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Smart Troll: Ground water sampling

Before starting ensure the meter is calibrated on the day of the run.

Calibration of handheld field meters must be carried out prior to each sampling run. Refer to the calibration procedure method 14.4. End of day checks are also required to determine sensor drift, if any.

Make sure blue tooth is turned on the battery pack and the idevice (iPhone / iPad)

Method 1: Use the meter exactly the same as the YSI and take manual readings.

Start the in-Situ App

- 1) Place the sensor in the water to be sampled and allow the parameters to stabilise (at least 2 minutes)
- 2) Manually record parameters in the field (SoE / site log books)



Method 2: Use the low flow sampling App.

This method uses the USGS method for low flow pumping. Set up the pump and flow cell, and start pumping water through the flow cell.

There are a few details about the site and the pump that you will need to know before starting this method.

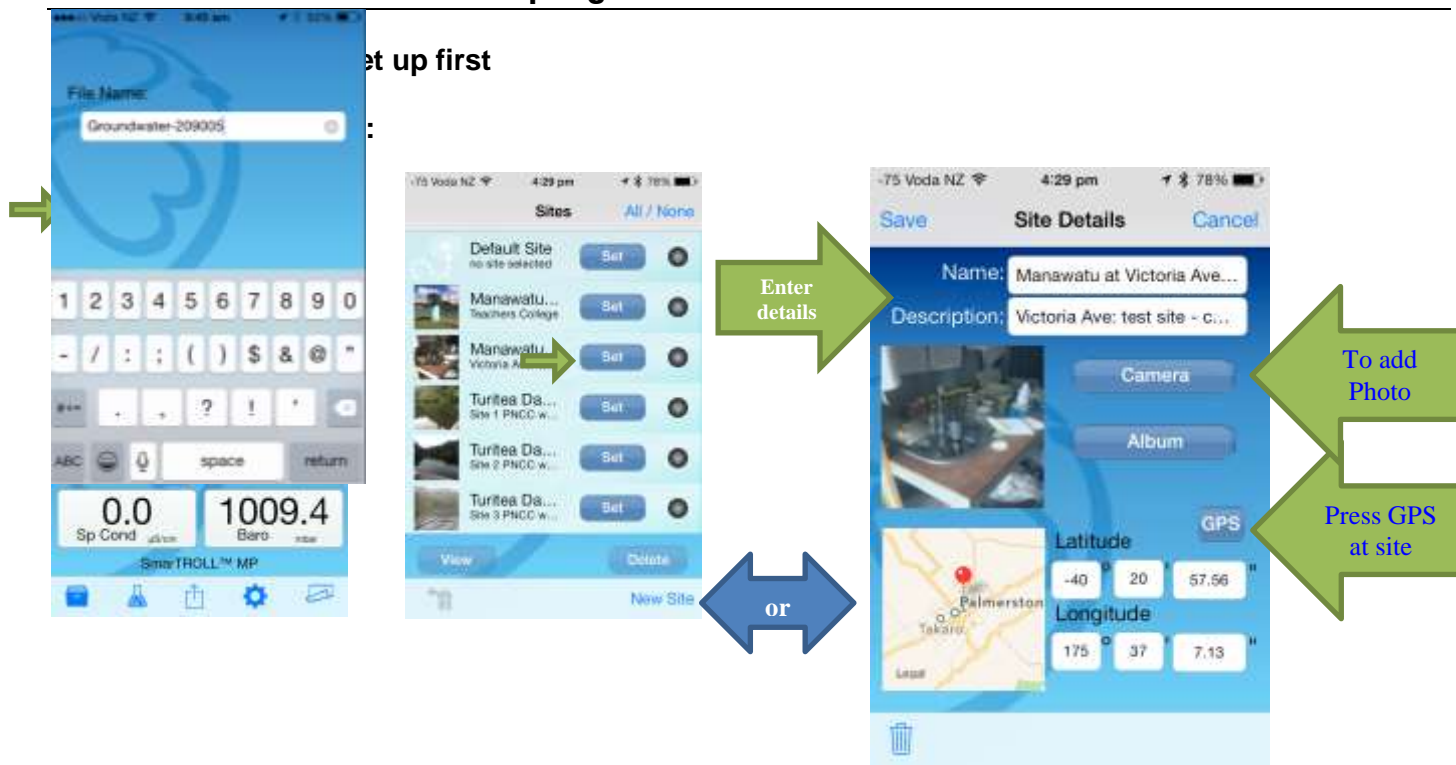
- Details of well bore diameter, depth, estimate of current depth to water.
- Well screen depth, length.
- Pump type, tubing diameters, flow rates.

Make sure blue tooth is turned on the battery pack and the idevice

Start the in-Situ App

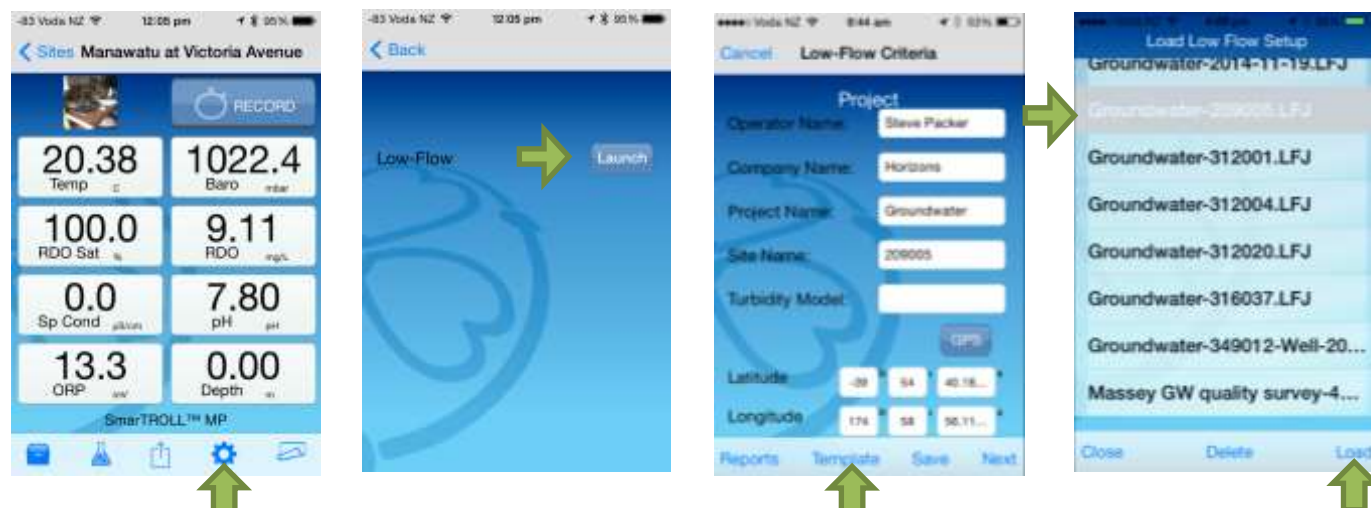
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- 1) Press the Sites button at the top of the screen
- 2) Scroll through list and press "Set" to choose an existing site.
- 3) If this is a new site / not in your list:
- 4) Press New Site
- 5) Using the correct Hilltop spelling enter the site name in the Name field
- 6) Add the reach into the description as well to help find it latter.
- 7) Take a photo at the site by pressing the camera button
- 8) Record the GPS points by pressing the GPS button at the site
- 9) Press Save

Start the low flow pumping app and select the right template to load:



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Enter as much information as you can, then press next after each step:
 (Tip: after you have done the first site, press save. Next time you can load the template)



Press save only if there are changes needed to the template. Edit the file name so it says "Groundwater-bore number"

Wait for pre-set time

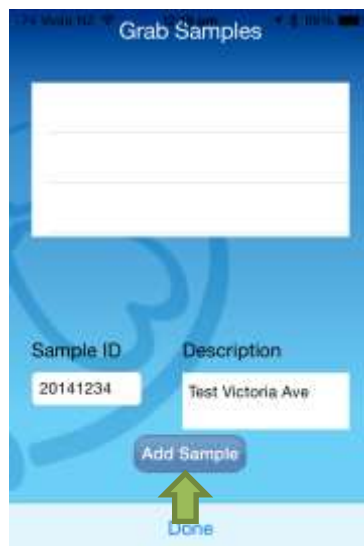
or

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Smart Troll: Ground water sampling

After completing the flow cell / SmartTroll readings:

Calculate and enter drawdown and add further notes, then press “Grab Sample”.

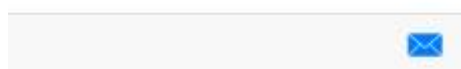
Can add multiple sample numbers.



Important: Type in the sample number / description, and then press the “Add sample” button!



Parameter	Unit	Value	Unit	Value	Unit	Value	Unit	Value
Temperature	°C	15.5	pH	7.5	DO (mg/L)	8.5	DO (%)	100
Salinity (PSU)	PSU	35.0	Turbidity (NTU)	0.5	Chlorophyll (µg/L)	1.2	Ammonia (mg/L)	0.1
Nitrate (mg/L)	mg/L	0.5	Nitrite (mg/L)	0.1	Phosphate (mg/L)	0.05	Silica (mg/L)	1.0



Results can be emailed through.