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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.

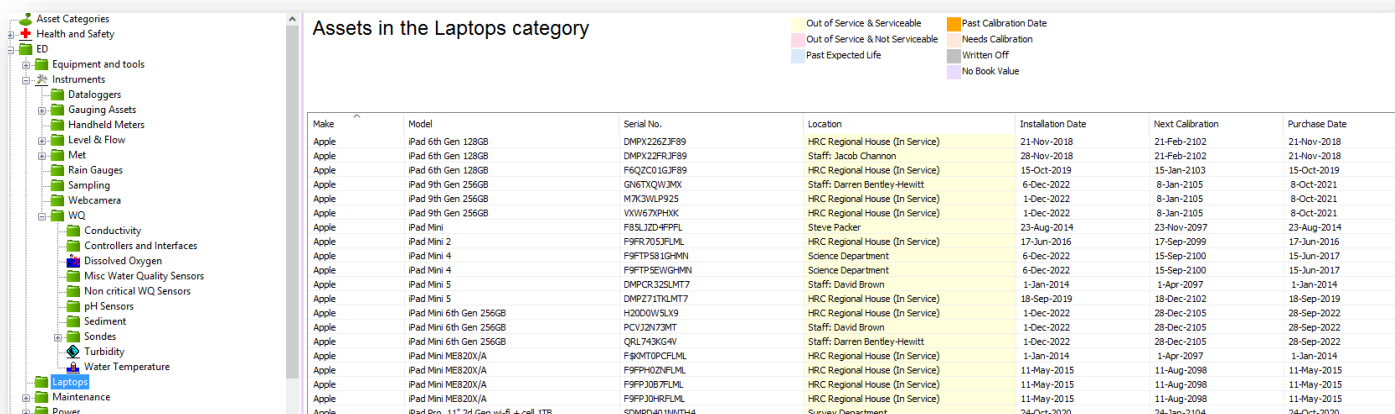
Horizons staff on the following devices use the App:

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

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:




Make	Model	Serial No.	Location	Installation Date	Next Calibration	Purchase Date
Apple	iPad 6th Gen 128GB	DMPX226ZJF89	HRC Regional House (In Service)	21-Nov-2018	21-Feb-2102	21-Nov-2018
Apple	iPad 6th Gen 128GB	DMPX226ZJF89	Staff: Jacob Channon	28-Nov-2018	21-Feb-2102	21-Nov-2018
Apple	iPad 6th Gen 128GB	F6QZC01GJF89	HRC Regional House (In Service)	15-Oct-2019	15-Jan-2103	15-Oct-2019
Apple	iPad 9th Gen 256GB	GN6TXQWJMX	Staff: Darren Bentley-Hewitt	6-Dec-2022	8-Jan-2105	8-Oct-2021
Apple	iPad 9th Gen 256GB	M7K3VLP925	HRC Regional House (In Service)	1-Dec-2022	8-Jan-2105	8-Oct-2021
Apple	iPad 9th Gen 256GB	VXW67XPHK	HRC Regional House (In Service)	1-Dec-2022	8-Jan-2105	8-Oct-2021
Apple	iPad Mini	F8SLJ2J4PPL	Steve Packer	23-Aug-2014	23-Nov-2097	23-Aug-2014
Apple	iPad Mini 2	F9FRT05JFJML	HRC Regional House (In Service)	17-Jun-2016	17-Sep-2099	17-Jun-2016
Apple	iPad Mini 4	F9FRT05JFJML	Science Department	6-Dec-2022	15-Sep-2100	15-Jun-2017
Apple	iPad Mini 4	F9FRT05JFJML	Science Department	6-Dec-2022	15-Sep-2100	15-Jun-2017
Apple	iPad Mini 5	DMPX226ZJF89	Staff: David Brown	1-Jan-2014	1-Apr-2097	1-Jan-2014
Apple	iPad Mini 5	DMPX226ZJF89	HRC Regional House (In Service)	18-Sep-2019	18-Dec-2102	18-Sep-2019
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
Apple	iPad Mini 6th Gen 256GB	QRL743G4V	Staff: Darren Bentley-Hewitt	1-Dec-2022	28-Dec-2105	28-Sep-2022
Apple	iPad Mini M6320X/A	F9FRT05JFJML	HRC Regional House (In Service)	1-Jan-2014	1-Apr-2097	1-Jan-2014
Apple	iPad Mini M6320X/A	F9FRT05JFJML	HRC Regional House (In Service)	11-May-2015	11-Aug-2098	11-May-2015
Apple	iPad Mini M6320X/A	F9FRT05JFJML	HRC Regional House (In Service)	11-May-2015	11-Aug-2098	11-May-2015
Apple	iPad Pro 11" 2d Gen wi-fi + cell 1TB	SDMPD401NTH4	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 ($\mu\text{S}/\text{cm}$) 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.

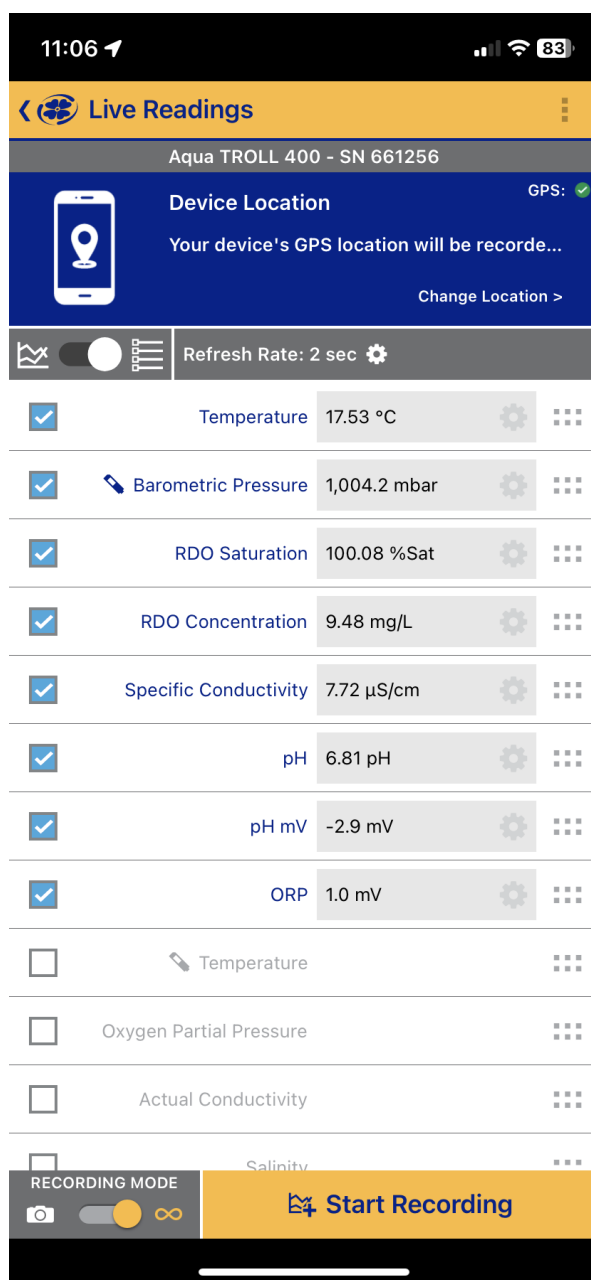




Figure 2: Screenshot showing correct configuration of iDevices prior to undertaking WQ sampling

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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:

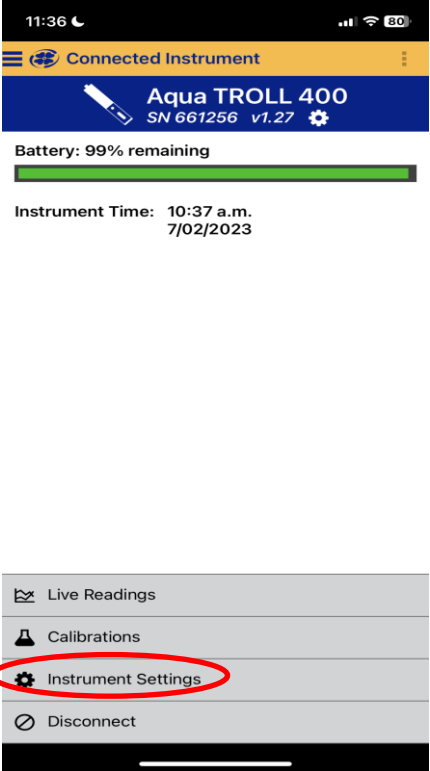
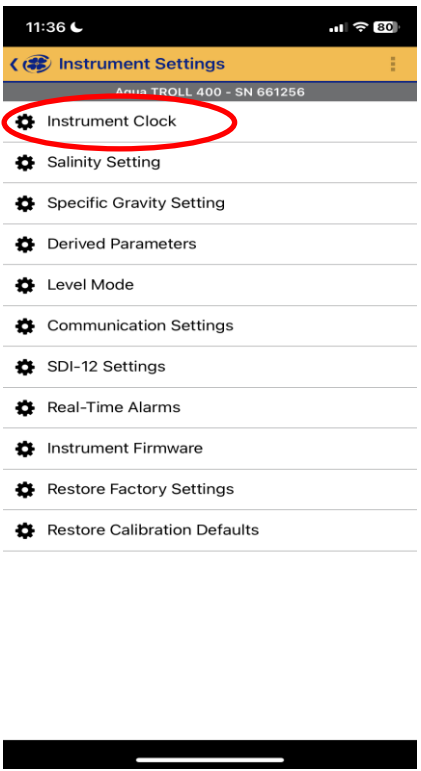
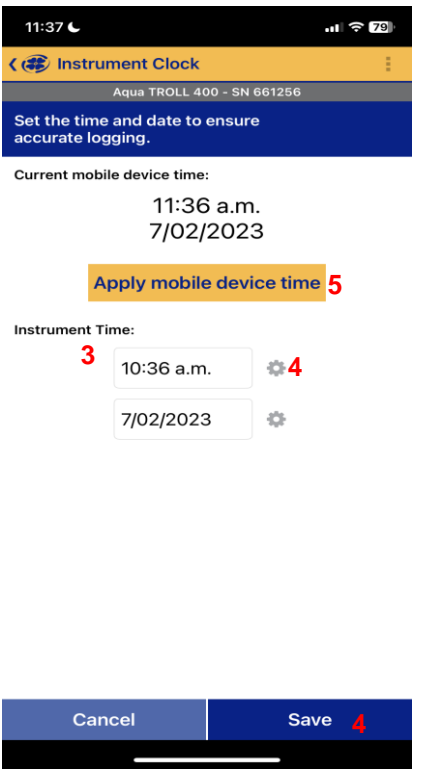
 <p>1. On the home screen select Instrument Settings</p>	 <p>2. Select Instrument Clock</p>	 <p>3. Check that the instrument time is correct to NZDT.</p> <p>4. To manually change the instrument time select the cog symbol adjust the time and hit save.</p> <p>5. When NZST = NZDT you can select 'Apply mobile device time'.</p> <p>6. Also, check that the date is correct.</p>
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Figure 3: Sequence for checking instrument time vs. iDevice time

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AIR TEMPERATURE VS. WATER TEMPERATURE



Both air and water temperature are referred to in the VuSitu App as *temperature*, the only difference being the inclusion of the  symbol for air temperature. Ensure that you have the water temperature (simply referred to as **Temperature** with no symbol) selected:



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.

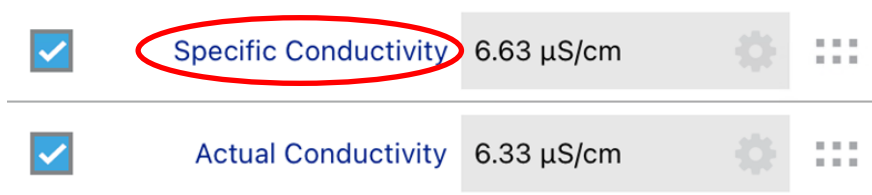


Figure 5: Screenshot showing the difference between Specific and Actual Conductivity (taken in the ED office)