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	VuSitu Mobile App Configuration					

# vusitu mobile App Configuration

## **OVERVIEW**

Horizons Regional Council's (Horizons) Sampling Teams use both the In-Situ Smartroll MP (SM) and In-situ Aquatroll 400 (AQ) handheld meters for recording field measured parameters when collecting Water Quality (WQ) samples where possible (the exception being sewage treatment ponds and effluent discharges). Horizons also use these meters for lake profiling and to provide check data for continuous water quality sites.

The AQ replaces the now discontinued SM, both instruments share the same probes, and both utilise the same VuSitu App to display the instruments readings.

Horizons staff on the following devices use the App:

- IPads purchased as part of the AQ CAPEX purchase: these are found on charge in the WQ lab, (i) Environmental Data (ED) and Science offices.
- IPads bought for Science programmes (i.e. periphyton monitoring): these are found in the Science office. (ii)
- Work iPhones: these are distributed to staff. (iii)

All devices used or likely to be used for WQ sampling must have the App correctly configured prior to use.

### ASSET MANAGEMENT

Devices are recorded in the ED Asset database:

Ith and Safety	Assets	in the Laptops category	Out of Service & Serviceable				
*				Out of Service & Not Serviceable Needs Calibration			
Equipment and tools					tten Off		
instruments				Not	Book Value		
Dataloggers							
Gauging Assets							
Handheld Meters	Make	Model	Serial No.	Location	Installation Date	Next Calibration	Purchase Date
Level & Flow	Apple	iPad 6th Gen 128GB	DMPX226ZJF89	HRC Regional House (In Service)	21-Nov-2018	21-Feb-2102	21-Nov-2018
Met	Apple	iPad 6th Gen 128GB	DMPX22FRJF89	Staff: Jacob Channon	28-Nov-2018	21-Feb-2102	21-Nov-2018
Rain Gauges	Apple	iPad 6th Gen 128GB	F60ZC01GJF89	HRC Regional House (In Service)	15-Oct-2019	15-Jan-2103	15-Oct-2019
Sampling	Apple	iPad 9th Gen 256GB	GN6TXQWJMX	Staff: Darren Bentley-Hewitt	6-Dec-2022	8-Jan-2105	8-Oct-2021
Webcamera	Apple	iPad 9th Gen 256GB	M7K3WLP925	HRC Regional House (In Service)	1-Dec-2022	8-Jan-2105	8-Oct-2021
WQ	Apple	iPad 9th Gen 256GB	VXW67XPHXK	HRC Regional House (In Service)	1-Dec-2022	8-Jan-2105	8-Oct-2021
Conductivity	Apple	iPad Mini	F85LJZD4FPFL	Steve Packer	23-Aug-2014	23-Nov-2097	23-Aug-2014
Controllers and Interfaces	Apple	iPad Mini 2	F9FR 705JFLML	HRC Regional House (In Service)	17-Jun-2016	17-Sep-2099	17-Jun-2016
Dissolved Oxygen	Apple	iPad Mini 4	F9FTP581GHMN	Science Department	6-Dec-2022	15-Sep-2100	15-Jun-2017
Misc Water Quality Sensors	Apple	iPad Mini 4	F9FTP5EWGHMN	Science Department	6-Dec-2022	15-Sep-2100	15-Jun-2017
Non critical WQ Sensors	Apple	iPad Mini 5	DMPCR32SLMT7	Staff: David Brown	1-Jan-2014	1-Apr-2097	1-Jan-2014
pH Sensors	Apple	iPad Mini 5	DMPZ71TKLMT7	HRC Regional House (In Service)	18-Sep-2019	18-Dec-2102	18-Sep-2019
Sediment	Apple	iPad Mini 6th Gen 256GB	H20D0W5LX9	HRC Regional House (In Service)	1-Dec-2022	28-Dec-2105	28-Sep-2022
	Apple	iPad Mini 6th Gen 256GB	PCVJ2N73MT	Staff: David Brown	1-Dec-2022	28-Dec-2105	28-Sep-2022
Sondes	Apple	iPad Mini 6th Gen 256GB	QRL743KG4V	Staff: Darren Bentley-Hewitt	1-Dec-2022	28-Dec-2105	28-Sep-2022
• Turbidity	Apple	iPad Mini ME820X/A	F\$KMT0PCFLML	HRC Regional House (In Service)	1-Jan-2014	1-Apr-2097	1-Jan-2014
Water Temperature	Apple	iPad Mini ME820X/A	F9FPH0ZNFLML	HRC Regional House (In Service)	11-May-2015	11-Aug-2098	11-May-2015
aptops	Apple	iPad Mini ME820X/A	F9FPJ0B7FLML	HRC Regional House (In Service)	11-May-2015	11-Aug-2098	11-May-2015
Maintenance	Apple	iPad Mini ME820X/A	F9FPJ0HRFLML	HRC Regional House (In Service)	11-May-2015	11-Aug-2098	11-May-2015
ower	Apple	iPad Pro 11" 2d Gen wi-fi + cell 1TB	SDMPD 40 1NNTH4	Survey Department	24-Oct-2020	24-Jan-2104	24-Oct-2020

Figure 1: Asset Screenshot showing location of all iDevices used for WQ sampling

Any iPad that is used or likely to be used for WQ sampling is to be added to Asset by the Discrete WQ portfolio holder or proxy.

#### **VU-SITU CONFIGURATION**

When a device first connects to VuSitu all options are selected, for standard practices the following parameters and units are required:

- Water Temperature (°C). Note: this is simply labelled temperature without a logo.
- Barometric Pressure (mbar)
- RDO Saturation (% Sat) •
- RDO Concentration (mg/L)

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- Specific Conductivity (µS/cm) Note: Actual Conductivity is not wanted!
- pH (pH units)
- pH mV (mV). Note this is used for calibrations.
- ORP (mV). Note: Oxidation Reduction Potential (ORP) is typically used for Groundwater Monitoring.

The iDevice being used should be configured as per figure 2 prior to any calibration and/or data collection; the Discrete WQ portfolio holder or proxy can set this up for you. All iPads in circulation should already be configured correctly.

11:0	6 🕇		"II 🔶 [	83
۲	Live Readings			÷
	Aqua TROLL 400	) - SN 661256		
	Device Locatio	n	G	PS: 🤡
	Your device's GF	PS location will b	e recorde	ə
		Chan	ge Locatio	n >
$\bowtie$	Refresh Rate: 2	2 sec 🏟		
<b>~</b>	Temperature	17.53 °C	•	
~	💊 Barometric Pressure	1,004.2 mbar	•	
<b>~</b>	RDO Saturation	100.08 %Sat	٥	
~	RDO Concentration	9.48 mg/L	٥	
~	Specific Conductivity	7.72 µS/cm	•	
<b>~</b>	рН	6.81 pH	٥	
<b>~</b>	pH mV	-2.9 mV	٥	
~	ORP	1.0 mV		
	💊 Temperature			
	Oxygen Partial Pressure			
	Actual Conductivity			
	Salinity			
RECOR		Start Recor	ding	

Figure 2: Screenshot showing correct configuration of iDevices prior to undertaking WQ sampling

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## **CHECKING INSTRUMENT TIME**

It is important to regularly check the instrument times vs the iDevice time, as drift is possible. Remember the Instrument should be the NZST. IPads should already be set to NZST as standard whereas iPhones will be to NZDT. The process is detailed below:

11:36 🦕					
	11:36 <b>L</b> II 🗢 🔟	11:37 C		ul 🗢 79	
Connected Instrument	Instrument Settings	< 🛞 Instru		1.	
Aqua TROLL 400	Arrun TROLL 400 - SN 661256	Set the time	Aqua TROLL 400 - S and date to ensu		
Battery: 99% remaining		accurate log	gging.		
	Salinity Setting	Current mobi	le device time:		
Instrument Time: 10:37 a.m.	Specific Gravity Setting		11:36 a.r		
7/02/2023	Derived Parameters	7/02/2023			
	Level Mode	Apply mobile device time 5			
	Communication Settings	Instrument Time:			
	SDI-12 Settings	3	10:36 a.m.	<b>04</b>	
	Real-Time Alarms		7/02/2023	÷	
	Instrument Firmware				
	Restore Factory Settings				
	Restore Calibration Defaults				
<ul> <li>Live Readings</li> <li>Calibrations</li> <li>Instrument Settings</li> <li>Disconnect</li> <li>1. On the home screen select Instrument Settings</li> </ul>	2. Select Instrument Clock	4. 1 4. 1 5. V 5. V 5. V	Check that th s correct to N To manually of nstrument tin symbol adjus save. When NZST select 'Apply ime'.		

Figure 3: Sequence for checking instrument time vs. iDevice time



Figure 4: Screenshot showing the difference between Air and Water Temperature (taken in the ED office)

The symbol represents the baro/battery unit of the SM/AQ and only appears for Air Temperature and Barometric Pressure.

#### SPECIFIC CONDUCTIVITY VS. ACTUAL CONDUCTIVITY

For all WQ sampling Horizons collects Conductivity corrected to 25°C – Specific Conductivity. Ensure that this option is selected. Note: Actual Conductivity is not corrected to a set temperature; in the field, the difference between the two is not immediately apparent.



Figure 5: Screenshot showing the difference between Specific and Actual Conductivity (taken in the ED office)