

WeatherMation LIVE Alerts and Notifications Module

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Introduction

Envirodata's WeatherMation software has been developed to download, display and respond to the weather data from your weather stations, automatically.

WeatherMation's Alerts and Notifications Module provides alerts based on your weather data. Alerts are sent by Email or SMS with settings that include 'Do Not Contact' times.

Basic Alerts can be setup using the Website, but for Advanced please contact Envirodata and we can set these up for you.

- *Section 1 explains more about how Alerts are defined and refers to the Advanced Setup that would be done by Envirodata*
- *Section 2 explains what you can setup yourself via the Website*
- *Section 3 explains how to receive Current Readings via a SMS message*
- *Section 4 shows some of the Advanced Alerts that would be setup by Envirodata*

1.0 Overview and Definitions

Alerts can be setup in a few easy steps:

- **Alert Conditions** – This refers to the limit of a single sensor reading or parameter
- **Alert Triggers** – This allows one or more Alert Conditions to be combined
- **Alert Contacts** – This is defining the users receiving alerts including "Do not Contact" times
- **Alert Output** – How is the alert to be sent
- **Messages Setup** – Do you need a specific message sent with that alert?
- **Notification** – A Notification is a message (either e-mail or sms) send to you at a SCHEDULED time e.g. once a day or weekly

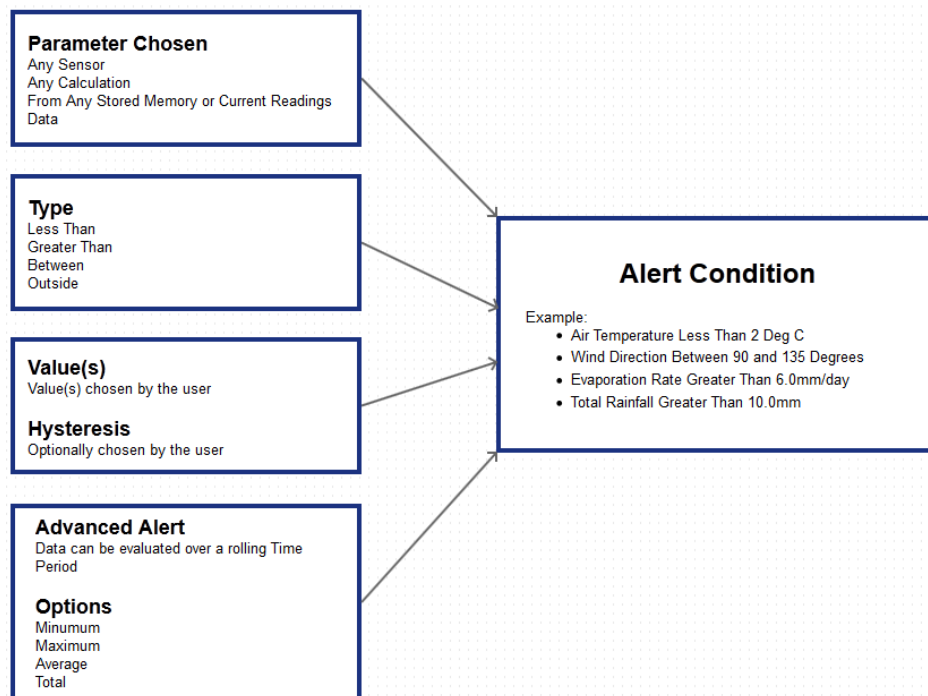


Diagram: Setting up an Alert Condition

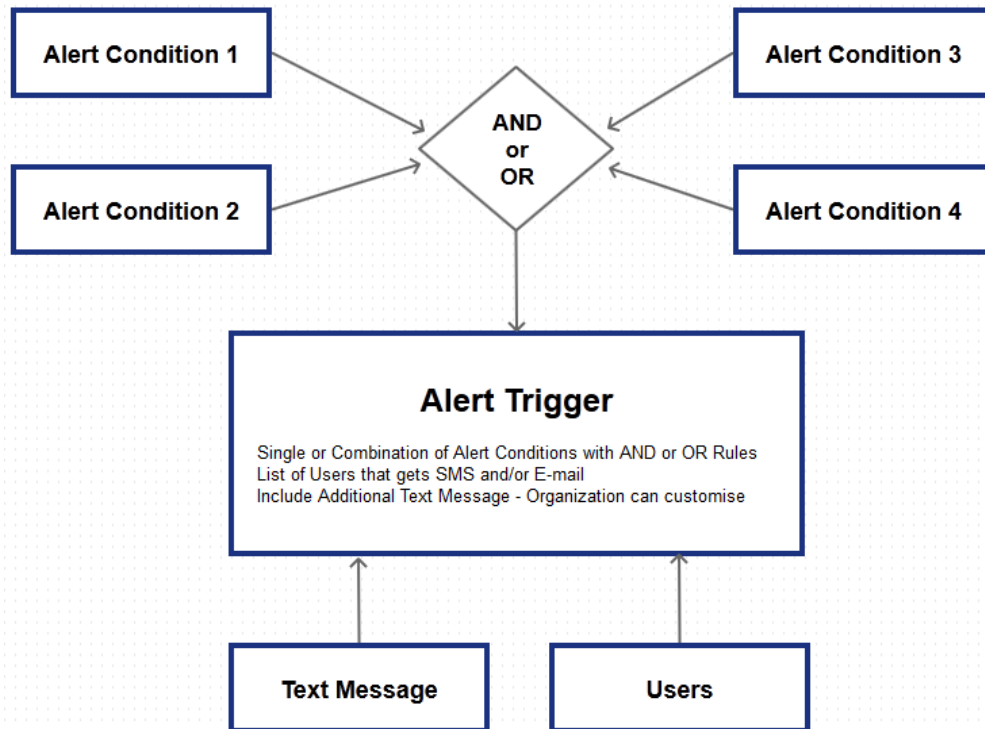


Diagram: Setting up an Alert Trigger

1.1 Alert Conditions

In the Alert Condition setup, you will enter the specific sensor, or calculated value you would like to monitor e.g. Wind Speed, Rainfall, HLI or TWL.

You may also decide the response time of the Alert by selecting how often you would like the system to check the data. Normally this is done by selecting the Memory that you'd like to monitor.

For example, if you want a faster response time, you can check the Current Readings data every minute. If it is less urgent, you can check the Hourly data or even the Daily Summary data once a day.

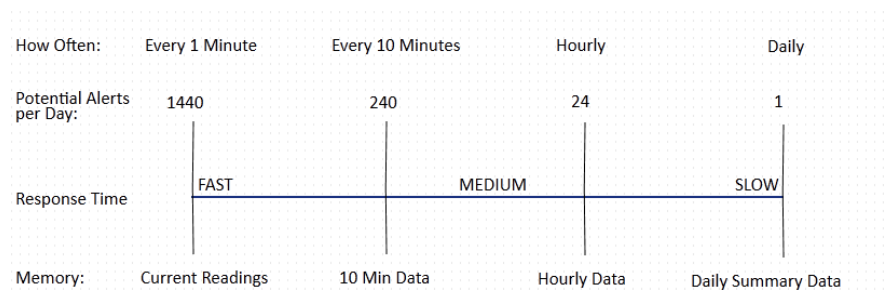


Diagram: Alert Response Times

You will enter the parameter values that the data will be compared against. There is also an option to enter a Hysteresis. Hysteresis is the change in value that is required before re-triggering the Alert Condition can reoccur.

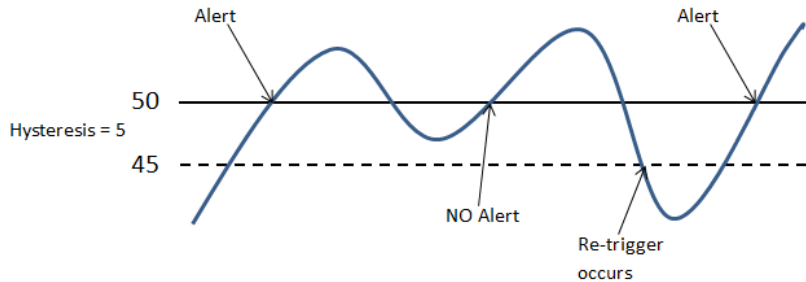


Diagram: Hysteresis

Finally, there are 2 Alert Condition options – a Standard Alert Condition and Special Alert Condition.

Standard Alert Condition – A basic setup that evaluates the last record of data downloaded from the Weather Station

Special Alert Condition – This setup allows you to evaluate data over a rolling period of time, thus more records are looked at and evaluated.

1.2 Alert Triggers

Alert Triggers are combinations of Alert Conditions with various AND or OR rules. They use the Alert Conditions referred to in Section 1.1.

A Simple Alert Trigger might use 1 Alert Condition whereas a more complex Alert Trigger could use multiple (max of 4) Alert Conditions.

Simple Alert: Rainfall

Total Rainfall Greater Than 50mm

Complex Alert: Wind Speed and Direction

Wind Speed Greater Than 60km/h **AND** Wind Direction Between 90 and 180 deg

Complex Alert using brackets: Wind Speed and Direction

(Wind Speed Greater Than 60km/h **AND** Wind Direction Between 90 and 180 deg) **AND**
(Wind Speed Greater Than 40km/h **AND** Wind Direction Between 270 and 300 deg)

Note: You can use brackets to make the Alert Triggers more complex

Alert Notifications - This set how often the Alert Notifications are send out to the Users.

Reset and Retrigger – An Alert Notification will be send the 1st time the Alert Trigger is met. The notification will only be sent again if the value falls outside the Alert Trigger by the hysteresis amount and then re-enters the Alert Trigger Condition.

Every Time – An Alert Notification will be send every time the Alert Trigger is met. For example, it could be every minute if Current Readings are evaluated or once a day if it is based on Daily Summary data.

Interval – An Alert Notification is only send the 1st time the Alert Trigger is met and then at the regular interval of minutes AFTER assuming it is still true AND Alert Conditions are evaluated. For example if the Alert is based on 1 minute Current Readings data and the Interval is set to 30 minutes, an Alert Notification will be send every 30 minutes WHILE the Alert Trigger is met. If the Alert is based on Daily Summary data and Interval is 30 minutes, an Alert Notification will still only be send once a Day. If the Alert Trigger is still met the next day, it will send an Alert Notification again as it is after more than 30 minutes.

You can also select which Users receives this Alert, and whether by SMS and / or E-mail. In order to receive any Alert Notification, the User needs to be loaded into the WeatherMation system.

Additional Messages - You can include a special text message for E-mail Alerts. You can have a different message for each Alert Trigger, but all users linked to that Alert will get the same message.

1.3 Alert Contacts

All Alert Notifications can only be sent to Users that are activated on the system.

Each User's SMS Phone number and/or E-mail address needs to be setup for them to receive an alert by that method.

The User setup includes "Do not Contact" times.

Options for "Do not Contact" times:

- Specific Times on certain days – Options are Between or Outside of certain Times and you select on which days of the Weeks these times apply.
- Specific Days of the week – notifications will not be sent from midnight to midnight on these days.
- During a specific Date Range – notifications will not be sent from midnight to midnight on these days, including the first and last days specified.

During the “Do not Contact” times:

- The User will not receive an alert (via SMS or E-mail or both, depending on the selection made) when an alert for that User occurs
- Any Alerts for that user will still be written to a log file

Once the User’s “Do not Contact” time ends, there is an option to notify the User by a single sms or e-mail that alerts occurred during these times. This message does not provide details, but merely that one or more Alerts have occurred. Details would be in the system Alert Log or within e-mails if the email alert was active during this period.

1.4 Alert Message

Examples of E-mail and SMS outputs as shows below.

From: alerts@weathermation.net.au [mailto:alerts@weathermation.net.au]
Sent: Thursday, 28 August 2014 11:51 AM
To: Jolinda Murray
Subject: Peak Wind Alert at Office

Peak Wind **Alert** at Percy Street Warwick - Attention: Jolinda Murray

Wind Speed of 59.1 km/h

Alert: Peak Wind		28/08/2014 11:50:26 AM		
Sensor	Memory	Value	Units	Trigger Condition(s)
Wind Speed	CurrentReadings	59.1	km/h	Greater Than 50

To open WeatherMation and view your weather data go to: www.weathermation.net.au



*** This is an automatically generated email, please do not reply ***

Diagram: E-mail Output Example

Peak Wind Alert 59.1 km/h Percy Street Warwick 11:50 AM 28/08/2014

Diagram: SMS Output Example

1.5 Messages

You can attach extra messages to your Alert Triggers. This is a text message and will be linked to an Alert Trigger, when the Alert Trigger is setup. This message will then be added to the end of the Alert E-mail Notification when it is send to the Users.

1.6 Notifications

A Notification is a message that is sent to your users (via e-mail or sms) at a scheduled time. This can be daily at a specific time, weekly at a specific time on specific days or even hourly.

You can send any of your weather station data e.g. the last Daily Summary for today. Or every morning at a specific time, send the Current Temperature and Rainfall etc.

You can also send a LINK to any of your predefined Reports.

Below is an example of an E-mail notification.

From: alerts@weathermation.net.au [mailto:alerts@weathermation.net.au]
Sent: Tuesday, 24 May 2016 2:00 PM
To: Jilinda Murray
Subject: Environdata Last 30 Days Rainfall TEST Percy Street Notification at TEST Percy Street



Notification for Percy Street Triggered at: 24/05/2016 2:00:00 PM

Your Last 30 Days Rainfall Percy Street Report is now available.

[Click here to go to WeatherMation and view your weather data](#)

*** This is an automatically generated email, please do not reply ***

When you click on the “yellow” link, it will first take you to the login page and then directly display your Report.



2.0 WeatherMation LIVE Web Setup and Reports

There are a few basic configuration tasks and reports on the WeatherMation LIVE website.

Configuration:

- 1) Current Readings Screen Alerts
- 2) Basic Alerts
- 3) User Maintenance
- 4) Assign Users Access to Weather Stations
- 5) Assign Alerts and Notifications to Users Stations

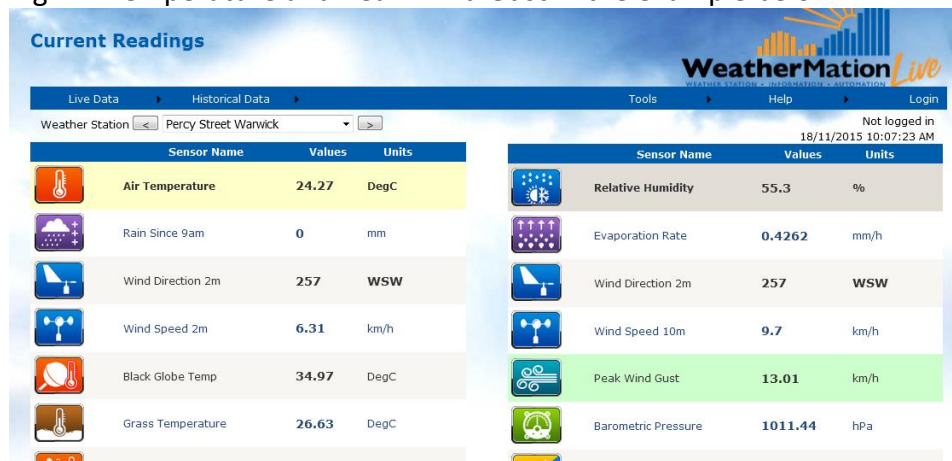
Reports:

- 6) Alerts and Notifications Setup Report
- 7) Alerts and Notifications Log

2.1 Current Readings Screen Alerts

You can highlight certain Sensors and Readings on your Current Readings Screen.

E.g. Air Temperature and Peak Wind Gust in the example below.



- The User has to be LOGGED IN on the WeatherMation Website, to access the Menu Option: Current Readings Screen Alerts on the right hand side under Tools.
- Click on Tools and Current Readings Screen Alerts.
- Select your Weather Station and the Sensor you want to highlight.
- Capture the Min and Max Values and select a colour from the drop-down list.
- Click the Save Alert Details to save any changes.
- These coloured highlights will be displayed on your Current Readings Website, the Current Readings Mobile site and the Current Readings Graph reports.

Current Readings Screen Alerts Setup

Weather Station: Percy Street Warwick
Sensor: Air Temperature

Current Readings Alert Values

Minimum Value	Maximum Value	Colour
-10	0	Light Blue
0.1	14.99	Light Green
15	24.99	Light Yellow
25	34.99	Light Orange
35	60	Light Red
		White
		White

[Save Alert Details](#)

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2.2 Basic Alerts Setup

You can setup some Basic Alerts via the Website. E.g. Rainfall more than 10mm since 9am.

Note: For more advanced Alerts, please contact Envirodata and we can set these up for you.

- The User has to be LOGGED IN on the WeatherMation Website and have User Administration Access edit or create Basic Alerts. To access the Menu Option: Basic Alerts Setup on the right hand side under Tools.
- Click on Tools and Basic Alerts Setup.
- At the top there will be a list of all Alerts already created. You can click on it to edit the existing Alert.

Basic Alerts Setup

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User: Jolinda Murray

Alert Description	Weather Station	Sensor	Value	Every x Minutes
Rain more than 10 mm Since 9AM	Office Main Station	Rain Since 9am	Greater Than 10	10
Wind Direction	Office Main Station	Wind Direction 10m	Greater Than 50	20

Alert Description: Wind Direction
Weather Station: Office Main Station
Sensor: Wind Direction 10m
Greater Than 50

Resend Alert every 20 minutes *

SMS Alerts: ☒ Jolinda Murray, ☐ Tom Edwards, ☐ John Deer, ☐ Peter Smith
E-Mail Alerts: ☒ Jolinda Murray, ☐ Tom Edwards, ☐ John Deer, ☐ Peter Smith

* NOTE: Make sure of your resend time. You may receive an SMS every 10 minutes if you select the 10 minute resend period.

Please Contact Envirodata for Advanced Alert Configurations

Save Alert Delete Alert

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- To create a NEW Alert, enter an Alert Description.
- Select your Station and Sensor
- Select Greater Than or Less Than and enter a value.
- Then enter how often you want to receive the Alert. Remember that Current Readings are downloaded every minute.
- Then select which users will get an SMS or E-mail of both.
- Click the Save Alert button to save this Alert.

NOTE: Make sure of your resend time. You may receive an SMS every 10 minutes if you select the 10 minute resend period.

2.3 User Maintenance

Please see the **User Maintenance Handbook** for details on how to use this feature. This is ONLY available if you have user administration permission.

2.4 Assign Users Access to Weather Stations

Please see the **User Maintenance Handbook** for details on how to use this feature. This is ONLY available if you have user administration permission.

2.5 Assign Alerts and Notifications to Users Stations

Please see the **User Maintenance Handbook** for details on how to use this feature. This is ONLY available if you have user administration permission.

2.6 Alerts and Notifications Setup Report

The Alerts and Notifications Setup Report displays what Alerts/Notifications has been setup for a particular user.

- The User has to be LOGGED IN on the WeatherMation Website, to access the Menu Option: Alerts and Notifications Setup Report on the right hand side under Tools.
- Click on Tools and Alerts and Notifications Setup Report
- Select the User you want to view.

The screenshot shows the 'Alerts and Notifications Setup Report' page for user Jolinda Murray. The page has a blue header with the WeatherMation Live logo and navigation links: Live Data, Historical Data, Tools, Help, and Logout. Below the header, the user's name 'Jolinda Murray' is displayed, along with their email 'alerts@enviromdata.com.au' and mobile number '0401999999'. The report is divided into two sections: Alerts and Notifications.

Alerts

Alert Name	Site	Alert Type	Condition	Condition	Condition	Condition
Rainfall more than 5mm	Percy Street Warwick	SMS	Rainfall > 5			
Rainfall more than 10mm	Percy Street Warwick	SMS	Rainfall > 10			

Notifications

Notifications Name	Site	Schedule	Memory	Sensors	Notifications Type
HourData Daily FTP	Percy Street Warwick	Weekly at: 14:15 on W	Hourly Data	All	E-MAIL
Current Rainfall	Percy Street Warwick	Daily at: 08:55	CurrentReadings	Rain Since 9am	SMS
Rainfall and Temperature for previous day	Percy Street Warwick	Daily at: 09:15	Daily Summary	Multiple	E-MAIL

The footer of the page includes the Enviromdata logo and the text 'WEATHER STATION SPECIALISTS © 2014 Enviromdata'.

- If you click on any of the Alerts, it will give you more detail about that Alert (see orange line below the Alerts)
- If the Notification includes Multiple Sensors, you can click on it and get a list of the sensor details (see orange line below the Notifications)

Alerts and Notifications Setup Report

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Live Data | Historical Data | Tools | Help | Logout

User: Jolinda Murray
E-mail: alerts@envirodata.com.au
Mobile: 0401999999

User: Jolinda Murray
[Download Alerts Setup](#)

Alerts

Alert Name	Site	Alert Type	Condition	Condition	Condition	Condition
Rainfall more than 5mm	Percy Street Warwick	SMS	Rainfall > 5			
Rainfall more than 10mm	Percy Street Warwick	SMS	Rainfall > 10			

Alert Condition	Sensor	Memory	Type	Value	Value
Rainfall > 10	Rain Since 9am	CurrentReadings	Greater Than	10	0

Notifications

Notifications Name	Site	Schedule	Memory	Sensors	Notifications Type
HourData Daily FTP	Percy Street Warwick	Weekly at: 14:15 on W	Hourly Data	All	E-MAIL
Current Rainfall	Percy Street Warwick	Daily at: 08:55	CurrentReadings	Rain Since 9am	SMS
Rainfall and Temperature for previous day	Percy Street Warwick	Daily at: 09:15	Daily Summary	Multiple	E-MAIL

Notifications Name	Sensor
Rainfall and Temperature for previous day	MAXIMUM Air Temperature
Rainfall and Temperature for previous day	MINIMUM Air Temperature
Rainfall and Temperature for previous day	TOTAL Rain Gauge
Rainfall and Temperature for previous day	AVERAGE Wind Speed 2m
Rainfall and Temperature for previous day	AVERAGE Wind Speed 10m

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- “Download Alerts Setup” button on the Top Right, will create a text file summary of all Alerts and Notifications that have been setup for your company.

2.7 Alerts and Notifications Log

The Alerts and Notifications Log is a complete list of all the Email and SMS Alerts/Notifications identified by the Server. It includes Alerts that were actually send AND Alerts that would have been sent, but were held back because of Do Not Contact times.

- The User has to be LOGGED IN on the WeatherMation Website, to access the Menu Option: Alerts Log on the right hand side under Tools.
- Click on Tools and Alerts Log
- This log displays all Alerts and Notifications for the specific logged on User.

Alerts Log

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Live Data | Historical Data | Tools | Help | Logout

User: Administrator

Site Name	Alert Date Time	Alert Trigger	Alert Conditions	Comment
Percy Street Warwick	20/08/2015 9:15:06 AM	Rainfall and Temperature for previous day	Daily Summary at 20/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 19.9 DegC MINIMUM Air Temperature of 3.97 DegC TOTAL Rain Gauge of 0 mm	E-Mail Sent
Percy Street Warwick	19/08/2015 2:15:00 PM	HourData Daily FTP	Daily Summary since 14/08/2015 9:00:00 AM - Your HourData Daily FTP Notification is now available - file attached to e-mail	E-Mail Sent
Percy Street Warwick	19/08/2015 9:15:03 AM	Rainfall and Temperature for previous day	Daily Summary at 19/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 19.7 DegC MINIMUM Air Temperature of -0.6 DegC TOTAL Rain Gauge of 0 mm	E-Mail Sent
Percy Street Warwick	18/08/2015 9:15:02 AM	Rainfall and Temperature for previous day	Daily Summary at 18/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 19.97 DegC MINIMUM Air Temperature of -1.67 DegC TOTAL Rain Gauge of 0 mm	E-Mail Sent
Percy Street Warwick	17/08/2015 9:15:04 AM	Rainfall and Temperature for previous day	Daily Summary at 17/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 19.97 DegC MINIMUM Air Temperature of 6.76 DegC TOTAL Rain Gauge of 2.2 mm	E-Mail Sent
Percy Street Warwick	17/08/2015 8:55:02 AM	Current Rainfall	CurrentReadings at 17/08/2015 8:54:01 AM - Rain Since 9am of 2.2 mm	SMS Triggered
Percy Street Warwick	16/08/2015 9:15:01 AM	Rainfall and Temperature for previous day	Daily Summary at 16/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 20.27 DegC MINIMUM Air Temperature of 4.06 DegC TOTAL Rain Gauge of 0 mm MAXIMUM Air Temperature1 of 20.27 MINIMUM Air Temperature1 of 4.06 TOTAL Rain Gauge1 of 0	E-Mail Sent
Percy Street Warwick	15/08/2015 9:15:05 AM	Rainfall and Temperature for previous day	Daily Summary at 15/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 20 DegC MINIMUM Air Temperature of -1.73 DegC TOTAL Rain Gauge of 0 mm MAXIMUM Air Temperature1 of 20 MINIMUM Air Temperature1 of -1.73 TOTAL Rain Gauge1 of 0	E-Mail Sent
Percy Street Warwick	13/08/2015 9:15:03 AM	Rainfall and Temperature for previous day	Daily Summary at 13/08/2015 9:00:00 AM - MAXIMUM Air Temperature of 23.63 DegC MINIMUM Air Temperature of 5.8 DegC TOTAL Rain Gauge of 0 mm	E-Mail Sent

3.0 Current Readings via SMS

You can receive your Station's Current Readings via a SMS by sending a Requesting SMS.

Send the SMS to WeatherMation LIVE to get the Latest Current Readings for your station:

AWSCR Percy Street Warwick

To mobile number: **0481072633**

- AWSCR is the code to request Current Readings – the system will NOT respond if this is typed incorrectly
- Percy Street Warwick in this case is the Site Name – it is VERY important to make sure of the spelling of your site name. This has to be correct for WeatherMation LIVE to know which site's data to send

Security:

- You have to be setup as a User (with your mobile number) with access to a specific site in order to get the data for the site – so data is not available to everyone.

You can setup which sensors and the order in which they are displayed on a Mobile Device.

Please refer to Web Module Manual for information about setting this up. This is used for to generate the SMS message.

If you do not have a specific setup for Mobile Devices, then the system will use the Layout of your Current Readings Webpage (first the left column and then the right column) to generate the SMS message.

Below is an example of the SMS Message you will receive back

AWSCR Notification
Percy Street Warwick
2016/08/02 10:12

AT 19.13 DegC
RG 0 mm
WS10m 35.5 km/h
WD2m 0 Degr(N)
RTOT 0 mm
BP 80 kPa
BV 13.89 V
BGT -20 DegC
CC 15.12 mA
LC 14.18 mA
PWG 35.5 km/h
SV 15.32 V

10:07 AM 02/08/2016

Diagram: SMS Output Example

4.0 Examples of Advanced Alerts

These could be setup by Envirodata

4.1 Based on Current Readings, the Total Rainfall since 9:00 am is more than 7 mm

4.2 Total Rainfall in the last 24 hours more than 10mm: 10-Min Data check and Alert every 6 hours while Total Rainfall is still more than 10mm

4.3 Total Rainfall in the last hour more than 5mm: Data checked every minute and Alert every hour while Total Rainfall is still more than 5mm

4.4 Minimum Air Temperature based on Daily Summary at 9am is less than 5 DegC. This will be tested when the Daily Summary is downloaded.

4.5 Wind Direction from South West quadrant and Wind Speed more than 50 km/h. This can be done on Current Readings or any other Historical Data.