Citizens Weather Observing Program (CWOP)
Configuration for *Virtual Weather Station (VWS)* Users
(Last updated: 13 August 2016)

These instructions assume you already have setup Virtual Weather Station either for home use, or to upload data to another server (e.g., Weather Underground).

1.) Signing Up for CWOP - Gather Station Location Data

- You will need your Latitude and Longitude in decimal degrees, and Elevation in metres. You may already have this information setup in VWS. In VWS, go to the 'Settings' drop-down menu, then click on "Station Settings Sun, Moon, and Altitude" about halfway down.

  You can convert elevation from feet to meters by multiplying your elevation in feet by 0.3048.

- If you do not know your lat/lon and elevation, please see the How-To "Signing up for CWOP" for methods to obtain your station location data: www.weather.gov/media/epz/mesonet/CWOP-SignUp.pdf

2.) Get a CWOP Station ID:

   With any web browser, fill out the form at:
   http://www.findu.com/citizenweather/cw_form.html

> The CWOP website is a little "old-fashioned" and unpolished, and it contains far more information than the average user needs. Don't worry about the parts of the form mentioning "Packet Checking" and "MADIS tech support."

CITIZEN WEATHER PROGRAM REGISTRATION FORM

To obtain a DW number fill in the form below. You will receive an e-mail reply with your assigned number (similar to "DW1234").

If you have questions, please contact your software provider, or send email to Randy at NOAA. Several different ways to check your data packets are at **Packet Checking**.

If you also send your weather data to another internet site, please contact MADIS technical support so they will be aware of the possibility of duplicate data.

Thank you for participating in the Citizen Weather Program!

First name	John
Last name	Doe
email	johndoe@anonymous.net
Nearby town	Hurricane
State (country if outside US)	WV
Zip Code (if US)	25526
Elevation	215 (meters above sea level)

Send my DW number!

- Make sure you use a valid email address (don't worry – no SPAM).
- If you are a business or agency, you may wish to use its name in place of "First Name" and "Last Name." Otherwise, use whoever will be the primary contact.
- If you need help with any of these steps, or finding your location or elevation, send an email to: cwop-support@noaa.gov.

3.) Send the form, then make note of your CWOP Station ID:

Your Citizen's Weather Account Number is: DWxxxx

An email will be sent to John Doe (johndoe@anonymous.net) confirming this number.

## 4.) Download the free VWS add-on called "VWSaprs"

- Download link: http://www.ambientweather.com/vwsaprs.html
- The actual software is in the "Download VWS APRS (zip format)" link.

5.) Install the "VWSaprs" add-on.

- The file you downloaded is in ZIP format. Most versions of Windows can automatically unzip the file, just open it like any other folder. Copy the "VWSaprs" file to the Virtual Weather Station installation directory… this is usually C:\vws\.

6.) Configure the "VWSaprs" add-on – Station Info Tab.

- Launch the VWSaprs program.

- On the "Station Info Tab" you will need to enter your station's latitude, longitude, and elevation in either feet or meters. However, there's a curveball.

- Instead of using decimal degrees for Lat/Lon, VWSaprs wants degrees and *decimal minutes.*

- Luckily, this is easy to calculate…
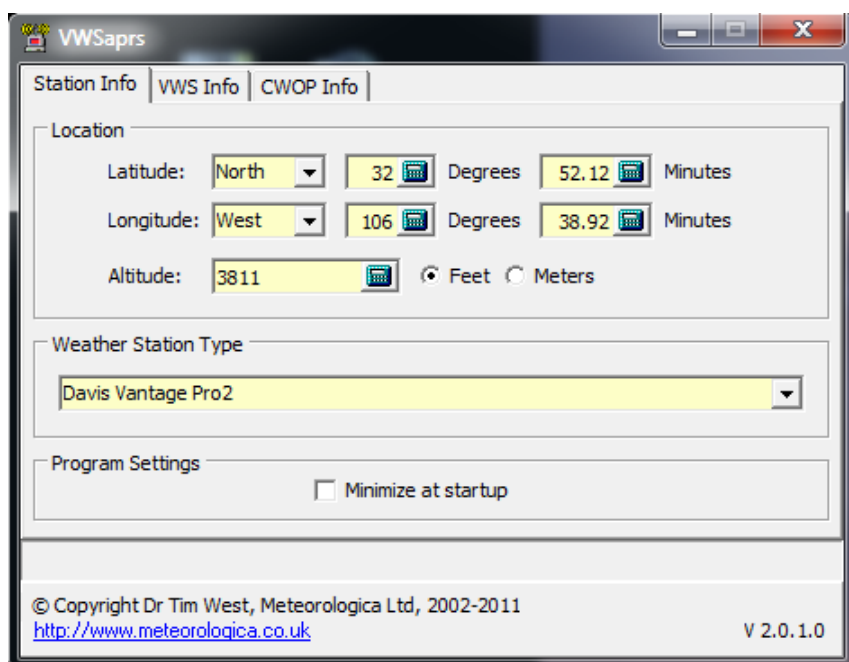
7.) Re-calculate Lat/Lon

• A useful page for converting lat/lon from decimal degrees to other formats can be found here: http://www.directionsmag.com/site/latlong-converter

• Enter your Latitude in the "Decimal Degrees" field (ex: 31.8969), then click the 'Convert' button.

• Your Latitude will be converted to decimal degrees next to the "DM.m" in the greenish-text box.

• Next, do the same for longitude.

Latitude / Longitude Conversion
This page can be used to convert latitude and longitude coordinates.

Deg: ___ Min: ___ Sec: ___ [Convert]

Degrees: ___ Minutes.M: ___ [Convert]

Decimal Degrees: 31.8969 [Convert]

DMS 31 53 49
DM.m 31 53.814
D.d 31.8969

• In VWSaprs, enter the Degrees/Decimal Minutes Lat/Lon in the Station Info Tab.

• Also, select your weather station type in the drop-down menu.

8.) Configure - VWSinfo Tab

• On the VWS Info tab, select the data units you use in VWS. The defaults are in Imperial Units.

• Set the location of the VWS Database file. In most cases, you can just go with the default. This is the file where VWS stores all the raw weather data.

VWSaprs

Station Info | VWS Info | CWOP Info

Conversions
Temperature: ○ °F   ○ °C
Rainfall: ● inches   ○ mm
Pressure: ● inHg   ○ mmHg   ○ mb   ○ hPa
Windspeed: ● mph   ○ knots   ○ km/h   ○ m/s

Please set these parameters to exactly match those you have set in VWS.

Data File Location
dbase.csv c:\vws\data\dbase.csv

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http://www.meteorologica.co.uk   V 2.0.1.0

9.) Configure – CWOP Info Tab

• Enter your CWOP Station ID under **Callsign**.
• Keep **Validation** set as '-1.'
• Set **Interval** to "5 Mins"
• Click the checkbox next to **Feed On**.
• Click all the relevant checkboxes under "**Latest CWOP data**." Do not inculde Luminosity unless you have a UV sensor.

VWSaprs

Station Info | VWS Info | CWOP Info

APRS/CWOP Details
Callsign: DW8522   Validation: -1   Interval: 5 Mins   Feed On ☑
Automatic Server Select ☑

Latest CWOP Data
☑ Wind Direction   °
☑ Wind Speed   mph
☑ Wind Gust   mph
☑ Temperature   °F
☑ Pressure (QNH)   mb
☑ Rain last hour   in
☑ Rain last 24 hours   in
☑ Rain since midnight   in
☑ Humidity   %
☐ Luminosity   W/m²

You can check your data at http://wx.findu.com/DW8522

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http://www.meteorologica.co.uk   V 2.0.1.0

10.) Check for data.

• Check for data at the following URL, replacing 'DWxxxx' with *your* station ID:
http://www.findu.com/cgi-bin/wx.cgi?call=DWxxxx

• It may take up to 15 minutes for new data to display.

• Note: The date/time stamp used on the above site is in the form YYYYMMDDhhmmss in UTC time. For example "20120402145210" means April 2, 2012 at 14:52 UTC (and 10 seconds).

11.) Let us know you're online!
• You should receive an email from CWOP asking you to check your station location and make sure your data is flowing.

12.) Normal Operations.

• Make sure you keep VWSaprs and Virtual Weather Station open at all times to send data.
• You can setup VWSaprs to run from the Windows Task Tray (small box on the lower right next to the clock) by selecting the checkbox "Minimize at Startup" under the "Station Info" tab in VWSaprs.

13.) MesoWest/MADIS Updates:
• These two data aggregators usually update their station tables on a weekly basis (usually Wednesdays). After several days, data from your station should begin showing up on plots at MesoWest:
http://mesowest.utah.edu/cgi-bin/droman/mesomap.cgi?state=NM&rawsflag=3