

- 1) Connect pH and Temperature probes to the meter. Ensure the pH probe connector snaps into place.
- 2) Turn meter on.
- 3) Determine which two buffer solutions you will use to calibrate the meter. If you think the water samples will have pH below 7, calibrate the meter with buffer solutions pH 4 and pH 7. If above pH 7 then use buffer solutions pH 7 and pH 10. Surface waters likely to be below pH 7 usually have a significant amount of wetlands in the watershed.
- 4) In the calibration record for the meter, record the date, time, person doing calibration, and value of the pH buffer standards.
- 5) Remove electrode from container with storage solution. Rinse electrode with distilled water. Shake excess water off electrode.
- 6) Press CAL button on the meter.
- 7) Place electrode and temperature sensor into the pH 7 buffer solution. Glass bulb must be completely submerged in buffer solution.
- 8) After meter reading stabilizes record pH on calibration record sheet, under "Stabilized Meter Value."
- 9) Press the ENTER key once. Calibration is now done for the 7 pH buffer solution. Reading should be off by 0.2 pH or less. If off by more than 0.2, re-calibrate. Enter this value in the "Calibrated Value" field.
- 10) Remove electrode from 7 pH buffer solution and rinse with distilled water. Shake off excess water.
- 11) Repeat steps 5 through 9 for the 10 pH buffer solution.
- 12) Replace pH probe in storage solution, turn meter off, and head out to the field.

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## pH Sampling Procedure

- 1) Wade into stream mid width.
- 2) Face upstream and dip plastic sample bottle into stream with the mouth faced down. Submerge the bottle 12 inches or halfway between the surface and stream bottom. To fill, turn bottle so that the mouth faces upward.
- 3) Rinse and dump water from sample bottle downstream.
- 4) Repeat Step 2.
- 5) Transport sample bottle back to shore or vehicle.
- 6) Connect any electrodes to pH meter and turn meter on.
- 7) Remove electrode from container with storage solution.
- 8) Rinse electrode with distilled water and shake off excess water.
- 9) Place pH and temperature probes into sample bottle, gently stir the probes, and wait 2-3 minutes for pH reading to stabilize.
- 10) Record the pH reading on the field sheet. Do not record the temperature reading from the pH meter since it is not the actual stream temperature.
- 11) Rinse electrode with distilled water and shake off excess water.
- 12) Place electrode back in container with storage solution.
- 13) Disconnect electrodes and turn the meter off to store.