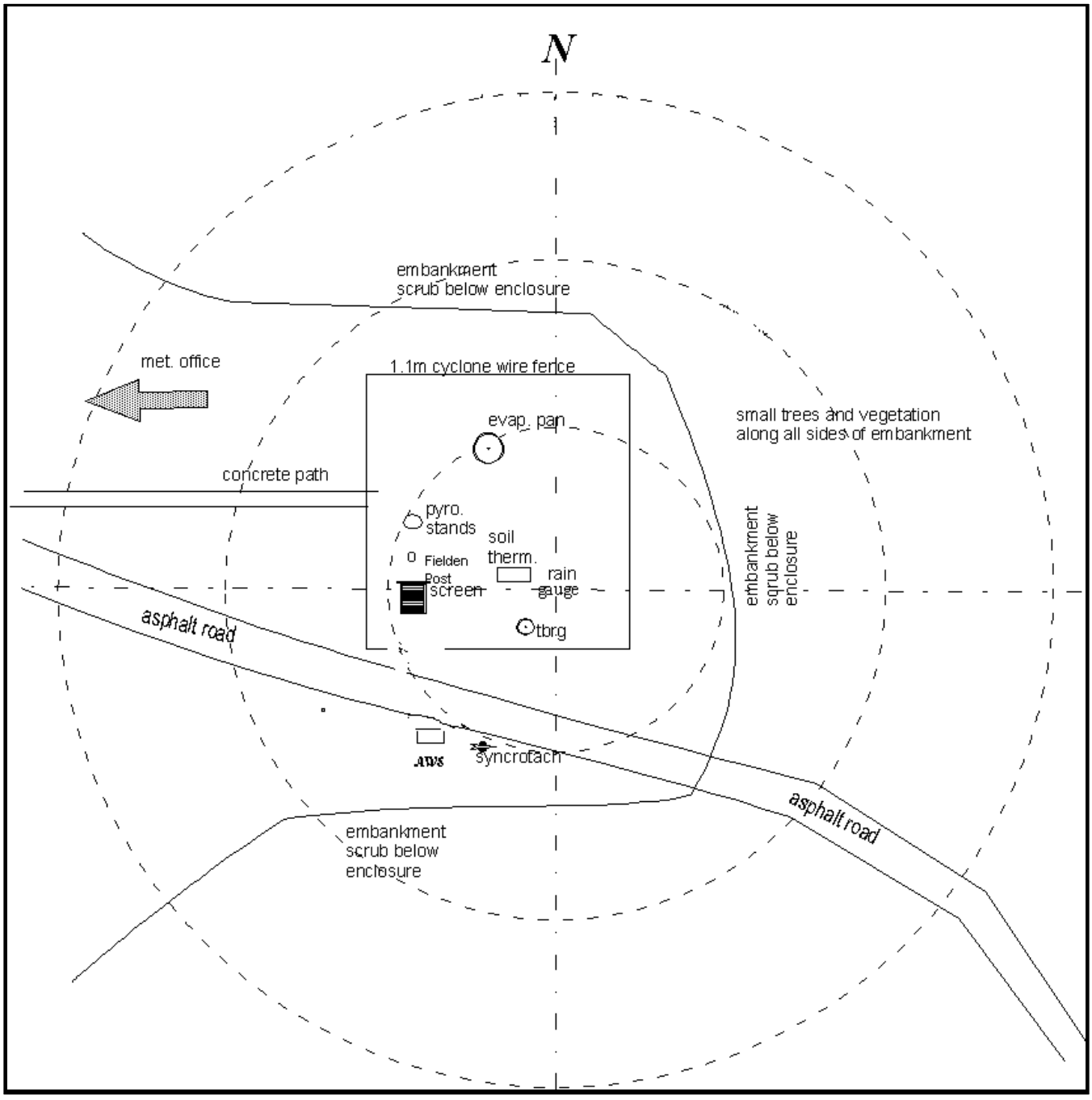
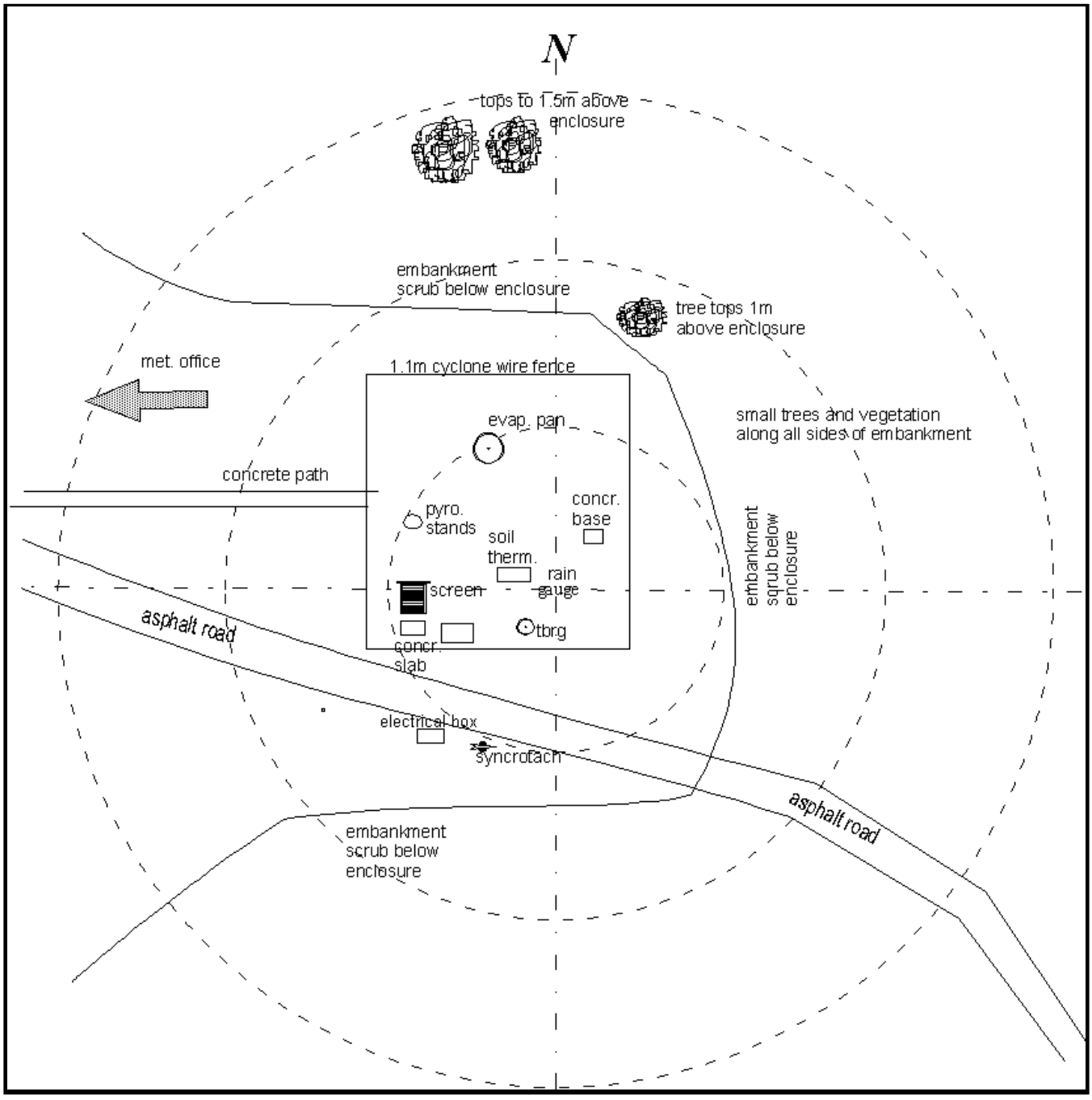
Instrument Location and Surrounding Features
18/03/2000



Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Instrument Location and Surrounding Features
03/12/1998



Extended Climatological Station Metadata
All History

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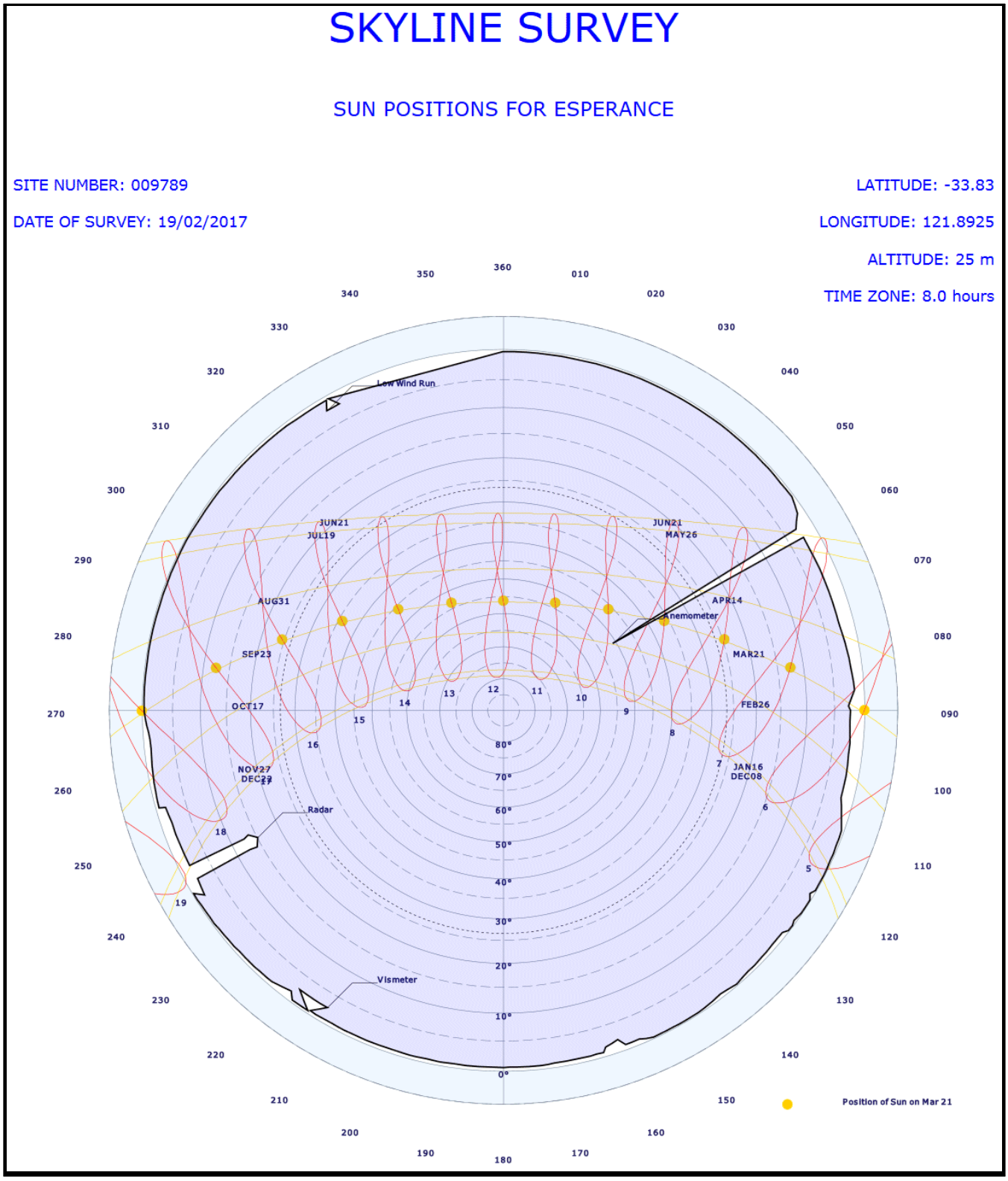
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Skyline Diagram
19/02/2017(most recent)



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Extended Climatological Station Metadata
All History

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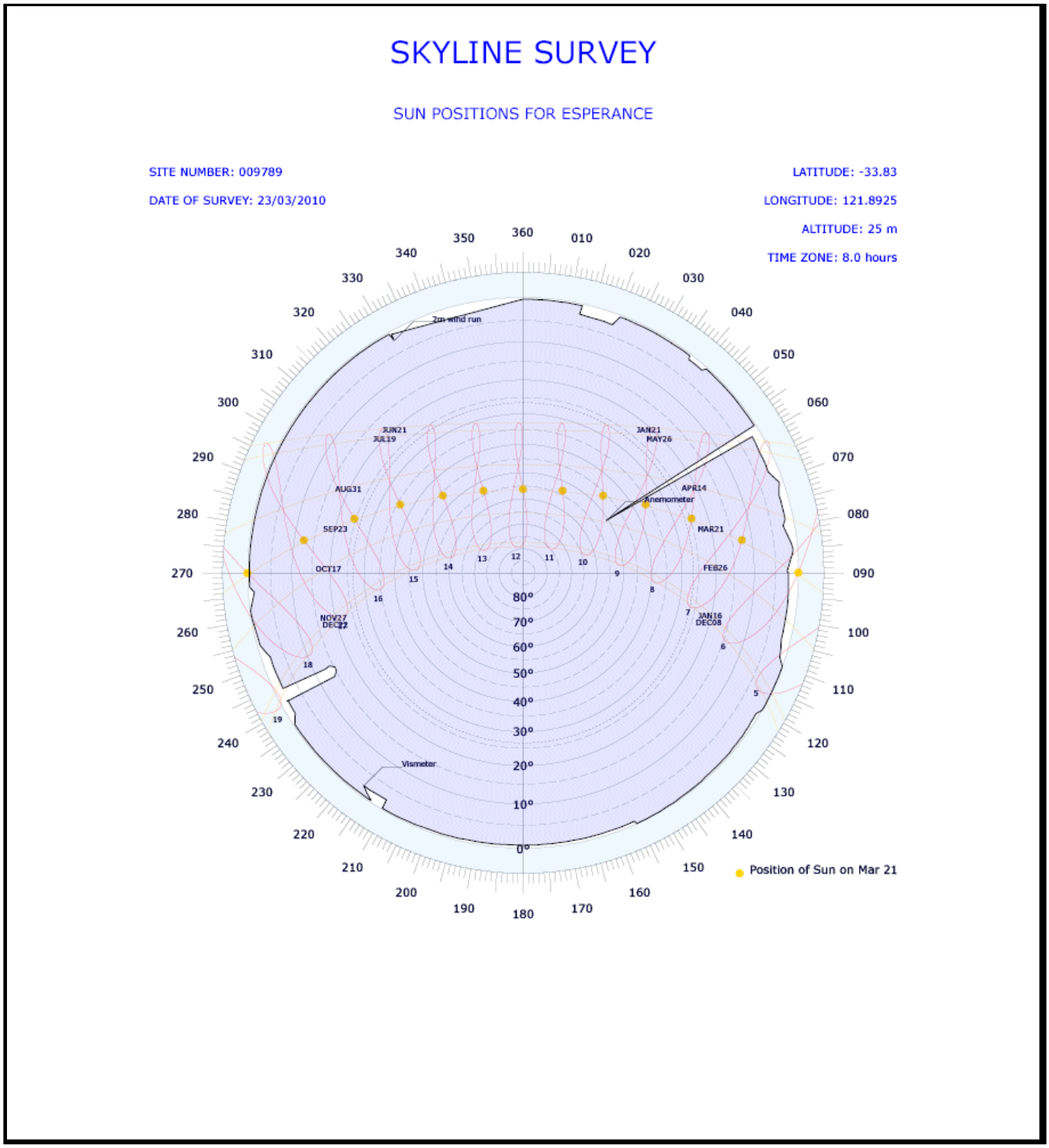
Skyline Diagram
23/03/2010



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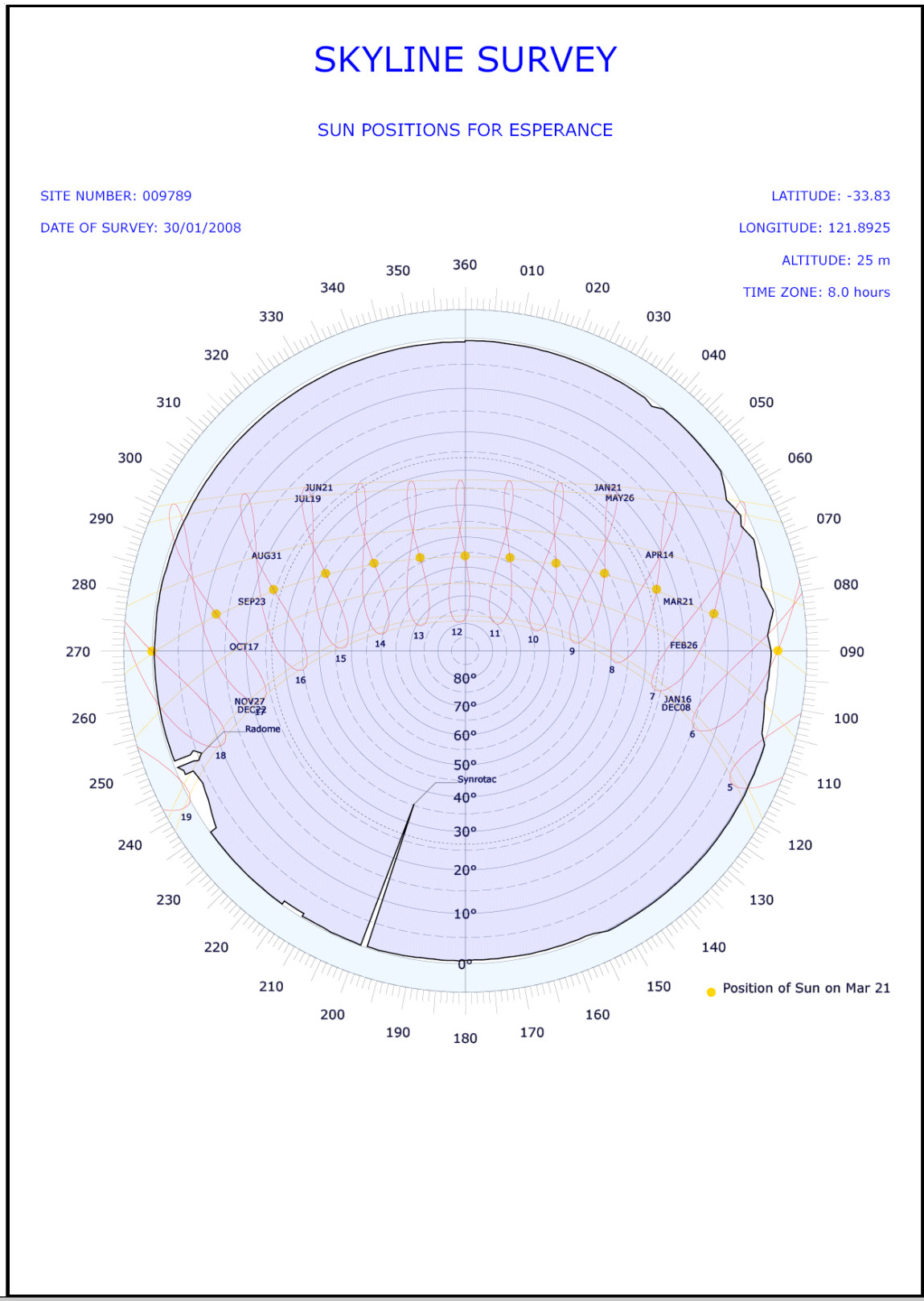
Skyline Diagram
30/01/2008



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All History

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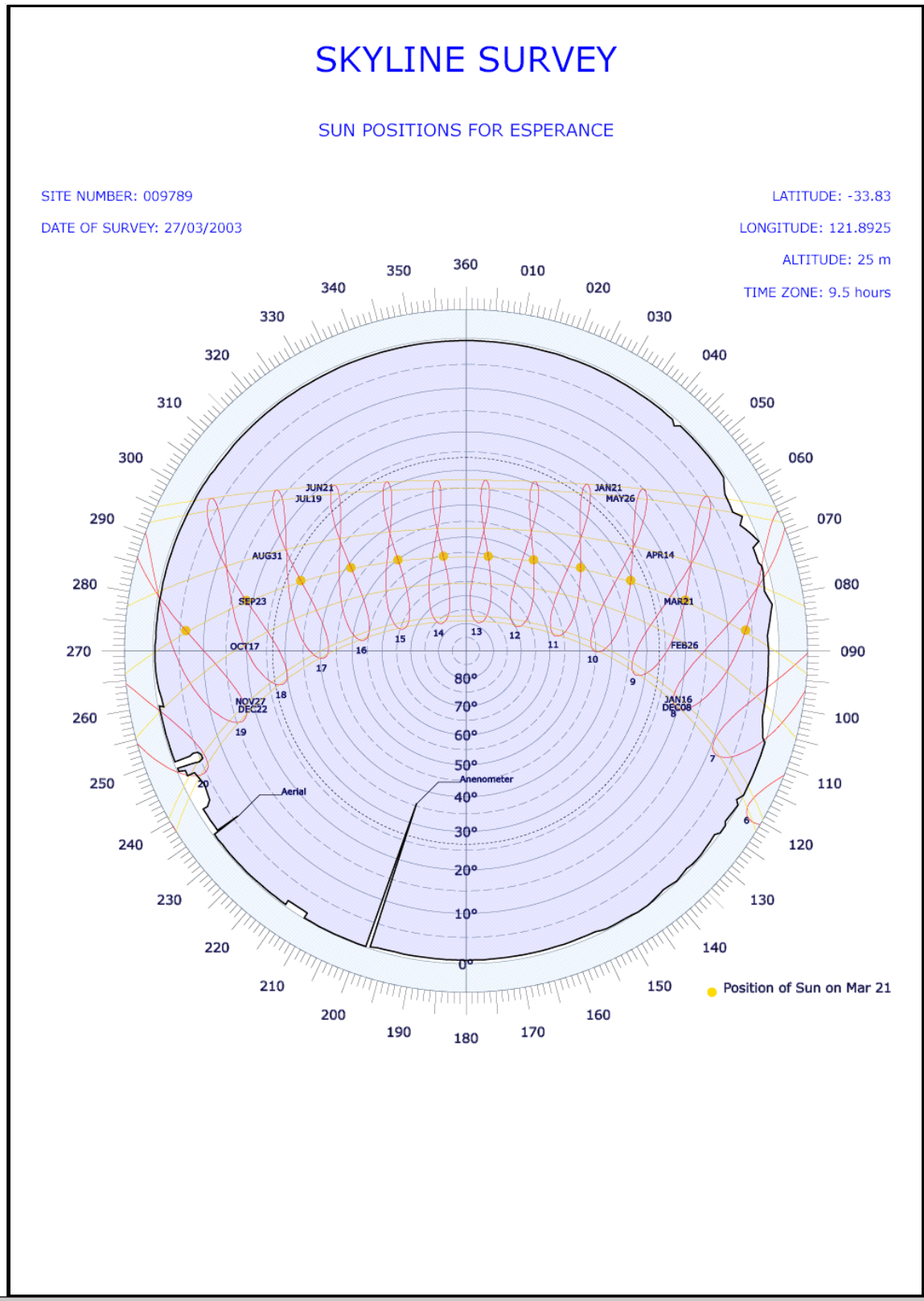
Skyline Diagram
27/03/2003



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Station Observation Program Summary (Surface Observations) from 28/06/1969 to 20/11/2002

Current Observation	Continuous	Half Hourly	Hourly
Surface Observations	-	Y	Y

Current Observation	Program Type	12 AM	3 AM	6 AM	9 AM	12 PM	3 PM	6 AM	9 AM
Surface Observation	PERFORMED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	REPORTED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	SEASONAL	-	-	-	-	-	-	-	-

Station Observation Program Summary (Surface Observations) from 20/11/2002 to 28/04/2016

Current Observation	Continuous	Half Hourly	Hourly
Surface Observations	Y	Y	Y

Current Observation	Program Type	12 AM	3 AM	6 AM	9 AM	12 PM	3 PM	6 AM	9 AM
Surface Observation	PERFORMED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	REPORTED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	SEASONAL	-	-	-	-	-	-	-	-

Station Observation Program Summary (Surface Observations) 26 JUL 2025 (most recent)

Current Observation	Continuous	Half Hourly	Hourly
Surface Observations	Y	Y	Y

Current Observation	Program Type	12 AM	3 AM	6 AM	9 AM	12 PM	3 PM	6 AM	9 AM
Surface Observation	PERFORMED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	REPORTED	Y	Y	Y	Y	Y	Y	Y	Y
Surface Observation	SEASONAL	-	-	-	-	-	-	-	-

Upper Air Routine 01/07/1999 to 05/01/2005

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	Y	Y	Y	Y	Y	Y	Y
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	Y	-	-	Y
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	Y	Y	Y	Y	Y	Y	Y
Wind	06:00	Y	Y	Y	Y	Y	Y	Y
Wind	12:00	Y	Y	Y	Y	Y	Y	Y
Wind	18:00	Y	Y	Y	Y	Y	Y	Y

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
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Upper Air Routine 05/01/2005 to 01/01/2009

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	Y	Y	Y	Y	Y	Y	Y
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	Y	Y	Y	Y	Y	Y	Y
Wind	06:00	Y	Y	Y	Y	Y	Y	Y
Wind	12:00	Y	Y	Y	Y	Y	Y	Y
Wind	18:00	Y	Y	Y	Y	Y	Y	Y

Upper Air Routine 01/01/2009 to 01/08/2012

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	Y	Y	Y	Y	Y	Y	Y
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	Y	Y	Y	Y	Y	Y	Y
Wind	06:00	Y	Y	Y	Y	Y	Y	Y
Wind	12:00	Y	Y	Y	Y	Y	Y	Y
Wind	18:00	-	-	-	-	-	-	-

Upper Air Routine 01/08/2012 to 28/04/2016

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	-	Y	-	Y	Y	Y	-
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	Y	Y	Y	Y	Y	Y	Y
Wind	06:00	Y	Y	Y	Y	Y	Y	Y
Wind	12:00	Y	Y	Y	Y	Y	Y	Y
Wind	18:00	-	-	-	-	-	-	-

Upper Air Routine 28/04/2016 to 24/08/2019

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	-	Y	Y	Y	Y	-	-
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	Y	Y	Y	Y	Y	-	-
Wind	06:00	Y	Y	Y	Y	Y	-	-
Wind	12:00	-	-	-	-	-	-	-

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Upper Air Routine 24/08/2019 to 01/08/2024

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	-	Y	Y	Y	Y	-	-
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	-	Y	Y	Y	Y	-	-
Wind	06:00	-	-	-	-	-	-	-
Wind	12:00	-	-	-	-	-	-	-
Wind	18:00	-	-	-	-	-	-	-

Upper Air Routine 01/08/2024 (most recent)

Flight type	Time UTC	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Wind & Temp.	00:00	-	-	-	-	-	-	-
Wind & Temp.	06:00	-	-	-	-	-	-	-
Wind & Temp.	12:00	-	-	-	-	-	-	-
Wind & Temp.	18:00	-	-	-	-	-	-	-
Wind	00:00	-	-	-	-	-	-	-
Wind	06:00	-	-	-	-	-	-	-
Wind	12:00	-	-	-	-	-	-	-
Wind	18:00	-	-	-	-	-	-	-

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History

Equipment Install/Remove

Cloud Height

26/NOV/2009 INSTALL Ceilometer (Type Vaisala CT25K S/N - C04203) Surface Observations
14/JAN/2010 REPLACE Ceilometer (Now Vaisala CT25K S/N - W09409) Surface Observations
31/AUG/2011 REPLACE Ceilometer (Now Vaisala CT25K S/N - Y08106) Surface Observations
28/JUN/1969 INSTALL Cloud Base Searchlight (Type 90 Degree S/N - Unknown) Surface Observations
15/JUN/2009 REMOVE Cloud Base Searchlight (Type 90 Degree S/N - CBSV02) Surface Observations
27/JUN/2005 REPLACE Cloud Base Searchlight (Now 90 Degree S/N - CBSV02) Surface Observations

Humidity

28/NOV/2017 INSTALL Humidity Probe (Type Rotronics MP101A-T4-W4W S/N - 10401004) Surface Observations
28/JUN/1969 INSTALL Hygrograph (Type Hair Hygrograph S/N - Unknown) Surface Observations
30/JUN/1994 REMOVE Hygrograph (Type Hair Hygrograph S/N - Unknown) Surface Observations
28/JUN/1969 INSTALL Psychrometer (Type Unknown S/N - Unknown) Surface Observations
03/DEC/1998 REMOVE Psychrometer (Type Unknown S/N - Unknown) Surface Observations

Pressure Trend

03/AUG/2009 INSTALL Barograph (Type Weekly S/N - CBM0021) Surface Observations
28/JUN/1969 INSTALL Barograph (Type Weekly S/N - F23439) Surface Observations
27/AUG/2009 REMOVE Barograph (Type Weekly S/N - CBM0021) Surface Observations
29/JAN/2009 REMOVE Barograph (Type Weekly S/N - F23439) Surface Observations

Lightning (No Electronic History)

Sea Surface Temperature (No Electronic History)

Magnetic Bearing (No Electronic History)

Wind Direction

28/JUN/1969 INSTALL Anemometer (Type Dines S/N - Unknown) Surface Observations
26/NOV/2009 INSTALL Anemometer (Type Synchrotac Cups - Type 732 S/N - D577) Surface Observations
24/JUN/1994 INSTALL Anemometer (Type Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
24/JUN/1994 INSTALL Mast Anemometer (Type Pivot, Standard 10m S/N - NONE) Infrastructure
11/FEB/2008 INSTALL Wind Run Anemometer (Type Munro S/N - 36558) Surface Observations
28/JUN/1969 INSTALL Wind Run Anemometer (Type Munro S/N - Unknown) Surface Observations
24/JUN/1994 REMOVE Anemometer (Type Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
28/DEC/2007 REMOVE Wind Run Anemometer (Type Munro S/N - 2765) Surface Observations
01/APR/2020 REMOVE Wind Run Anemometer (Type Munro S/N - 805) Surface Observations
26/NOV/2009 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - 75056) Surface Observations
15/SEP/2003 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - 89469/83266) Surface Observations
25/JUN/1996 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - NONE) Surface Observations
05/SEP/1988 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
25/NOV/2009 REPLACE Mast Anemometer (Now Pivot, Standard 8m S/N - NONE) Infrastructure
04/APR/2007 REPLACE Wind Run Anemometer (Now Munro S/N - 2765) Surface Observations
19/JUN/2008 REPLACE Wind Run Anemometer (Now Munro S/N - 7210) Surface Observations
16/MAY/2009 REPLACE Wind Run Anemometer (Now Munro S/N - 805) Surface Observations
15/APR/2006 REPLACE Wind Run Anemometer (Now Munro S/N - 8799) Surface Observations
18/MAR/2000 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM359) Surface Observations
08/DEC/2004 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM514) Surface Observations

Wet Bulb Temperature

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Equipment Install/Remove(Continued)

24/JUN/1994 INSTALL Temperature Probe - Wet Bulb (Type Rosemount S/N - NONE) Surface Observations
28/NOV/2017 REMOVE Temperature Probe - Wet Bulb (Type Rosemount ST2401 S/N - 58336-2) Surface Observations
26/NOV/2009 REPLACE Temperature Probe - Wet Bulb (Now Rosemount ST2401 S/N - 10188) Surface Observations
12/JAN/2010 REPLACE Temperature Probe - Wet Bulb (Now Rosemount ST2401 S/N - 58336-2) Surface Observations
28/JUN/1969 INSTALL Thermometer, Mercury, Wet Bulb (Type Dobbie S/N - M 6783) Surface Observations
27/MAR/2003 INSTALL Thermometer, Mercury, Wet Bulb (Type Dobbie S/N - M0804) Surface Observations
13/AUG/2013 INSTALL Thermometer, Mercury, Wet Bulb (Type Unknown S/N - M1167) Surface Observations
28/APR/2016 REMOVE Thermometer, Mercury, Wet Bulb (Type Dobbie S/N - 18730) Surface Observations
14/AUG/2013 REMOVE Thermometer, Mercury, Wet Bulb (Type Dobbie S/N - M6783) Surface Observations
01/APR/2020 REMOVE Thermometer, Mercury, Wet Bulb (Type WIKA S/N - 23001) Surface Observations
09/SEP/2005 REPLACE Thermometer, Mercury, Wet Bulb (Now Dobbie S/N - 15941) Surface Observations
03/JAN/2012 REPLACE Thermometer, Mercury, Wet Bulb (Now Dobbie S/N - 18730) Surface Observations
09/SEP/2005 REPLACE Thermometer, Mercury, Wet Bulb (Now Dobbie S/N - 18744) Surface Observations
30/JAN/2008 REPLACE Thermometer, Mercury, Wet Bulb (Now Dobbie S/N - M6783) Surface Observations
08/MAR/2001 REPLACE Thermometer, Mercury, Wet Bulb (Now Dobbie S/N - M6783) Surface Observations
10/MAR/2015 REPLACE Thermometer, Mercury, Wet Bulb (Now WIKA S/N - 23001) Surface Observations

Solar Radiation (Long Wave) (No Electronic History)

Spectral Radiation (No Electronic History)

Maximum Temperature

28/JUN/1969 INSTALL Thermometer, Mercury, Max (Type Dobbie S/N - M 2402) Surface Observations
28/APR/2016 REMOVE Thermometer, Mercury, Max (Type Dobbie S/N - CBM2395) Surface Observations
18/MAR/2000 REPLACE Thermometer, Mercury, Max (Now Dobbie S/N - 15560) Surface Observations
15/NOV/2001 REPLACE Thermometer, Mercury, Max (Now Dobbie S/N - 20583) Surface Observations
14/JUN/2004 REPLACE Thermometer, Mercury, Max (Now Dobbie S/N - CBM2395) Surface Observations

Soil Temperature 10cm

01/AUG/1969 INSTALL Thermometer, Soil, 10cm (Type Dobros S/N - CBM193) Surface Observations
28/APR/2016 REMOVE Thermometer, Soil, 10cm (Type Dobros S/N - M0887) Surface Observations
09/AUG/2005 REPLACE Thermometer, Soil, 10cm (Now Dobros S/N - 9566430) Surface Observations
03/MAR/2001 REPLACE Thermometer, Soil, 10cm (Now Dobros S/N - 9725429) Surface Observations
30/JAN/2008 REPLACE Thermometer, Soil, 10cm (Now Dobros S/N - M0887) Surface Observations

Soil Temperature 20cm

01/AUG/1969 INSTALL Thermometer, Soil, 20cm (Type Dobros S/N - Unknown) Surface Observations
28/APR/2016 REMOVE Thermometer, Soil, 20cm (Type Dobros S/N - 0428921) Surface Observations
20/MAY/2009 REPLACE Thermometer, Soil, 20cm (Now Dobros S/N - 0428921) Surface Observations
11/JUN/2001 REPLACE Thermometer, Soil, 20cm (Now Dobros S/N - 415484) Surface Observations
18/MAR/2000 REPLACE Thermometer, Soil, 20cm (Now Dobros S/N - 9566393) Surface Observations
29/AUG/2008 REPLACE Thermometer, Soil, 20cm (Now Dobros S/N - 9604861) Surface Observations
04/MAR/2002 REPLACE Thermometer, Soil, 20cm (Now Dobros S/N - M6432) Surface Observations

Soil Temperature 50cm

15/JAN/2009 INSTALL Thermometer, Soil, 50cm (Type Amarol S/N - 0398356) Surface Observations
01/AUG/1969 INSTALL Thermometer, Soil, 50cm (Type Dobros S/N - CBM077) Surface Observations
15/JAN/2009 REMOVE Thermometer, Soil, 50cm (Type Amarol S/N - 0010812) Surface Observations
28/APR/2016 REMOVE Thermometer, Soil, 50cm (Type Amarol S/N - 9566-067) Surface Observations

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Equipment Install/Remove(Continued)

30/AUG/2006 REPLACE Thermometer, Soil, 50cm (Now Amarol S/N - 0010812) Surface Observations
20/AUG/2009 REPLACE Thermometer, Soil, 50cm (Now Amarol S/N - 9566-067) Surface Observations
18/MAR/2000 REPLACE Thermometer, Soil, 50cm (Now Dobros S/N - 97251533) Surface Observations

Snow Height (No Electronic History)

Soil Temperature 100cm

15/JAN/2009 INSTALL Thermometer, Soil, 100cm (Type Amarol S/N - 0010812) Surface Observations
01/AUG/1969 INSTALL Thermometer, Soil, 100cm (Type Dobros S/N - CBM462) Surface Observations
28/APR/2016 REMOVE Thermometer, Soil, 100cm (Type Amarol S/N - 0010812) Surface Observations
15/JAN/2009 REMOVE Thermometer, Soil, 100cm (Type Amarol S/N - 0398356) Surface Observations
23/JAN/2008 REPLACE Thermometer, Soil, 100cm (Now Amarol S/N - 0398356) Surface Observations
03/JUL/2007 REPLACE Thermometer, Soil, 100cm (Now Amarol S/N - 0398362) Surface Observations
11/JUN/2001 REPLACE Thermometer, Soil, 100cm (Now Dobros S/N - CBM462) Surface Observations

Sunshine Hours (No Electronic History)

Wind Run

11/FEB/2008 INSTALL Wind Run Anemometer (Type Munro S/N - 36558) Surface Observations
28/JUN/1969 INSTALL Wind Run Anemometer (Type Munro S/N - Unknown) Surface Observations
28/DEC/2007 REMOVE Wind Run Anemometer (Type Munro S/N - 2765) Surface Observations
01/APR/2020 REMOVE Wind Run Anemometer (Type Munro S/N - 805) Surface Observations
04/APR/2007 REPLACE Wind Run Anemometer (Now Munro S/N - 2765) Surface Observations
19/JUN/2008 REPLACE Wind Run Anemometer (Now Munro S/N - 7210) Surface Observations
16/MAY/2009 REPLACE Wind Run Anemometer (Now Munro S/N - 805) Surface Observations
15/APR/2006 REPLACE Wind Run Anemometer (Now Munro S/N - 8799) Surface Observations
18/MAR/2000 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM359) Surface Observations
08/DEC/2004 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM514) Surface Observations

Minimum Temperature

28/JUN/1969 INSTALL Thermometer, Alcohol, Min (Type Dobbie S/N - M 6597) Surface Observations
09/OCT/2013 INSTALL Thermometer, Alcohol, Min (Type WIKA S/N - 19456) Surface Observations
09/OCT/2013 REMOVE Thermometer, Alcohol, Min (Type Dobbie S/N - 19465) Surface Observations
28/APR/2016 REMOVE Thermometer, Alcohol, Min (Type WIKA S/N - 19465) Surface Observations
22/MAY/2001 REPLACE Thermometer, Alcohol, Min (Now Dobbie S/N - 19456) Surface Observations
03/JAN/2012 REPLACE Thermometer, Alcohol, Min (Now Dobbie S/N - 19465) Surface Observations
18/MAR/2000 REPLACE Thermometer, Alcohol, Min (Now Dobbie S/N - 56648) Surface Observations
16/JAN/2016 REPLACE Thermometer, Alcohol, Min (Now WIKA S/N - 19465) Surface Observations

Terrestial Minimum Temperature

28/JUN/1969 INSTALL Thermometer, Terrestrial, Min (Type Dobbie S/N - 15603) Surface Observations
28/APR/2016 REMOVE Thermometer, Terrestrial, Min (Type WIKA S/N - 19456) Surface Observations
03/JAN/2012 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 19456) Surface Observations
05/FEB/2006 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 19465) Surface Observations
14/JUL/2004 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 23210) Surface Observations
01/APR/2007 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 27648) Surface Observations
23/JAN/2010 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 27664) Surface Observations
05/FEB/2007 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 27664) Surface Observations
18/MAR/2000 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 3616) Surface Observations

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Equipment Install/Remove(Continued)

11/JUN/2001 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - 6648) Surface Observations
04/MAR/2002 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - M0738) Surface Observations
16/MAY/2005 REPLACE Thermometer, Terrestrial, Min (Now Dobbie S/N - M6697) Surface Observations
16/JAN/2016 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 19456) Surface Observations
08/JAN/2016 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 19465) Surface Observations
10/OCT/2013 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 19465) Surface Observations
28/DEC/2007 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 23210) Surface Observations
22/MAR/2010 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 29079) Surface Observations
05/DEC/2014 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 32923) Surface Observations
09/SEP/2013 REPLACE Thermometer, Terrestrial, Min (Now WIKA S/N - 32973) Surface Observations

Visibility

26/NOV/2009 INSTALL Visibility Meter (Type Vaisala FD12 S/N - B15102) Surface Observations

Soil Temperature 5cm (No Electronic History)

Sub Surface Temperature (No Electronic History)

Electrical Conductivity (No Electronic History)

Oxygen Content (No Electronic History)

RF Reflectivity

11/DEC/2019 INSTALL Radar (Type Leonardo 735CDP10 S/N - 1904575) WeatherWatch
26/SEP/1988 INSTALL Radar (Type WF100-5C S/N - Unknown) Upper Air
26/SEP/1988 INSTALL Radar (Type WF100-5C S/N - Unknown) WeatherWatch
28/JUN/1969 INSTALL Radar (Type WF2 S/N - Unknown) Upper Air
01/JAN/2010 INSTALL Radar Safety System (RSS) (Type RSS (2502C/8502S) S/N - Unknown) Upper Air
01/JAN/2010 INSTALL Radar Safety System (RSS) (Type RSS (2502C/8502S) S/N - Unknown) WeatherWatch
26/SEP/1988 INSTALL Radar Tower (Type Cylindrical WF100 - 7.75 m S/N - Unknown) Infrastructure
01/OCT/2019 REMOVE Radar (Type WF100-5C S/N - Unknown) Upper Air
01/OCT/2019 REMOVE Radar (Type WF100-5C S/N - Unknown) WeatherWatch
06/SEP/1988 REMOVE Radar (Type WF2 S/N - Unknown) Upper Air
01/OCT/2019 REMOVE Radar Safety System (RSS) (Type RSS (2502C/8502S) S/N - 5026-05) Upper Air
01/OCT/2019 REMOVE Radar Safety System (RSS) (Type RSS (2502C/8502S) S/N - 5026-05) WeatherWatch
20/JUN/2012 REPLACE Radar Safety System (RSS) (Now RSS (2502C/8502S) S/N - 5026-05) Upper Air
20/JUN/2012 REPLACE Radar Safety System (RSS) (Now RSS (2502C/8502S) S/N - 5026-05) WeatherWatch
25/NOV/2009 REPLACE Radar Tower (Now Cylindrical Spiral Staircase EEC - 16m S/N - NONE) Infrastructure

Total Column Ozone Amount (No Electronic History)

Pressure

28/JUN/1969 INSTALL Barometer (Type Kew pattern mercury S/N - 1940) Surface Observations
24/JUN/1994 INSTALL Barometer (Type Vaisala PA11A S/N - 458222) Surface Observations
24/JUN/1994 REMOVE Barometer (Type Vaisala PA11 S/N - 307072) Surface Observations
31/OCT/1989 REPLACE Barometer (Now Kew pattern mercury S/N - 2021) Surface Observations
02/DEC/1990 REPLACE Barometer (Now Vaisala PA11 S/N - 307072) Surface Observations
22/NOV/1990 REPLACE Barometer (Now Vaisala PA11 S/N - 307076) Surface Observations
01/SEP/1998 REPLACE Barometer (Now Vaisala PA11A S/N - 458215) Surface Observations
17/JAN/2012 REPLACE Barometer (Now Vaisala PTB220B S/N - D3540117) Surface Observations

Evaporation

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Equipment Install/Remove(Continued)

16/MAR/2018 INSTALL Equipment Reset Device (Type Watchdog Automatic Evaporation Pan S/N - NONE) Surface Observations
28/JUN/1969 INSTALL Evaporation Pan (Type Class A S/N - Unknown) Surface Observations
16/MAR/2018 INSTALL Evaporation Pan (Type SS Class A Automatic S/N - NONE) Surface Observations
05/AUG/2020 REMOVE Evaporation Pan (Type Class A S/N - Unknown) Surface Observations
22/MAY/2001 REPLACE Evaporation Pan (Now Class A S/N - Unknown) Surface Observations
31/MAR/2009 REPLACE Evaporation Pan (Now Class A S/N - Unknown) Surface Observations

Rainfall

28/JUN/1969 INSTALL Pluviograph (Type Dines syphoning S/N - Unknown) Rainfall Intensity
01/DEC/1997 REMOVE Pluviograph (Type Dines syphoning S/N - Unknown) Rainfall Intensity
28/JUN/1969 INSTALL Raingauge (Type 203 mm (8in) - 200mm capacity S/N - Unknown) Surface Observations
16/MAR/2018 INSTALL Raingauge (Type HS-TB3/0.1/P S/N - 0001) Surface Observations
24/JUN/1994 INSTALL Raingauge (Type Unknown S/N - Unknown) Surface Observations
05/AUG/2020 REMOVE Raingauge (Type 203 mm (8in) - 200mm capacity S/N - Unknown) Surface Observations
22/MAY/2001 REPLACE Raingauge (Now 203 mm (8in) - 200mm capacity S/N - Unknown) Surface Observations
05/NOV/1997 REPLACE Raingauge (Now HS TB3A-0.2 S/N - 96-200) Rainfall Intensity
05/NOV/1997 REPLACE Raingauge (Now HS TB3A-0.2 S/N - 96-200) Surface Observations
22/OCT/1998 REPLACE Raingauge (Now HS TB3A-0.2 S/N - 96-254) Rainfall Intensity
22/OCT/1998 REPLACE Raingauge (Now HS TB3A-0.2 S/N - 96-254) Surface Observations
19/MAY/2020 REPLACE Raingauge (Now Rimco 7499 TBRG S/N - 85861) Rainfall Intensity
19/MAY/2020 REPLACE Raingauge (Now Rimco 7499 TBRG S/N - 85861) Surface Observations
26/NOV/2009 REPLACE Raingauge (Now Rimco 8020 TBRG S/N - 579) Rainfall Intensity
26/NOV/2009 REPLACE Raingauge (Now Rimco 8020 TBRG S/N - 579) Surface Observations
17/JUN/2003 REPLACE Raingauge (Now Rimco 8020 TBRG S/N - 77810) Rainfall Intensity
17/JUN/2003 REPLACE Raingauge (Now Rimco 8020 TBRG S/N - 77810) Surface Observations
09/MAR/2000 REPLACE Raingauge (Now Rimco TBRG (type unspecified) S/N - 010) Rainfall Intensity
09/MAR/2000 REPLACE Raingauge (Now Rimco TBRG (type unspecified) S/N - 010) Surface Observations
05/NOV/1997 SHARE Raingauge (Type HS TB3A-0.2 S/N - 96-200) Rainfall Intensity
05/NOV/1997 SHARE Raingauge (Type HS TB3A-0.2 S/N - 96-254) Rainfall Intensity
05/NOV/1997 SHARE Raingauge (Type Rimco 8020 TBRG S/N - 579) Rainfall Intensity
05/NOV/1997 SHARE Raingauge (Type Rimco 8020 TBRG S/N - 77810) Rainfall Intensity
05/NOV/1997 SHARE Raingauge (Type Rimco TBRG (type unspecified) S/N - 010) Rainfall Intensity
05/NOV/1997 SHARE Raingauge (Type Unknown S/N - Unknown) Rainfall Intensity
18/AUG/2020 UNSHARE Raingauge (Type Rimco 7499 TBRG S/N - 85861) Rainfall Intensity

River Height (No Electronic History)

Solar Radiation (No Electronic History)

Solar Radiation (Direct) (No Electronic History)

Turbidity (No Electronic History)

Sea Water Level (No Electronic History)

Sea Water Temperature

16/MAR/2018 INSTALL Temperature Probe - Water (Type TEMP CONTROLS TCBMP02A S/N - NONE) Surface Observations

Wind Speed

28/JUN/1969 INSTALL Anemometer (Type Dines S/N - Unknown) Surface Observations
26/NOV/2009 INSTALL Anemometer (Type Synchrotac Cups - Type 732 S/N - D577) Surface Observations

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Equipment Install/Remove(Continued)

24/JUN/1994 INSTALL Anemometer (Type Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
24/JUN/1994 INSTALL Mast Anemometer (Type Pivot, Standard 10m S/N - NONE) Infrastructure
11/FEB/2008 INSTALL Wind Run Anemometer (Type Munro S/N - 36558) Surface Observations
28/JUN/1969 INSTALL Wind Run Anemometer (Type Munro S/N - Unknown) Surface Observations
24/JUN/1994 REMOVE Anemometer (Type Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
28/DEC/2007 REMOVE Wind Run Anemometer (Type Munro S/N - 2765) Surface Observations
01/APR/2020 REMOVE Wind Run Anemometer (Type Munro S/N - 805) Surface Observations
26/NOV/2009 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - 75056) Surface Observations
15/SEP/2003 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - 89469/83266) Surface Observations
25/JUN/1996 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - NONE) Surface Observations
05/SEP/1988 REPLACE Anemometer (Now Synchrotac Vane - Type 706 S/N - Unknown) Surface Observations
25/NOV/2009 REPLACE Mast Anemometer (Now Pivot, Standard 8m S/N - NONE) Infrastructure
04/APR/2007 REPLACE Wind Run Anemometer (Now Munro S/N - 2765) Surface Observations
19/JUN/2008 REPLACE Wind Run Anemometer (Now Munro S/N - 7210) Surface Observations
16/MAY/2009 REPLACE Wind Run Anemometer (Now Munro S/N - 805) Surface Observations
15/APR/2006 REPLACE Wind Run Anemometer (Now Munro S/N - 8799) Surface Observations
18/MAR/2000 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM359) Surface Observations
08/DEC/2004 REPLACE Wind Run Anemometer (Now Synchrotac S/N - CBM514) Surface Observations

Air Temperature

28/NOV/2017 INSTALL Humidity Probe (Type Rotronics MP101A-T4-W4W S/N - 10401004) Surface Observations
24/JUN/1994 INSTALL Temperature Probe - Dry Bulb (Type Rosemount S/N - NONE) Surface Observations
03/MAR/2010 REPLACE Temperature Probe - Dry Bulb (Now Rosemount ST2401 S/N - 0643) Surface Observations
26/NOV/2009 REPLACE Temperature Probe - Dry Bulb (Now Rosemount ST2401 S/N - 10216) Surface Observations
28/JUN/1969 INSTALL Thermograph (Type Weekly S/N - Unknown) Surface Observations
30/JUN/1994 REMOVE Thermograph (Type Weekly S/N - Unknown) Surface Observations
28/JUN/1969 INSTALL Thermometer, Mercury, Dry Bulb (Type Dobbie S/N - M 0804) Surface Observations
05/AUG/2020 REMOVE Thermometer, Mercury, Dry Bulb (Type Dobbie S/N - 15941) Surface Observations
03/JAN/2012 REPLACE Thermometer, Mercury, Dry Bulb (Now Dobbie S/N - 15941) Surface Observations
11/JUN/2001 REPLACE Thermometer, Mercury, Dry Bulb (Now Dobbie S/N - 187380) Surface Observations

Surface Inclination (No Electronic History)

The following table summarises information on field performance checks available electronically over the period indicated. The number of instances an instrument was found to fail field performance checks should only be used as a guide. A system of data quality flags is implemented by the Bureau of Meteorology to indicate the data quality of an observation as determined by a mutli-stage quality control process.

Available Date Range	Element	Fail Field Performance Check
26/NOV/2009 - 12/JAN/2021	Cloud Height	0
10/JUL/2018 - 19/AUG/2021	Humidity	0
18/MAR/2000 - 30/JAN/2008	Pressure Trend	0
07/JAN/1996 - 19/AUG/2021	Wind Direction	7
07/JAN/1996 - 11/JAN/2017	Wet Bulb Temperature	1
03/DEC/1998 - 12/MAR/2015	Maximum Temperature	0

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Available Date Range	Element	Fail Field Performance Check
03/DEC/1998 - 12/MAR/2015	Soil Temperature 10cm	0
03/DEC/1998 - 12/MAR/2015	Soil Temperature 20cm	0
03/DEC/1998 - 12/MAR/2015	Soil Temperature 50cm	1
03/DEC/1998 - 12/MAR/2015	Soil Temperature 100cm	0
03/DEC/1998 - 12/MAR/2015	Wind Run	1
03/DEC/1998 - 12/MAR/2015	Minimum Temperature	0
03/DEC/1998 - 12/MAR/2015	Terrestial Minimum Temperature	1
26/NOV/2009 - 12/JAN/2021	Visibility	3
24/JUN/2002 - 18/AUG/2021	RF Reflectivity	2
07/JAN/1996 - 19/AUG/2021	Pressure	0
18/MAR/2000 - 13/FEB/2020	Evaporation	2
07/JAN/1996 - 19/AUG/2021	Rainfall	13
07/JAN/1996 - 19/AUG/2021	Wind Speed	7
07/JAN/1996 - 19/AUG/2021	Air Temperature	0

Station Detail Changes

01/FEB/2021 CLASSIFICATION AWS Priority 3 - Standard (SLP3-AWS)
01/JUL/2011 CLASSIFICATION Australian Climate Observations Reference Network - Surface Air Temperature (ACORN-SAT)
26/JUN/2002 CLASSIFICATION CLIMAT Stations (CLC)
26/JUN/2002 CLASSIFICATION CLIMAT TEMP Stations (CLT)
24/JUN/1994 CLASSIFICATION Fielden (FFD)
01/MAY/1997 CLASSIFICATION GCOS Surface Network (GSN)
01/JUL/2018 CLASSIFICATION HQ EVAPORATION (HQEVAP)
10/JAN/2011 CLASSIFICATION Important (ASOSIMP)
01/JUL/1998 CLASSIFICATION Information and Observations (MIO)
27/SEP/2021 CLASSIFICATION Mastered in EAMS (EAMS)
01/JUL/2017 CLASSIFICATION Observing Operations Hub - Perth (OOH-P)
21/MAR/2016 CLASSIFICATION Processed by ASOS (PBA)
01/JUL/1998 CLASSIFICATION Rawinsonde Stations (RS)
01/SEP/1992 CLASSIFICATION Reference Climate Stations (RCS) ENDED 30-06-2011
14/FEB/1997 CLASSIFICATION Regional Basic Synoptic Network (RBSN)
23/MAR/2010 OBJECT Document/00978100323tnt
03/MAR/2011 OBJECT Document/009789110303tnt
07/DEC/2010 OBJECT Document/AWS SITE AUDIT
17/OCT/2011 OBJECT Document/BAROMETER COEFFICIENTS
26/AUG/2013 OBJECT Document/BAROMETER COEFFICIENTS
15/MAR/2016 OBJECT Document/CEILOMETER STATUS
31/AUG/2011 OBJECT Document/CEILOMETER STATUS
04/DEC/2012 OBJECT Document/CEILOMETER STATUS
03/DEC/2018 OBJECT Document/CEILOMETER STATUS
24/DEC/2014 OBJECT Document/CEILOMETER STATUS
16/JUN/2020 OBJECT Document/CEILOMETER STATUS
12/JAN/2021 OBJECT Document/CEILOMETER STATUS

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

Station Detail Changes(Continued)

07/DEC/2015 OBJECT Document/CEILOMETER STATUS
11/JAN/2017 OBJECT Document/CEILOMETER STATUS
17/JAN/2012 OBJECT Document/CEILOMETER STATUS
25/JUN/2002 OBJECT Document/Esperance rapictx config. (02/07/2002)
17/OCT/2011 OBJECT Document/Esperance1
05/OCT/2005 OBJECT Document/RAPIC TX CAL DATA
08/MAR/2006 OBJECT Document/RAPIC TX CAL DATA
19/FEB/2017 OBJECT Document/SKYLINE DATA
23/MAR/2010 OBJECT Document/SKYLINE DATA
30/JAN/2008 OBJECT Document/SKYLINE DATA
27/MAR/2003 OBJECT Document/SKYLINE DATA
04/OCT/2009 OBJECT Document/SKYLINE DATA - RADAR
01/SEP/2011 OBJECT Document/VISIBILITY METER STATUS
17/JAN/2012 OBJECT Document/VISIBILITY METER STATUS
04/DEC/2012 OBJECT Document/VISIBILITY METER STATUS
03/DEC/2018 OBJECT Document/VISIBILITY METER STATUS
24/DEC/2014 OBJECT Document/VISIBILITY METER STATUS
16/JUN/2020 OBJECT Document/VISIBILITY METER STATUS
12/JAN/2021 OBJECT Document/VISIBILITY METER STATUS
07/DEC/2015 OBJECT Document/VISIBILITY METER STATUS
11/JAN/2017 OBJECT Document/VISIBILITY METER STATUS
28/JUN/1969 STATION - (nondb seeding) Opened
28/JUN/1969 STATION - (nondb seeding) bar_ht Changed to 27
28/JUN/1969 STATION - (nondb seeding) bar_ht_deriv Changed to SURVEY
28/JUN/1969 STATION - (nondb seeding) latitude Changed to -33.8308
28/JUN/1969 STATION - (nondb seeding) longitude Changed to 121.8908
28/JUN/1969 STATION - (nondb seeding) name Changed to ESPERANCE
28/JUN/1969 STATION - (nondb seeding) stn_ht Changed to 25
28/JUN/1969 STATION - (nondb seeding) stn_ht_deriv Changed to SURVEY
28/JUN/1969 STATION - (nondb seeding) wmo_num Changed to 94638
28/JUN/1969 STATION aviation_id Changed to YEST
27/FEB/2003 STATION latitude Changed to -33.83WGS84 System
28/JUN/1969 STATION latlon_deriv Changed to GPS
27/FEB/2003 STATION latlon_deriv Changed to GPS
27/FEB/2003 STATION longitude Changed to 121.8925WGS84 System
03/DEC/1998 STATION lu_0_100m Changed to Town 1000 to 10,000
03/DEC/1998 STATION lu_100m_1km Changed to Town 1000 to 10,000
03/DEC/1998 STATION lu_1km_10km Changed to Town 1000 to 10,000
03/DEC/1998 STATION soil_type Changed to sand
18/MAR/2000 STATION surface_type Changed to bare ground
03/DEC/1998 STATION surface_type Changed to partly covered by grass
27/MAR/2003 STATION surface_type Changed to partly covered by grass

System Changes

01/MAY/1969 SYSTEM Infrastructure Commenced

Extended Climatological Station Metadata
All History

Station:	ESPERANCE			**Location:**	ESPERANCE			**State:**	WA
Bureau No.:	009789	**WMO No.:**	94638	**Aviation ID:**	YEST	**Opened:**	28 Jun 1969	**Current Status:**	Still open
Latitude:	-33.8300	**Longitude:**	121.8925	**Elevation:**	25 m	**Barometer Elev:**	27 m	**Metadata compiled:**	26 JUL 2025

Station Equipment History (continued)

System Changes(Continued)

18/AUG/2020 SYSTEM Rainfall Intensity Ceased
28/JUN/1969 SYSTEM Rainfall Intensity Commenced
02/AUG/2019 SYSTEM Reference Standards Ceased
01/JAN/2011 SYSTEM Reference Standards Commenced
28/JUN/1969 SYSTEM Surface Observations Commenced
01/MAY/1969 SYSTEM Upper Air Commenced
26/SEP/1988 SYSTEM WeatherWatch Commenced

Notes on these metadata

The following notes have been compiled to assist with interpreting the metadata provided in this document. These notes are subject to change as the network evolves. Changes in station-specific metadata occur more frequently, both as recent changes are recorded and historical information is transferred from paper file to electronic database.

Reliability of the metadata

The Commonwealth Bureau of Meteorology maintains information on more than 20,000 stations which have operated since observations began in the mid 1800s. The amount of information available for each of these sites and its associated uncertainty are influenced by a number of factors including the type and purpose of the station and the time over which it operated.

Early information about stations was held only on paper file. In 1998 a corporate electronic database was established to help maintain information about the network and its components. The number of parameters recorded about a station is now much greater than before this database was established. The national database has also helped improve consistency in the metadata through the implementation of predefined fields. As a result, and through the refinement of operating procedures, station metadata recorded since 1998 are of a higher overall standard than previously, although occasional omissions and errors are still possible.

The Bureau is part way through a task of entering historical information held on paper file into the corporate database. **Until this process is completed there will remain large gaps in the information contained in these metadata documents and considerable caution should be used when deriving conclusions from the metadata.** As an example, two consecutive entries about a rain gauge dated 50 years apart may appear in the equipment metadata. This may either mean that nothing happened to that instrument over the 50 years, or that information for the intervening period has yet to be entered into the database. Similarly, if no information was available about instruments at a site when it was first established, fields which were required to have a value present may have used the earliest information available as a best-guess estimate. Sometimes this was the metadata current when the database was established in 1998. In some instances there may be gaps in metadata relevant to the post 1998 period.

For the above reasons it is recommended that all metadata prior to 1998 be considered as indicative only, and used with caution, unless it has been quality controlled. The Bureau of Meteorology should be contacted if further information or confirmation of the data is required. Depending on the nature of the inquiry there may be a fee associated with this request. Contact details are provided in the telephone book for each capital city or the Bureau's web site at:
http://www.bom.gov.au

The following pages contain explanatory notes for selected terms found in this document.

Station Number

The Bureau of Meteorology station number uniquely specifies a station and is not intended to change over time time, although on very rare occasions a station number may change or be deleted from the record (usually to correct an error). Generally a new station number is established if an existing station changes in a way that would affect the climate data record for that site (measured in terms of air temperature and precipitation). Significant station moves are an example of this.

Some stations also possess a World Meteorological Organization (WMO) station number. The WMO number is different to the Bureau of Meteorology number. It also uniquely specifies a station at any given time but can be reassigned to another station if the new station takes priority in the global reporting network. Only selected stations will have a WMO number. Significant stations may maintain their WMO number for many decades.

Notes on these metadata

Network Classification

SUPPORTING the BASIC CLIMATE SERVICE
Global Climate Observing System (GCOS)
GCOS Upper Air Network (GUAN)
GCOS Surface Network (GSN)
National Climate Network {not yet assigned}
Reference Climate Stations (RCS)
Regional Basic Climatological Network (RBCN)
CLIMAT Stations (CLC)
CLIMAT TEMP Stations (CLT)
SUPPORTING the NATIONAL WEATHER WATCH SYSTEM
WMO Global Observing System (GOS)
GOS Upper Air Network
GOS Satellite Network
Global Atmospheric Watch
Background Atmospheric Pollution Monitoring Network (BAPMON)
Basic Ozone Network
Basic Solar and Terrestrial Radiation Network
Regional Basic Synoptic Network (RBSN)
WMO Global Oceanic Observing System (GOOS)
SUPPORTING the BASIC WEATHER SERVICE (BWS)
BWS Land Network
Significant Land Locations
Capital City Mesonets
National Benchmark Network for Agrometeorology (NBNA)
BWS Marine Network
Significant Coastal Loactions
Open Ocean Network
BWS Upper Air Network
Major Significant Locations
BWS Remote Sensing Network
Weather Watch Radar Network
Fire Weather Wind Mesonets
High Resolution Satellite
SUPPORTING the BASIC HYDROLOGICAL SERVICE
Regional Flood Warning Network
Water Resources Assessment Network
Global Hydrological Network
Global Terrestrial Observing System (GTOS)
World Hydrological Cycle Observing System (WHYCOS)
National Hydrological Network

Networks of stations are defined for a variety of purposes (as defined in above table).

Notes on these metadata

Network Classification Continued....

Stations may be included in several different networks, which may change over time. The table on the previous page lists current network classifications related to the scientific purpose of the network. Some of these networks - the GCOS network for instance - are components of a global network. Entries in the database for some networks may not be complete, thus not properly representing the status of the network. The composition of the network will usually change over time. While several of the networks have international significance, other network classifications have been developed to aid operational management.

Station Purpose

The station purpose can be classified according to the observation program listed below. Parameters in brackets list some of the various different configurations which occur.

- Synoptic [Seasonal, River Height, Climatological, Telegraphic Rain, Aeronautical, Upper Air]
- Climatological [Seasonal, Telegraphic Rain]
- Aeronautical
- Rainfall [River Height]
- River Height
- Telegraphic Rain [Non-Telegraphic River Height, Telegraphic River Height]
- Non-Telegraphic Rain [Telegraphic River Height]
- Evaporation [Rainfall, River Height, Telegraphic River Height, Non-Telegraphic River Height, Telegraphic Rain, Non-Telegraphic Rain]
- Pluviograph [Rainfall, Telegraphic Rain, Non-Telegraphic Rain, River Height, Telegraphic River Height, Non-Telegraphic River Height]
- Radiation
- Lightning Flash Counter
- Public Information
- Local Conditions
- Radar Site
- Unclassified
- No Routine Observations

Note: Telegraphic observations are those which are sent by some electronic means be it a phone or telegram to the responsible Bureau office. It is a term which is historically linked to analogue non automatic data transmission.

Station Observation Program Summary

Surface Observations

The following terms are used to describe the frequency of surface observations at a site. Historical observation programs will typically be missing for many sites until the database is backfilled with information.

Set a)

- Continuous Program
  - More than half hourly observations sent (eg an automatic weather station {AWS} which continuously transmits 10 minute observations). This will automatically include half hourly and hourly observations programs.
- Half hourly observations
  - Half hourly observations sent. This will automatically include hourly observations.
- Hourly observations
  - Hourly observations sent only. Stations report on non-synoptic hours (ie. 0100, 0200, 0400, 0500, etc)

Notes on these metadata

Surface observations continued....

Set b)

- Performed
  - Observations performed, instruments read and observations recorded
- Reported
  - Observations performed, instruments read and reported real time
- Seasonal
  - The program may only be performed during a defined season (such as Fire Weather observations) or the routine program may increase in reporting frequency and/or parameters. The program dates are currently modified at the start and end of each season for stations performing seasonal observations. Historically this was not always the case.

Current Station Equipment Summary

Equipment listed in this metadata product is catalogued under one of systems listed below, appropriate to its application. The "Infrastructure" category has been included since it contains information about the mast height of an anemometer (if present).

- Flood Warning
- Infrastructure
- Radiation
- Rainfall Intensity
- Surface Observations
- Upper Air
- Weather Watch {RADAR}

Station Equipment History

Equipment Install/Remove

One of four types of actions can be performed on an instrument in this listing:

Install - A new instrument is installed at the site. This can be either a completely new addition (eg the first barometer at the site), or the replacement of an existing instrument with a different type (eg replacing mercury barometer with electronic barometer)

Remove - An instrument can be removed either when it is no longer necessary to measure a particular element, or when the element is to be measured by an instrument of a different type (see under "Install" above)

Replace - This occurs when one instrument is replaced with another of the same type (eg Kew pattern mercury barometer replacing another Kew pattern mercury barometer)

Share - The same instrument is used for observations under two (or more) systems (eg a rain gauge may be used within both Surface Observations and Rainfall Intensity systems)

Unshare - The instrument is no longer shared between systems

Notes on these metadata

Calibration

During a site inspection an instrument will be calibrated as either being within or not within the specified tolerance in accuracy.

Where a quantative calibration result can be achieved by comparison to a transfer standard (eg barometer comparisons and tipping bucket rain gauge calibrations), the instrument will be recorded as being within or outside the required tolerance. Instruments (such as 203mm rain gauges, screens and evaporation pans) where quantitative calibrations cannot be derived should be regarded as meeting specifications when the instrument is in 'good working order'.

This product provides a summary table of the number of times an instrument was found to be out of calibration

Station Detail Changes

This set of metadata indicates when some aspect of the general information about a station has changed.

- STATION

Metadata which are categorised as pertaining to STATION are items of (textual) information describing a specific attribute of the station. A reference to (nondB seeding) indicates initial information of this field has been sourced from a previous database.

Station position

- Latitude and longitude

Derivation of station latitude and longitude, defined by the location of the rain gauge when it is present, has changed over time. Current practice is to locate or verify open and operational station latitude and longitude based on Global Positioning System equipment. Methods used to locate a station as described in this product (latlon_deriv) are as follows: GPS, MAP 1:10000, MAP 1:12500, MAP 1:25000, MAP 1:50000, MAP 1:100000, MAP 1:250000, SURVEY, and Unknown (which is more commonly represented by a null value). The field latlon_error should be used with caution as the method of determining this value has been interpreted in different ways over time.

- Height

Determination of heights for observing sites is by survey where possible. Otherwise height may be determined using a Digital Aneroid Barometer and a known surveyed point, or derived from map contours. The source of height is provided in the corresponding parameter with a suffix of "_deriv".

Heights which may appear in these metadata are:

- aero_ht
  - The official elevation of the aerodrome which normally corresponds to the altitude of the highest threshold of the runways at that airport;
- bar_ht
  - this represents the height of the mercury barometer cistern or the digital aneroid barometer above mean sea level (MSL);
- stn_ht
  - this normally represents the height of the rain gauge above MSL

Notes on these metadata

- Land Use

To assist the long term understanding of climate change it is important to be able to determine the differences over time which are attributed to variations in the climate. Since land use has an effect on the micro climate around the site, and changes in land use will therefore affect the climate record, it is important that the characteristics of the site are monitored. Soil types are recorded as they affect the land use and also add to the knowledge of the site details.

Defined Land use Types.

- Non-vegetated (barren, desert)
- Coastal or Island
- Forest
- Open farmland, grassland or tundra
- Small town, less than 1000 population
- Town 1000 to 10,000 population
- City area with buildings less than 10 metres (3 stories)
- City area with buildings greater than 10 metres (3 stories)
- Airport

The land use code is entered on the station inspection form in the ranges 0 to 100 m, 100 to 1 km and 1km to 10 km; ie:

- lu_0_100m: Land Use 0 to 100 metres from the enclosure
- lu_100m_1km: Land Use 100 metres to 1 kilometre
- lu_1km_10km: Land Use 1 kilometre to 10 kilometres

Defined Soil Type (At Enclosure).

- unable to determine
- sand
- black soil
- clay
- rock
- red soil
- other

Surface Type (At Enclosure).

- unable to determine
- fully covered by grass
- mostly covered by grass
- partly covered by grass
- bare ground
- sand
- concrete
- asphalt
- rock
- other