Check Data

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Overview:

Like all hydrological and water quality measurements, check data is collected from an independent meter in order to verify the dissolved oxygen readings are correct. It is important that the field meters are calibrated correctly and care should be taken to minimise errors in the check data.

Handheld YSI Pro calibration:

Before collecting check data at a dissolved oxygen site, the field meter must be calibrated. The YSI Pro hand held meters have an inbuilt barometer and conductivity sensor which correct for local barometric pressure and salinity. (Note: the WTW in river sensors do not correct for salinity or barometric pressure in the field).

Follow the YSI Pro calibration procedures *refer section 14 of this manual.* Calibrating at the minimum conductivity and dissolved oxygen, and checking / calibrating the barometer. If the barometer needs adjustment, this must be done prior to the dissolved oxygen calibration.

YSI placement in the river:

Dissolved oxygen readings have been found to vary with depth and flow. It is essential that the hand held meter is placed in the river as close as practical to the fixed in river sensor. The dissolved oxygen sensor needs time to stabilise ideally around 5 minutes before recording the reading.

Recording check data:

Check data needs to be collected as close as possible to the “punch” (time the logger records the dissolved oxygen reading), as possible. Water quality sensors are recorded every 15 minutes.

The following parameters must be recorded from the handheld:

- Time of sample
- Barometric pressure
- Dissolved oxygen saturation
- Dissolved oxygen concentration
- Water Temperature
- Conductivity

Frequency of collection for check data:

At a minimum check data should be collected monthly. Horizons state of the environment monitoring programme ensures these sites are monitored at least monthly. More frequent testing is desirable.

Caution:

Check Data

As the YSI Pro is corrected to local barometric pressure and salinity, do not directly compare the raw readings from the WTW in river sensors. The raw sensor readings need to be corrected for salinity and barometric pressure before processing this check data.