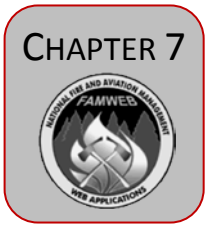


Working with Observations -- OBS

This chapter includes information needed to display, enter, and edit weather observations.

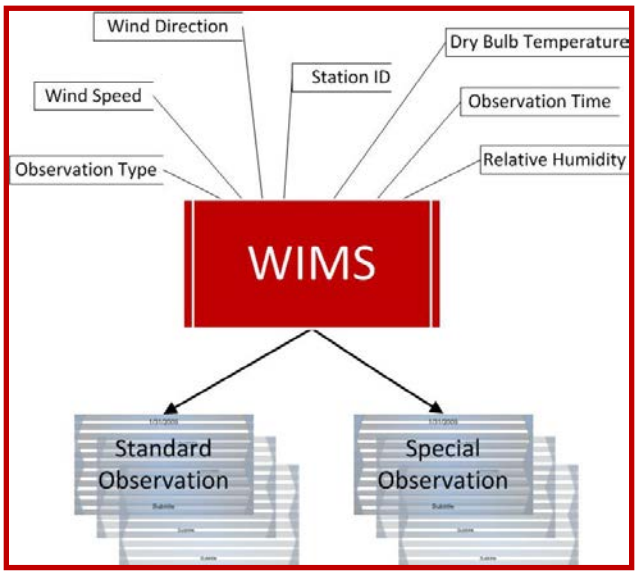
NOTE: Users must be a station owner or have Access Control List authorization to create and edit observations.

TABLE OF CONTENTS

Observations 1
Accessing the Observations Menu 1
DOBS – Displaying Observations 2
DRAWS – Displaying RAWS Data 3
Difference between DOBS and DRAWS 6
EOBS – Edit Observations 7
EOBS via DOBS 10
EOBS via DRAWS 10
NOBS – Creating a new manual observation 12
Required Fields 12
New Observations For SIGs 13
Appendix 7A – NOBS/DOBS/EOBS Column Definitions 15
Appendix 7B – DRAWS Column Definitions 19
Index 21

OBSERVATIONS

Weather observations are gathered from a nationwide network of manual and remotely operated weather stations. These observations provide specific information to fire and land management and research personnel. For automated weather stations, WIMS ingest routines put observations into tables based on station information as described in Chapter 6. Observations are organized by Station ID, Date, Time, and Type. All required fields for NFDRS observations are populated during the data ingest process.



WIMS stores and maintains weather information in two basic categories:

- Observations—Weather observations from RAWS or other stations are stored as observations. This chapter covers observations. WIMS recognizes three observation types:
  - ✓ Type R: An unedited observation from an automated weather station.
  - ✓ Type O: An observation that had been edited (from type R) or entered manually to generate NFDRS records at the Regular Scheduled observation time (RS).
  - ✓ Type S: An observation that had been edited (from type R) or entered manually to generate NFDRS records times *other than the RS time*.
- Forecasts—NWS forecasts to generate next-day NFDRS forecasts are stored as Point forecasts. Forecasts are discussed in Chapter 7.

Accessing the Observations Menu

The Observations menu allows you to:

- Create a new, regular or special observation
- Input missed historical observations
- Edit an existing observation
- Change a RAWS observation to a regular or special observation
- Display an existing observation
- Display RAWS data

OBS - Observations is a menu item on the Data Entry & Manipulation DATA screen. Select the DATA hyperlink from the WIMS Main Menu then select OBS from the DATA menu. Or in the FastPath field, type OBS and click **Go**.

Remember, you can skip the OBS menu by typing the FastPath commands for specific menu items under OBS.

- DOBS to display the Display Observation form
- EOBS to display the Edit Observation form
- DRAWS to display the Remote Automatic Weather Station Display (RAWS) form.
- NOBS to display the Create Observation form

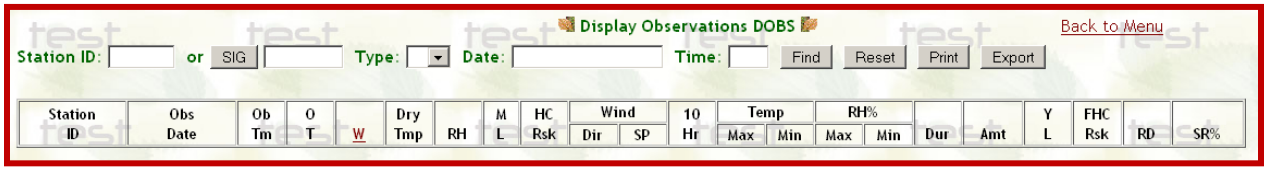
DOBS – Displaying Observations

The Display Observation form allows users to display observations of any observation type.

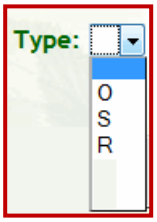
NOTE: Any WIMS user can display observation data for any station.

In the FastPath field, enter DOBS and select Go.

The Display Observations DOBS has four query fields: Station ID (or SIG), Type, Date and Time.



In the Station ID field, enter the number of the station, or in the SIG field, the Special Interest Group name. Entering an ID or SIG, along with a Date entry and clicking the **Find** button is all that is required to generate a DOBS report. If no entries are made for Type or Time**,** the output will include all observation types for all hours for the date (or dates).



The Type field has a drop-down list; select from O, S or R, or to return all types.

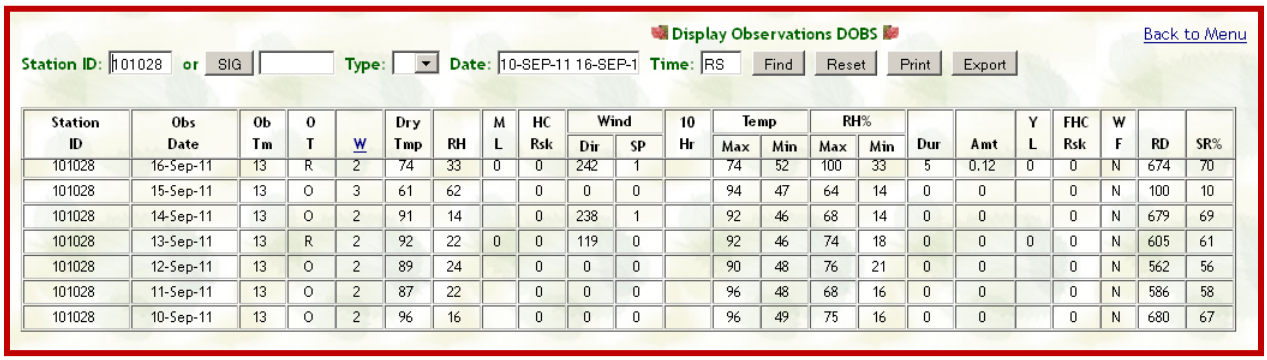
In the Date field enter an observation date (or date range). The observations will be displayed starting with the most recent observation in the first row.

If an hour is entered in the time field, only observations for that time will be displayed. Enter RS to see only observations at the regularly scheduled observation time.

The combination of using a Date range and a Time allows users to view RAWS observations that were not converted to O observations for the date range. This is illustrated in the following example. The query filters of:

- Any observation type
- A range of dates
- Time of the observation restricted to RS (regular scheduled observation time for the station).

Note: The Ob time of 13 was returned because it is the regular scheduled observation time for the station.

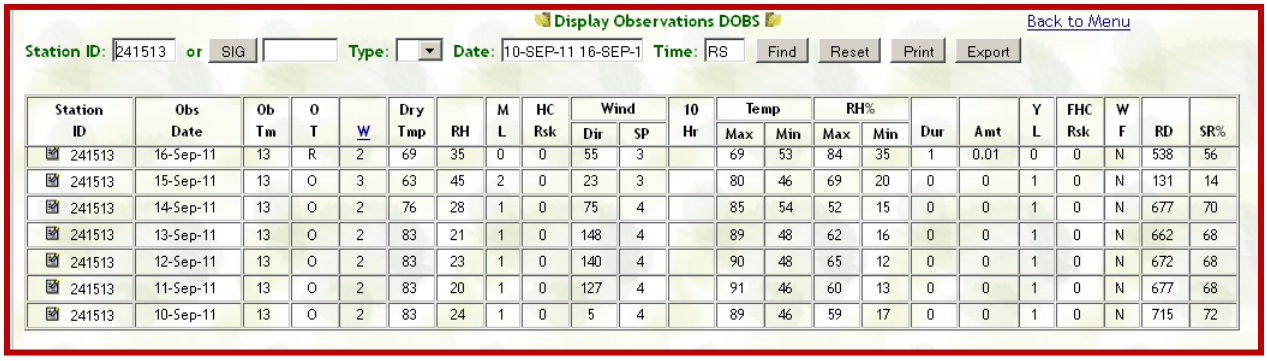


Display Observations DOBS — Back to Menu

Station ID: 101028 or SIG Type: Date: 10-SEP-11 16-SEP-1 Time: RS Find Reset Print Export

Station ID	Obs Date	Ob Tm	O T	W	Dry Tmp	RH	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	W F	RD	SR%
101028	16-Sep-11	13	R	2	74	33	0	0	242	1		74	52	100	33	5	0.12	0	0	N	674	70
101028	15-Sep-11	13	O	3	61	62		0	0	0		94	47	64	14	0	0		0	N	100	10
101028	14-Sep-11	13	O	2	91	14		0	238	1		92	46	68	14	0	0		0	N	679	69
101028	13-Sep-11	13	R	2	92	22	0	0	119	0		92	46	74	18	0	0	0	0	N	605	61
101028	12-Sep-11	13	O	2	89	24		0	0	0		90	48	76	21	0	0		0	N	562	56
101028	11-Sep-11	13	O	2	87	22		0	0	0		96	48	68	16	0	0		0	N	586	58
101028	10-Sep-11	13	O	2	96	16		0	0	0		96	49	75	16	0	0		0	N	680	67

The same query for a station for which you have edit access will show edit icons in front of the station number. You can click the icon and go directly to the edit screen for that observation. See Editing Observations in the following sections.



Display Observations DOBS — Back to Menu

Station ID: 241513 or SIG Type: Date: 10-SEP-11 16-SEP-1 Time: RS Find Reset Print Export

Station ID	Obs Date	Ob Tm	O T	W	Dry Tmp	RH	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	W F	RD	SR%
241513	16-Sep-11	13	R	2	69	35	0	0	55	3		69	53	84	35	1	0.01	0	0	N	538	56
241513	15-Sep-11	13	O	3	63	45	2	0	23	3		80	46	69	20	0	0	1	0	N	131	14
241513	14-Sep-11	13	O	2	76	28	1	0	75	4		85	54	52	15	0	0	1	0	N	677	70
241513	13-Sep-11	13	O	2	83	21	1	0	148	4		89	48	62	16	0	0	1	0	N	662	68
241513	12-Sep-11	13	O	2	83	23	1	0	140	4		90	48	65	12	0	0	1	0	N	672	68
241513	11-Sep-11	13	O	2	83	20	1	0	127	4		91	46	60	13	0	0	1	0	N	677	68
241513	10-Sep-11	13	O	2	83	24	1	0	5	4		89	46	59	17	0	0	1	0	N	715	72

DRAWS – Displaying RAWS Data

The Display Remote Automatic Weather Station form displays the hourly RAWS observations for a single station or stations in a SIG. The DRAWS form includes all sensor data from the station and is the only place in WIMS where all sensor data are displayed.

If a SIG is specified, manual stations that are part of the SIG will have a regular standard observation and any special observations displayed on this form.

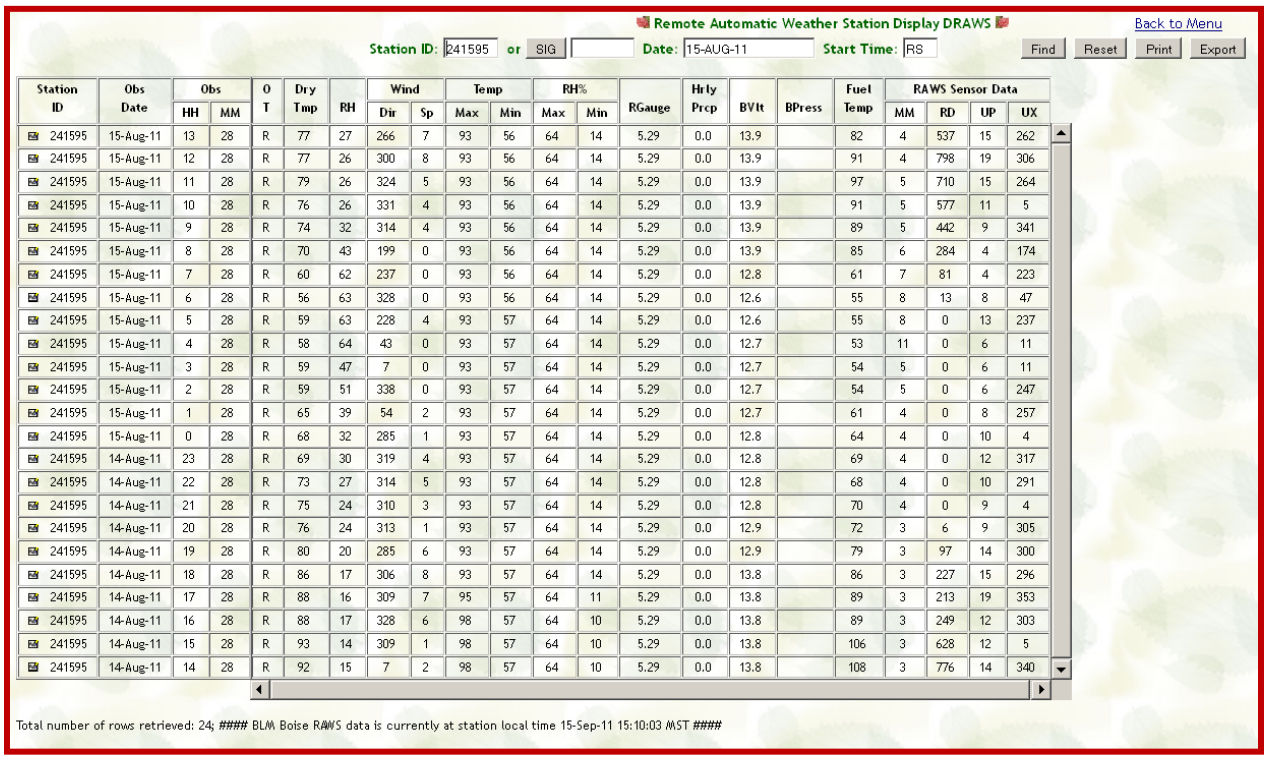
To access the DRAWS form, type DRAWS in the FastPath field and select Go.

The DRAWS form has three query fields: Station ID or SIG, Date and Start Time.

To populate the form, enter the Station ID or SIG, the desired date (single day or range) and start time.

- **Start Time query field.** The time query field in DRAWS is a little different than other time queries in WIMS. The DRAWS query is designed to return the previous 24 hours of observations. Start Time is the hour the 24 observations end (i.e. count backwards 24 hours), allowing you to quickly inspect the last 24 observations for sensor or transmission errors.
  - If Start Time is blank and the date is the current day the data display starts with last transmission from the station and provides observations for the *current day*.
  - If Start Time is blank and the date is a previous date, all 24 hours for that date are returned.
  - If Start Time is "RS" the station's regular_scheduled observation and 23 prior hours are returned.
  - If any other value, that hour and prior 23 hours are returned.

Click **Find** and the results will display in table format on the current window. As in DOBS, if you have edit access to the station, the edit icon will appear in front of the station ID.



Remote Automatic Weather Station Display DRAWS

Back to Menu

Station ID: 241595 or SIG Date: 15-AUG-11 Start Time: RS Find Reset Print Export

Station ID	Obs Date	Obs HH	Obs MM	O T	Dry Tmp	RH	Wind Dir	Wind Sp	Temp Max	Temp Min	RH% Max	RH% Min	RGauge	Hrly Prcp	BVlt	BPress	Fuel Temp	RAWS Sensor Data MM	RD	UP	UX
241595	15-Aug-11	13	28	R	77	27	266	7	93	56	64	14	5.29	0.0	13.9		82	4	537	15	262
241595	15-Aug-11	12	28	R	77	26	300	8	93	56	64	14	5.29	0.0	13.9		91	4	798	19	306
241595	15-Aug-11	11	28	R	79	26	324	5	93	56	64	14	5.29	0.0	13.9		97	5	710	15	264
241595	15-Aug-11	10	28	R	76	26	331	4	93	56	64	14	5.29	0.0	13.9		91	5	577	11	5
241595	15-Aug-11	9	28	R	74	32	314	4	93	56	64	14	5.29	0.0	13.9		89	5	442	9	341
241595	15-Aug-11	8	28	R	70	43	199	0	93	56	64	14	5.29	0.0	13.9		85	6	284	4	174
241595	15-Aug-11	7	28	R	60	62	237	0	93	56	64	14	5.29	0.0	12.8		61	7	81	4	223
241595	15-Aug-11	6	28	R	56	63	328	0	93	56	64	14	5.29	0.0	12.6		55	8	13	8	47
241595	15-Aug-11	5	28	R	59	63	228	4	93	57	64	14	5.29	0.0	12.6		55	8	0	13	237
241595	15-Aug-11	4	28	R	58	64	43	0	93	57	64	14	5.29	0.0	12.7		53	11	0	6	11
241595	15-Aug-11	3	28	R	59	47	7	0	93	57	64	14	5.29	0.0	12.7		54	5	0	6	11
241595	15-Aug-11	2	28	R	59	51	338	0	93	57	64	14	5.29	0.0	12.7		54	5	0	6	247
241595	15-Aug-11	1	28	R	65	39	54	2	93	57	64	14	5.29	0.0	12.7		61	4	0	8	257
241595	15-Aug-11	0	28	R	68	32	285	1	93	57	64	14	5.29	0.0	12.8		64	4	0	10	4
241595	14-Aug-11	23	28	R	69	30	319	4	93	57	64	14	5.29	0.0	12.8		69	4	0	12	317
241595	14-Aug-11	22	28	R	73	27	314	5	93	57	64	14	5.29	0.0	12.8		68	4	0	10	291
241595	14-Aug-11	21	28	R	75	24	310	3	93	57	64	14	5.29	0.0	12.8		70	4	0	9	4
241595	14-Aug-11	20	28	R	76	24	313	1	93	57	64	14	5.29	0.0	12.9		72	3	6	9	305
241595	14-Aug-11	19	28	R	80	20	285	6	93	57	64	14	5.29	0.0	12.9		79	3	97	14	300
241595	14-Aug-11	18	28	R	86	17	306	8	93	57	64	14	5.29	0.0	13.8		86	3	227	15	296
241595	14-Aug-11	17	28	R	88	16	309	7	95	57	64	11	5.29	0.0	13.8		89	3	213	19	353
241595	14-Aug-11	16	28	R	88	17	328	6	98	57	64	10	5.29	0.0	13.8		89	3	249	12	303
241595	14-Aug-11	15	28	R	93	14	309	1	98	57	64	10	5.29	0.0	13.8		106	3	628	12	5
241595	14-Aug-11	14	28	R	92	15	7	2	98	57	64	10	5.29	0.0	13.8		108	3	776	14	340

Total number of rows retrieved: 24; #### BLM Boise RAWS data is currently at station local time 15-Sep-11 15:10:03 MST ####

The DRAWS output screen has slider bars to view more rows and columns than may fit on a screen. Additional sensor data are displayed in columns under "RAWS Sensor Data" that can be fully viewed with the bottom slider bar moved to the right. Additional sensor data columns have SHEF code headers describing their contents. SHEF code definitions for a station may be found in the ESTA screen for a station as described in Chapter 6, Station Information. The BPress (Barometric Pressure) column is often blank because most NFDRS stations do not have Barometric Pressure sensors.

- The above example displays the common extra sensors or an NFDRS station:

  MM - fuel moisture, wood RD - radiation, direct beam solar radiation
  UP - wind, speed (peak) UX - wind direction, peak gust

Data for a RAWS should be viewed in this manner prior to creating a regular standard observation or any special observations. For users with edit access, EOBS may be accessed from DRAWS by clicking the edit icon next to the station ID. The icon is not displayed if you do not have edit access.

Difference between DOBS and DRAWS

Display of Precipitation information

DOBS – Total hours of duration along with an Amount accumulated in last (running) 24 hour period.

DRAWS – Rain gauge reading along with amount accumulated for that hour.

DOBS contains user entries for Observation Type, State of Weather, Lightning Level, Human Caused Risk, and 10 hour fuel moisture (if weighed).

Station ID	Obs Date	Ob Tm	O T	W	Dry Tmp	RH	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	RD	SR%
241513	17-Oct-10	17	R		49	33	0	0	288	2		61	30	91	23	0	0	0	0	26	
241513	17-Oct-10	16	R		53	27	0	0	331	3		61	30	91	23	0	0	0	0	145	
241513	17-Oct-10	15	R		61	23	0	0	40	3		61	30	91	23	0	0	0	0	440	
241513	17-Oct-10	14	R		59	30	0	0	31	4		59	30	91	30	0	0	0	0	524	
241513	17-Oct-10	13	O	1	58	34		0	25	4		58	30	91	34	0	0		0	556	76

DRAWS – contains user entry for Observation Type and displays for all station sensors.

Station OID	Obs Date	Obs HH	Obs MM	O T	Dry Tmp	RH	Wind Dir	Wind Sp	Temp Max	Temp Min	RH% Max	RH% Min	RGauge	Hrly Prcp	BVlt	BPress	Fuel Temp
241513	17-Oct-10	23	1	R	31	69	209	2	61	30	91	23	11.85	0.0	12.4		27
241513	17-Oct-10	22	1	R	34	62	230	2	61	30	91	23	11.85	0.0	12.5		29
241513	17-Oct-10	21	1	R	36	60	209	2	61	30	91	23	11.85	0.0	12.5		30
241513	17-Oct-10	20	1	R	36	55	204	3	61	30	91	23	11.85	0.0	12.6		31
241513	17-Oct-10	19	1	R	40	45	222	3	61	30	91	23	11.85	0.0	12.8		35
241513	17-Oct-10	18	1	R	46	34	267	2	61	30	91	23	11.85	0.0	12.9		39
241513	17-Oct-10	17	1	R	49	33	288	2	61	30	91	23	11.85	0.0	13.1		44
241513	17-Oct-10	16	1	R	53	27	331	3	61	30	91	23	11.85	0.0	13.3		51

Remember regular scheduled observations must be published daily to generate NFDRS outputs. Observations must be completed within specified time frames for NWS forecasts to be produced.

- For detailed information on column definitions and contents in the DOBS/EOBS screen, see Appendix 7A.
- For detailed information on column definitions and contents in the DRAWS screen, see Appendix 7B.

EOBS – Edit Observations

The Edit Observation form allows you to:

- Publish the NFDRS observation for the day. This becomes the type "O" for the day.
- Generate Special (type "S") NFDR records at various hours of the day.
- Edit specific fields in RAWS (type "R") observations.
- Edit previously entered type "O" observations and recomputed NFDR outputs.
- Correct erroneous information for archived historical weather information.

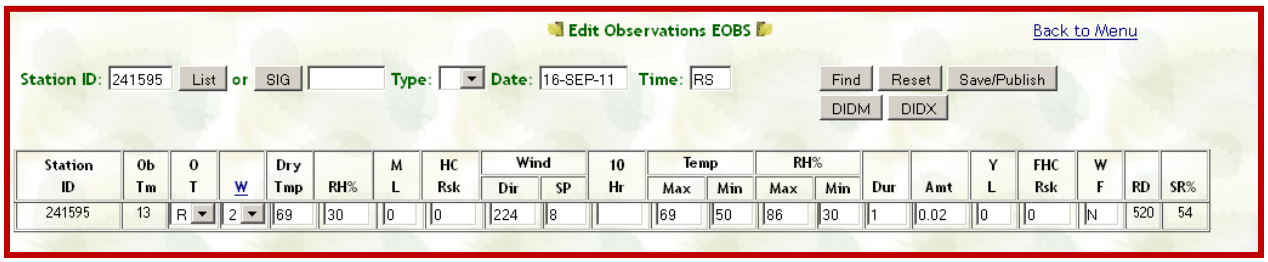
Users must have access authority to edit an observation. A station can have only one Regular observation (Type= O) per day, but up to 23 Special Observations for the day.

In the FastPath field, type EOBS and click **Go**.

The EOBS form has four query fields: Station ID (or SIG), Observation Type, Date and Time.

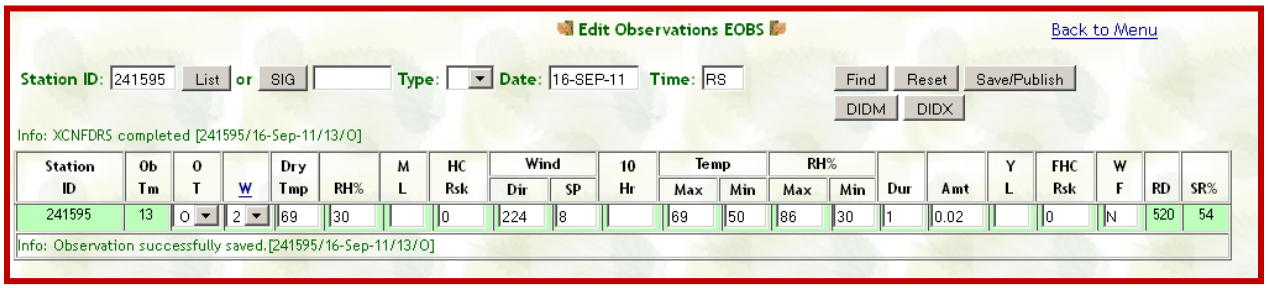
To populate the form, enter the Station ID or SIG, select the observation type, enter the date and time, then click the **Find** button. The results will display in table format on the current window.

- Note: The EOBS form changed significantly in Version 2.0 (November 2010) to support the automated SOW and WF functions for RAWS NFDRS stations.
    - You may select only type O, R, or S. (Blank returns all.)
    - Entry of RS in the time field returns only the hour of regular_scheduled observation (from ESTA) for a station (or each station if a SIG is used).
        - If the RS hour observation is edited, the State of Weather, WF and SR% are computed by RAWS Gateway ingest routines. Users can "Publish" this observation without physically entering changes (***unless your quality assurance checks warrant***). For more detail about EOBS and creating NFDR records, see Chapter 9, "Working with NFDRS."
    - The Save Button has been replaced by Save/Publish.
    - There are buttons linking to the NFDRS display modules DIDM and DIDX.
    - Solar radiation (RD) and RD converted to percent of possible (SR%) are displayed (see Appendix A).



From the Edit Observations EOBS screen you may edit fields as required – particularly State of Weather (W) and WetFlag (WF) that were estimated by the Gateway routines. The observation is then ***Published*** by clicking the **Save/Publish** button.

- If the Save/Publish is successful the table will be shaded green and a message will be displayed confirming the observation was successfully saved (with type changed to "O"), and that the NFDRS record was completed. You can view the NFDR results via the DIDM or DIDX buttons.
- If the Save/Publish was unsuccessful the table will be shaded pink and display the error in a message below the table. Correct the error and click **Save/Publish** to complete the observation.



If you are editing observations via EOBS and using a SIG, things will look a little different. Generally you will select the RS hour and each station in the SIG will display their observations, including the estimated State of Weather and Wet Flag at RS time. After confirming your data quality, again click **Save/Publish** to complete the observation.

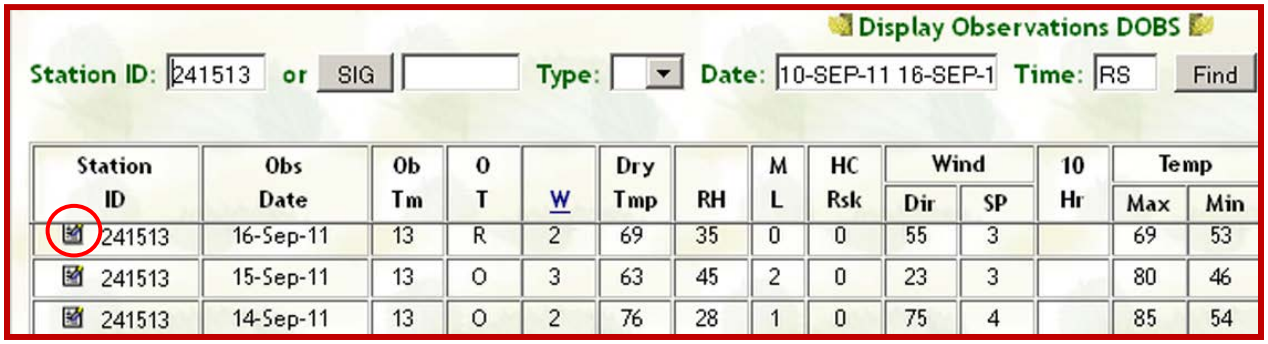
Station ID	Ob Tm	O T	W	Dry Tmp	RH%	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	W F	RD	SR%
241206	13	R	3	62	71	0	0	284	3		84	47	78	22	1	0.01	0	0	N	223	23
241213	13	R	3	62	65	0	0	92	12		84	52	76	21	1	0.01	0	0	N	194	20
241302	13	R	3	64	69	0	0	162	1		87	43	88	18	1	0.01	0	0	N	325	34
241308	13	R	3	60	52	0	0	157	12		78	56	63	20	0	0	0	0	N	261	27
241507	13	R	3	62	56	0	0	55	4		83	45	71	18	0	0	0	0	N	92	10
241508	13	R	3	71	31	0	0	285	2		78	35	90	21	0	0	0	0	N	317	33
241513	13	R	3	63	45	0	0	23	3		80	46	69	20	0	0	0	0	N	131	14
241519	13	R	3	48	62	0	0	272	10		60	48	62	30	0	0	0	0	N	84	9
243002	13	R	3	74	30	0	0	322	3		74	36	78	26	0	0	0	0	N	440	45
243204	13	R	1	76	29	0	0	203	3		76	36	89	29	0	0	0	0	N	838	85

This time though you will see the POBS (Publish Observations) window where you can select or deselect (uncheck) which stations you want to publish at this time, then click **OK**. There will be a message in the EOBS screen and after a short pause, each row in the screen will update in green or red as described above.

☑	Station ID	Obs Time	SOW	WF	RD	SR%
☑	241206	13	3	N	223	23
☑	241213	13	3	N	194	20
☑	241302	13	3	N	325	34
☑	241308	13	3	N	261	27
☑	241507	13	3	N	92	10
☑	241508	13	3	N	317	33
☑	241513	13	3	N	131	14
☑	241519	13	3	N	84	9
☑	243002	13	3	N	440	45
☑	243204	13	1	N	838	85

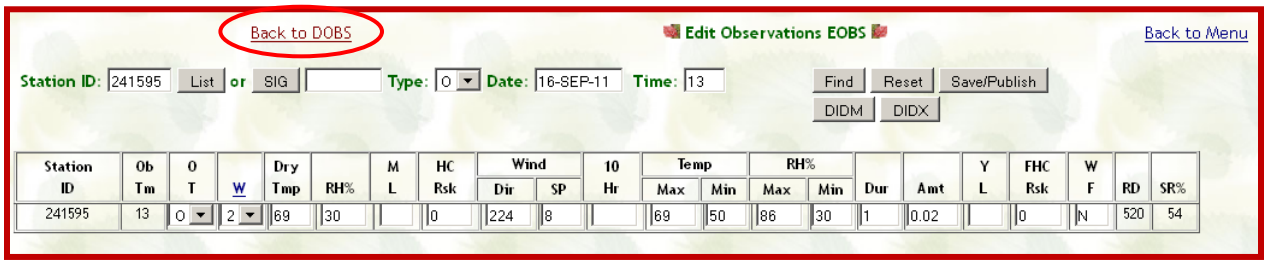
EOBS via DOBS

As noted in the DOBS discussion, if you have edit access to a station, the edit icon is displayed in front of the Station ID. By clicking the icon, you are put directly into the EOBS screen for that observation (and that observation only!).



Station ID	Obs Date	Ob Tm	O T	W	Dry Tmp	RH	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min
241513	16-Sep-11	13	R	2	69	35	0	0	55	3		69	53
241513	15-Sep-11	13	O	3	63	45	2	0	23	3		80	46
241513	14-Sep-11	13	O	2	76	28	1	0	75	4		85	54

The only difference between EOBS and EOBS via DOB is the hyperlink Back to DOBS to return to the calling DOBS screen. Or you may change the query criteria in the active EOBS screen to find and edit another observation.



Station ID	Ob Tm	O T	W	Dry Tmp	RH%	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	W F	RD	SR%
241595	13	O	2	69	30		0	224	8		69	50	86	30	1	0.02		0	N	520	54

EOBS via DRAWS

As noted in the DRAWS discussion, if you have edit access to a station, the edit icon is displayed in front of the Station ID. By clicking the icon, you are put directly into the EOBS screen for that observation (and that observation only!).

Station ID	Obs Date	Obs HH	Obs MM	O T	Dry Tmp	RH	Wind Dir	Wind Sp	Temp Max	Temp Min	RH% Max	RH% Min	RGauge	Hrly Prcp	BVlt	BPress
241595	15-Sep-11	13	28	R	65	38	302	7	87	44	77	14	5.47	0.0	13.6	
241595	15-Sep-11	12	28	R	66	40	328	0	87	44	77	14	5.47	0.0	13.6	

The only difference between EOBS and EOBS via DRAWS is the hyperlink Back to DRAWS to return to the calling RAWS screen. Or you may change the query criteria in the active EOBS screen. In this example the observation time is 28 minutes after the hour so 1328 is closer to

1300 than 1228. Therefor the 1328 observation is edited in EOBS.

- As discussed and shown in the DRAWS section above, inspecting the weather data for the previous 24 hours to check for station sensor/transmission problems is the best way to keep bad data from becoming part of the station's observation and producing invalid NFDRS outputs.

NOBS – Creating a new manual observation

The NOBS command is used to create a observation for either a daily regular observation or for special observation for a Type 2 weather station.

To access the Create Observation NOBS form, in the FastPath field, type NOBS and click **Go**.

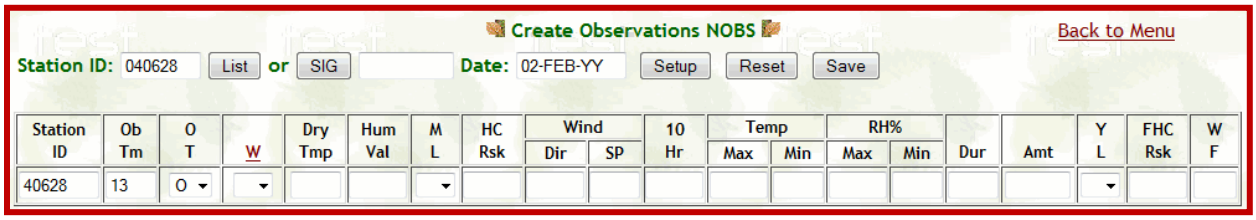
Create Observations NOBS form

The Create Observation (NOBS) form will display with the current date in the Date field. Change the date if necessary.

Enter the station number in the Station ID field, or use the List button to select the desired station. The stations accessed with the List button are those which a user owns or has been granted access.

In the SIG field type the Special Interest Group name or select the SIG button to access a list of user created personal SIGs and Public SIGs.

Selecting the Setup button will change the form to a fill in table with the station number and standard observation time entered into the form. OT (Obs Type), W (State of Weather), ML (Morning Lightning) and YL (Yesterday's Lightning) have drop-down menus.



Create a new observation

REQUIRED FIELDS

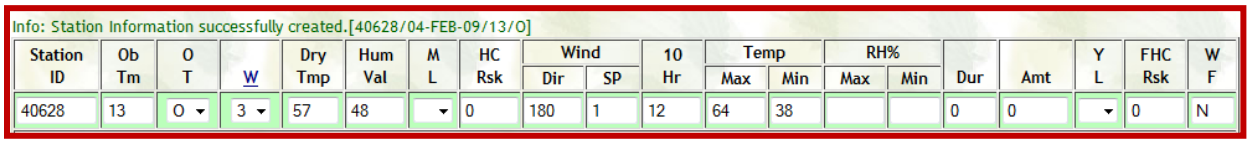
- W (State of the Weather) has a drop-down menu from which to select. If you are unsure of the State of the Weather criteria, select the W of the header.
- Dry Tmp (Dry Bulb Temperature at Observation time)

- Hum Val (Humidity Value at Observation time)
- HC RSK (Human Cause Risk) – an entry must be made but a zero (0) can be entered
- Wind Dir (Wind Direction at Observation time)
- SP (Wind Speed at Observation time)
- 10 Hr (10 Hour fuel moisture) – entered if a stick is weighted.
- Temp Max/Min (Maximum and minimum temperature in last 24 hours)
- RH% Max/Min (Maximum and minimum relative humidity in last 24 hours)
- Dur (Hours of Precipitation in the last 24 hours)
- Amt (Amount of Precipitation in the last 24 hours)
- FHC Risk (Forecasted Human Cause Risk) - an entry must be made but a zero (0) can be entered. No entry is needed for a special observation.
- WF (Wet Flag) Yes (Y) or No (N)
  - Verify the WF (Wet Flag). If the State of the Weather is 0, 1, 2, 3 or 4, WF defaults to N. If the State of the Weather is 5, 6, or 7, WF will default to Y. States of Weather 8 and 9 assume localized precipitation and will not set WF to Y.
  - If fuels are snow covered for just a day or two, you can force the WF to Y. If fuels will be snow covered for an extended period, you should set the Snow Flag in ENFDR to Y.

- ML - Morning Lightning and YL - Yesterdays Lightning columns do not require an entry. These columns are no longer required fields, but if they are entered, they will be used for computing lightning risk for the day and will be archived with the observation.

Click **Save** to save the edits and generate an NFDR record.

With a successful "Save" the table will fill with green and will contain a confirmation message stating "Info: Station Information successfully created." as in the example below.

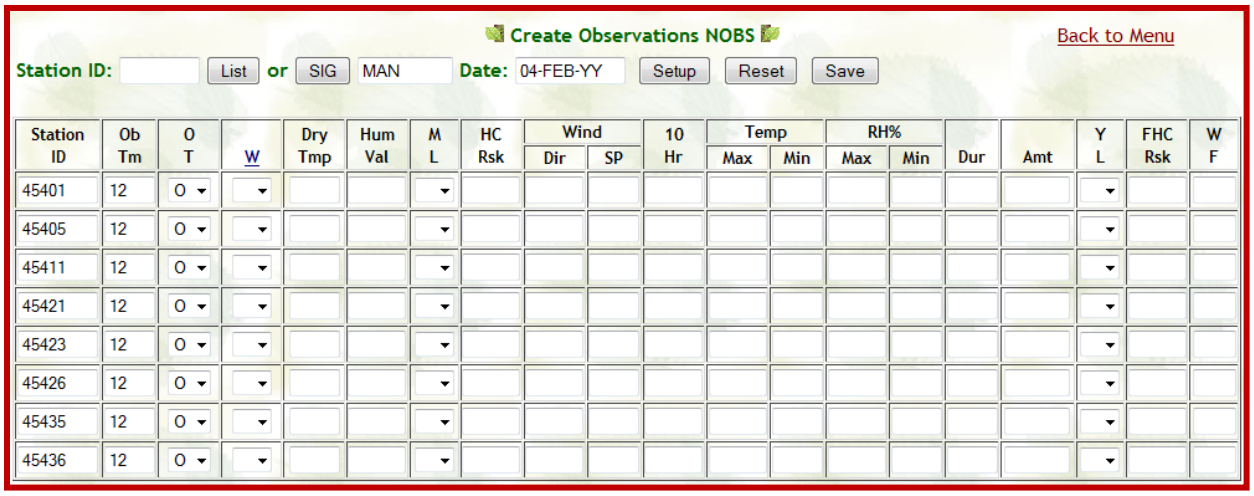

Info: Station Information successfully created.[40628/04-FEB-09/13/O]

Station ID	Ob Tm	O T	W	Dry Tmp	Hum Val	M L	HC Rsk	Wind Dir	Wind SP	10 Hr	Temp Max	Temp Min	RH% Max	RH% Min	Dur	Amt	Y L	FHC Rsk	W F
40628	13	O	3	57	48		0	180	1	12	64	38			0	0		0	N

NEW OBSERVATIONS FOR SIGS

The process of using the NOBS form to enter observations for a SIG rather than a single station starts with entering the SIG name in the query field or by choosing the SIG name after utilizing the SIG button. Each station in the SIG will be displayed in the NOBS table after selecting the Setup button. Complete the observations for each station and select the Save button. If there

are no observations for a station(s) of the SIG just leave its fields empty, complete the remaining station observations and select Save.



Appendix 7A – NOBS/DOBS/EOBS Column Definitions

Field	Description and action to be taken
Station ID - Station number	This is a 6-digit number that is assigned to a specific weather station. It is the primary identifier for the weather observation.
Ob Tm - Observation time	Using the 24-hour clock, displays the local standard time of the observation. WIMS truncates the time to the hour. The regular standard observation time is stored in the Station Information Screen (ESTA).
O T - Observation type	Displays the type of observation: R: An unedited observation from an automated weather station. O: An observation that had been edited (from type R) or entered manually to generate NFDRS records at the Regular Scheduled observation time (RS). S: An observation that had been edited (from type R) or entered manually to generate NFDRS records times *other than the RS time*.
W - State of the weather (SOW)	One-digit code number describing the weather at the time of the observation. Code Description 0 - Clear (0.0 -0.1) 1 - Scattered clouds (0.2 -0.5) 2 - Broken clouds (0.6 -0.9) 3 - Overcast (100% obscured) 4 - Foggy 5 - Drizzling 6 - Raining 7 - Snow/ sleet 8 - Showering 9 - Thunderstorms in progress A State of Weather "8" should be reported when showers are in sight or occurring at the observing weather station. States of the Weather 5, 6, or 7 (drizzle, rain, and snow) sets the "fuels-wet" flag to "Y", which will cause key NFDRS components and indexes to be set to zero because generalized precipitation over the area that the weather station represents is assumed. States of Weather 8 and 9 assume localized precipitation and will not set the fuels-wet flag to "Y". Thunderstorms in progress (lightning seen or thunder heard) should be recorded by stations having unrestricted visibility (i.e. lookouts) only when the activity is not more than 30 miles away

Field	Description and action to be taken
Dry Tmp - Dry bulb temperature	Displays the observed dry bulb temperature in degrees. Fahrenheit or Celsius is specified in the Temperature Code field in the station catalog.
Hum Val - Measured humidity	Displays the measured humidity, if available. Based on the station catalog, this field identifies: wet bulb temperature, dew point temperature, or relative humidity.
M L - Morning's lightning -required	This field is no longer used in the NFDRS calculations and may be left blank.
HC Rsk - Human-caused risk	This field is no longer used in the NFDRS calculations; but an entry is required, a "0" (zero) can be entered.
Wind Dir - Wind direction	Displays the direction where the wind is blowing from, in degrees: The reported value represents the 10-minute average direction that corresponds to the same period in which the average wind speed was determined. Code Equivalent wind direction in degrees NNE 23 SW 225 NE 45 WSW 248 ENE 68 W 270 E 90 WNW 293 ESE 113 NW 315 SE 135 NNW 338 SSE 158 N 360 S 180 FL 0 SSW 203
Wind Sp - Wind speed	Displays the observed average ten-minute wind speed.
10 Hr Measured (weighted) values only. Do not enter calculated value.	Displays the measured ten-hour fuel stick moisture content. Report the measured moisture content of the 1/2-inch fuel moisture sticks to the nearest gram. If the 10-Hr TL (Time Lag) Fuel Moisture is unavailable and the entry is left blank, the danger-rating processor will calculate a value. This calculated value is displayed on various screens but it is NOT ARCHIVED to NIFMID. If the Wet Fuels field is set to " Y" the default ten-hour fuel stick moisture content is " 35".

Field	Description and action to be taken
Temp Max (24-hour maximum temperature)	Displays the maximum temperature observed in the last 24 hours of observation time. The maximum temperature must be equal to or higher than the dry bulb temperature (Dry Tmp field) at observation time.
Temp Min (24-hour minimum temperature)	Displays the minimum temperature observed in the last 24 hours. The minimum temperature must be equal to or lower than the dry bulb temperature (Dry Tmp field) at observation time.
RH% Max (Maximum observed relative humidity percentile)	Enter the maximum relative humidity observed in the last 24 hours, a value from 1 to 100. The maximum relative humidity must be equal to or higher than the reported or calculated relative humidity at observation time.
RH% Min (Minimum observed relative humidity percentile)	Displays the minimum relative humidity observed in the last 24 hours, a value from 1 to 100. The minimum relative humidity must be equal to or lower than the reported or calculated relative humidity at observation time.
Dur - Precipitation duration	Displays the duration of precipitation in hours, as observed in the last 24 hours.
Amt - Precipitation amount	Displays the cumulative precipitation amount observed in the last 24 hours.
Y L - Yesterday's lightning	This field is no longer used in the NFDRS calculations and may be left blank.
FHC Rsk - Forecasted human-caused risk	This field is no longer used in the NFDRS calculation. Enter a "0" (zero). Entry is not required for a Special Observation.

Field	Description and action to be taken
W F (Wet fuels)	This entry is used to indicate when the fuels are wet at observation time. The Fuels-Wet Flag default is set to "Y" (yes) by the danger-rating processor if State of Weather codes "5", "6", or "7" are entered for the particular observation. NOTE: A Fuels-Wet Flag default of "Y" causes the ignition component, spread component, energy release component and burning index to be set to zero (0). It also causes the 1-hour and 10-hour fuel moisture values to be set to 35% if no 10-hour fuel stick value has been entered. Y - indicates wet fuels. N - Indicates dry fuels. If fuels are covered by snow, set the Snow Flag to "Y" in ENFDR.
RD	Solar Radiation, watts/meter^2 averaged for the hour.
SR%	The value of RD converted to percent of possible for the station for the latitude, day, and hour.

Appendix 7B – DRAWS Column Definitions

Field	Description and action to be taken
Station ID: (number)	The unique six digit numeric identifier assigned to each station.
Date:	The date of the observation requested.
Obs HH MM (Hour and Minute)	The time of the observation. In the RAWS screen the hour and minutes will be displayed. In the DOBS screen only the hour will be displayed.
OT (Observation Types)	R: An unedited observation from an automated weather station. O: An observation that had been edited (from type R) to generate NFDRS records at the Regular Scheduled observation time (RS). S: An observation that had been edited (from type R) to generate NFDRS records times *other than the RS time*.
Dry Tmp (Dry bulb temperature)	Displays the observed dry bulb temperature, in degrees at the time of the hour's observation.
RH (Relative humidity)	Displays the relative humidity at the time of the observation.
Wind Dir (Wind direction)	Displays the wind direction in degrees at the time of the observation.
Wind Sp (Wind speed)	Displays the observed ten-minute wind speed at the time of the observation.
Temp Max (24-hour maximum temperature)	The maximum temperature recorded during the 24 hour period prior to the hour's observation
Temp Min (24-hour minimum temperature)	The minimum temperature recorded during the 24 hour period prior to the hour's observation
RH% Max (Maximum relative humidity percent)	The maximum relative humidity temperature recorded during the 24 hour period prior to the hour's observation.
RH% Min (Minimum relative humidity percent)	The minimum relative humidity temperature recorded during the 24 hour period prior to the hour's observation..

Field	Description and action to be taken
RGauge (Rain gauge)	Cumulative total of rainfall recorded since the stations tipping bucket has been reset. The tipping bucket should be reset before it reaches 99.99 or WIMS will encounter problems.
Hrly Precip (Hourly precipitation	Displays the hourly amount of precipitation measured during the last 24 hours.
BVlt (Battery voltage)	Displays the current battery voltage at the RAWS station.
BPress (Barometric pressure)	Displays the current barometric pressure measured at transmission time.

Index

B

Barometric pressure 19
Battery voltage 19

C

Create Observations 2

D

Date 18
Displaying Observations 10
Displaying RAWS 5
DRAWS Column Definitions 14
Dry bulb temperature 18

E

Editing an observation 4

H

Hourly precipitation 19

M

Maximum relative humidity percent 18
Minimum relative humidity percent 19

O

Observation field definitions 2
Observation Types 18
Observations menu 1

R

Rain gauge 19
Relative humidity 18

S

SHEF codes 6
Start Time query field 7
State of the weather 14
Station ID 18

T

Temp Max 18
Temp Min 18

W

Wet fuels 17
Wind direction 18
Wind speed 18